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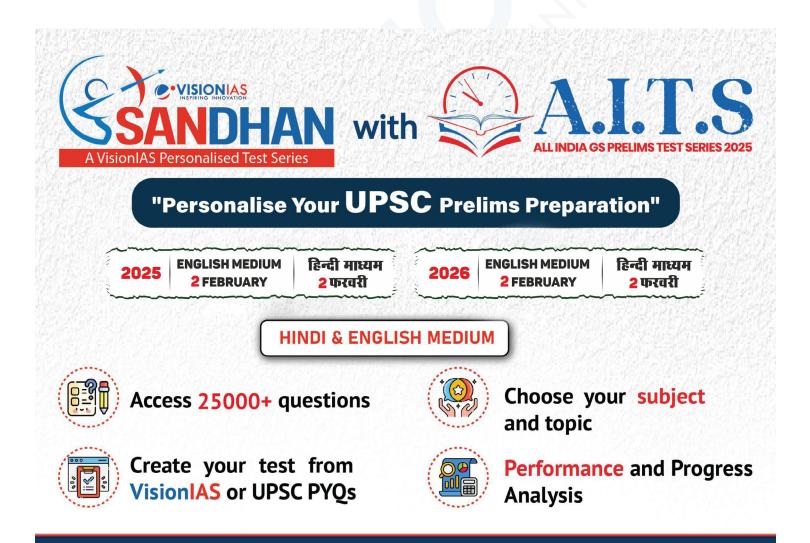
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# From the Editor's Desk

#### Dear Readers,

This Workbook combines the power of thorough reading and hands-on practice to ensure you not only understand key concepts but also apply them effectively. By actively engaging with the Workbook after studying the Monthly Current Affairs Document, you will reinforce your knowledge and develop the confidence needed to excel in competitive examinations.

This month, we explore pivotal topics such as the **One Nation**, **One Election Bill** and its implications on federalism and democratic governance, India's strategic engagements with its neighbors, and crucial economic reforms shaping the nation's financial architecture.

Additionally, we examine pressing social issues, environmental challenges, and advancements in science and technology that influence policymaking.

# How the Workbook is Organized?

- 1. Summary of the Monthly Magazine: A concise overview of the month's major insights, key events, and trends. This section lays the foundation for understanding before delving into activities.
- 2. Quick Facts Block: A ready reference of essential facts, figures, and statistics—ideal for rapid revision and recall.
- 3. Activities Block:



MCQ's : Test comprehension of significant topics.



of key facts.

Mains practice Questions :

Explore and articulate in-depth topics with clarity.



Ethics Case Studies : Apply current events to ethical dilemmas, refining decision making skills.



Answers and Explanation : Includes answers to MCQs and True/False questions for immediate feedback.

4. **Progress tracking table :** Monitor your progress with a dedicated section to record scores and reflect on areas for improvement.

Dedicate yourself to regular practice, embrace the process, and let this workbook be your trusted companion in your preparation. With focus, determination, and the right tools, you will not only master current affairs but also build the confidence to face any challenge.

Warm regards, Team Current Affairs, VisionIAS



"The best way to predict the future is to create it" – Peter Drucker







# 1.1. One Nation, One Election Bill

## Why in the news?

The Constitution (129th Amendment) Bill, 2024, and The Union Territories Laws (Amendment) Bill, 2024, introduced to implement "One Nation One Election".

# **Key Provisions of the Bills**

- Articles Amended:
  - Article 83 (Duration of Houses of Parliament): Proposes if Lok Sabha dissolves early, the next one serves only the remaining term.
  - → Article 172 (Duration of State Legislatures): Similar to Article 83.
  - Article 327 (Power of Parliament regarding Legislature elections): Adds "conduct of simultaneous elections" after "delimitation of constituencies".
- Article 82A inserted:
  - → Simultaneous Elections: General elections for Lok Sabha and all Legislative Assemblies held together.
  - → Appointed Date: The President can enforce changes on the first sitting of Lok Sabha.
    - All State Assemblies elected after this date end with Lok Sabha's term.
  - Election Commission's (EC) Powers: EC can recommend a later date for state elections if not feasible with Lok Sabha elections.
  - Deferred Elections: An Assembly's term ends with the Lok Sabha's if its election is deferred.
  - → Term Declaration: EC announces each Assembly's 'term end date' when notifying elections.
- The Union Territories Laws (Amendment) Bill, 2024: Aligns Union Territories' Legislative Assemblies' terms with Lok Sabha by amending respective Acts.

## **About Simultaneous Elections**

- Simultaneous Elections: Refers to holding elections for Lok Sabha, State Assemblies, and local bodies (not included in the Bill) at the same time.
- High-Level Committee under former President Ram Nath Kovind (2024) recommended simultaneous polls to Parliament, State Assemblies, and Local bodies.
- Previous Recommendations: Election Commission of India (1983), Law Commission (1999), Parliament Standing Committee (79th report), NITI Aayog (2017), Law Commission (2018)

## **Need for Simultaneous Elections**

- **Financial:** Reduces costs related to **manpower**, **equipment**, **and security**.
- **Economic:** Minimizes disruption to **supply chains, business investments and economic growth.**
- **Governance**: Avoids policy paralysis due to frequent application of **Model Code of Conduct**.
- **Voter Participation**: Reduces voter fatigue.
- **2** Efficiency: Optimizes resource use, reduces election disputes.

## **Issues Involved in Simultaneous Elections**

**Constitutional:** Potential **misuse of President's Rule** to maintain synchronization.

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- Logistical: Challenges with administrative capacity due to vast electorate (over 96 crore electors in 2024).
- Federalism: Reduced state participation in decision-making.
- Voter Behavior: Risk of national issues overshadowing local concerns and smaller parties.
- Legal: Requires amendments to multiple constitutional provisions (e.g., Articles 83, 172, 327) and changes to the Representation of the People Act, 1951.
- Accountability: Fixed terms might reduce political accountability.

#### Conclusion

Simultaneous elections could streamline the electoral process but face hurdles in logistics, democratic accountability, and federalism. **Careful planning & democratic framework** are essential for effective implementation.

# **1.2. Atrocities against Scheduled Castes**

#### Why in the News?

Standing Committee on Social Justice and Empowerment has raised concerns over the failure of States to establish mechanisms to address atrocities against Scheduled Castes.

#### Scheduled Castes and their background

- Article 366 defines the term 'Scheduled Caste'.
  - First used in the Government of India Act of 1935.
- Article 341 allows the President to notify Scheduled Castes for a state or UT after consulting the State governor. Parliament can amend this list.

#### Mechanism to tackle Caste based atrocities

- Constitutional
  - + Fundamental Rights: Articles 14, 15, 16, 17.
  - → DPSP: Article 46 (Educational and economic interests of SCs), Article 338 (National Commission for SCs).
- Legal
  - → Untouchability (Offences) Act, 1955
  - Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989
    - Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Amendment Act, 2015 added new crimes of sexual offences against women of SC/ST.
- Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013

## **Observations of Standing Committee on Social Justice and Empowerment**

- Inefficiency in curbing atrocities against SCs due to **poor implementation of legal provisions**.
- NAMASTE Scheme not meeting zero fatality goals.
- **Lack of specific targets** in schemes like Pradhan Mantri Adarsh Gram Yojana (PMAGY).
- Fund surrender in schemes like SHRESHTA due to delays in state proposals.
- **Challenges in reaching the 27% GER target** for SCs in higher education due to delays in state plan submissions.
- Inadequate execution of Pradhan Mantri Anusuchit Jaati Abhyudaya Yojana (PM-AJAY), with fewer SC villages declared as Adarsh Grams.

	Reason for Continued Atrocities Against SCs											
Complacency of State		Poor Economic Status		Rising Political Awareness		Social Prejudices			Failure to Enforce Legal Mechanism			
	<ul> <li>Absence of Protection Cells, police apathy</li> </ul>	0 0 0	Land Alienation Bonded labor	0	Due to 73rd and 74th Constitutional Amendment Acts	0 0	Dominance of other castes 97.7% of atrocities	0 0	Lack of enforcement of legal mechanisms Discrimination in			
	,	Ð	About 34% of SCs below poverty line	0	Refusal of Traditional Works		against SCs in 2022 from 13 States		education ( <b>Thorat</b> committee, 2007)			

# Way forward

- Ensure effective utilization of funds.
- Set quantifiable targets for all schemes.
- Empower National Institute of Social Defence for Drug Abuse prevention, rehabilitation, etc.
- Identify poorest SC households for benefits under schemes such as Scholarship for Higher Education for Young Achievers Scheme (SHREYAS).
- **2** Expand skill training schemes like **PM-DAKSH**.

# 1.3. Bharatiya Vayuyan Vidheyak, 2024

# Why in the News?

President recently approved the Bharatiya Vayuyan Vidheyak (BVV), 2024 to replace the Aircraft Act, 1934, modernise India's aviation, improve safety, and meet global standards.

# Key features of BVV, 2024

Parameters	Re	tained from Aircraft Act, 1934	Ad	Addition/ Changes in BVV, 2024	
Regulatory Structure	C	Establishes 3 bodies <b>: DGCA, BCAS, and AAIB</b> under central government oversight.	0	Power to issue <b>Radio Telephone Operator</b> (Restricted) Certificate and licence transferred to DGCA.	
Regulation of aircraft- related activities	0	Regulates <b>manufacturing, use, operation, and trade</b> of aircraft.	0	Adds regulation of <b>aircraft design.</b>	
Power to make Rules	C	With central government on <b>licensing, air</b> <b>transport services</b> , and implementation of <b>Convention on International Civil Aviation, 1944</b>	0	With central government on radio telephone operator certificate and licences under the International Telecommunication Convention.	
Offences and Penalties	0	up to <b>2 years imprisonment or ₹1 crore fine</b> for violations like carrying prohibited goods.	Э	Allows central government to specify civil or criminal penalties for rule violations.	
Adjudication of penalties	Э	Adjudication by an officer of <b>Deputy Secretary</b> rank or above. First appeal to a higher-ranked officer.	0	<b>Second appeal available</b> to an officer of higher rank than the First Appellate Officer.	

#### **Concerns related to BVV 2024**

- **Cack of independence of DGCA:** Central government oversight unlike other regulatory bodies.
- Appellate System: Appeals limited to Union Government only.
- **Arbitration:** Government's unilateral arbitrator appointment may violate equality rights.

## Aviation Governance in India

- **Ministry of Civil Aviation (MoCA):** Manages policy, rules, and regulations for aviation.
- **Organizations under Ministry of Civil Aviation** 
  - → Directorate General of Civil Aviation (DGCA): Regulatory body for civil aviation safety.
  - Bureau of Civil Aviation Security (BCAS): Responsible for security standards at airports.
  - Airport Authority of India (AAI): Manages airport development and modernization.
  - → Aircraft Accident Investigation Bureau (AAIB): Investigates aircraft accidents.
  - Airport Economic Regulatory Authority of India (AERA): Regulates tariffs and monitors performance of aeronautical services.





#### Key legislations:

- → Aircraft Act 1934 (and Aircraft Rules, 1937): Governs civil aviation activities.
- → AERA Act, 2008: Regulates airport service tariffs.
- + FDI Policy: Allows up to 100% FDI in scheduled Air Transport Service/Domestic Scheduled Passenger Airline.

## **Key Initiatives for India's Aviation Sector**

- Policies:
  - → National Civil Aviation Policy, 2016: Enhances regional connectivity with an integrated eco-system.
  - → Vision 2040: Strategic development plan for aviation.
- Schemes/ Initiatives:
  - → RCS-UDAN: Aims for 1,000 routes and development of 100 airports by 2024.
  - → Maintenance, Repair and Operations (MRO): Budget incentives for maintenance operations.
  - Airport Privatization: 25 airports via PPP under the National Monetization Pipeline.
  - Technological Interventions: NABH Nirman (for airport capacity), Digi Yatra (paperless travel), AirSewa (online grievance redressal), GAGAN (for air traffic management).
- International Cooperation:
  - Delhi Declaration on Civil Aviation (2024): Enhances regional aviation cooperation.
  - Carbon Neutrality: Standardization of Carbon Accounting and Reporting framework of Airports.

#### Conclusion

India's aviation sector is advancing in infrastructure, connectivity, and sustainability, with BVV 2024 aiming to clarify legal frameworks for further growth.

# 1.4. Overseas Citizen of India (OCI)

#### Why in the News?

Ministry of External Affairs has dispelled concerns regarding OCI cardholders being reclassified as foreigners, confirming that the **existing OCI rules remain unchanged**.

#### **About OCI Cardholders**

- **O** Under the OCI scheme introduced in 2005 by amending the Citizenship Act, 1955
- Eligibility:
  - Foreign nationals (except from Pakistan or Bangladesh), who were Indian citizens or eligible for citizenship on or after January 26, 1950, or related to territories merged with India post-August 15, 1947, or their descendants, etc.
  - Also, foreign spouses of Indian citizens or OCI cardholders, married for at least two years.
  - Excludes foreign military personnel.
- Merged PIO and OCI into one category in 2015.

#### **Benefits for OCI card holders**

- **Difetime**, multi-entry visa for India.
- Similar rights as NRIs in financial, economic, and educational fields, except land acquisition and adoption.
- Eligible for Indian citizenship after 5 years of OCI status, with one year of residence in India.
- Can enroll in the National Pension Scheme similar to NRIs.

## **Restrictions Related to OCI Cardholders**

- Does not grant dual citizenship or voting rights.
- Ineligible for constitutional posts, judicial positions, or Parliament membership, etc.
- **Excluded from public employment**, except specific posts designated by the Central Government.
- **Special permission needed** for research, mountaineering, missionary work, journalism, or visiting restricted areas.

# 1.5. News in Shorts

# 1.5.1. Process for Removal of Rajya Sabha Chairperson

Opposition moved a No-confidence motion against Rajya Sabha (RS) Chairperson.

Article 64: Vice President (VP) shall be ex officio Chairperson of RS.

#### **Constitutional Procedure:**

- **3** Notice: 14-day notice required before Resolution.
- Resolution Passage: Article 67(b) allows removal by RS majority of all its members and Lok Sabha simple majority.
- Grounds not specified for VP removal.

# 1.5.2. SC Guidelines on Mercy Petition

Supreme Court (SC) issued guidelines on processing of Mercy Petitions to States/UTs

#### Guidelines from Pradeep Yashwant Kokade case:

- Dedicated Cells: States/UTs to establish for prompt processing.
- Judicial Officer: To be attached to dedicated cell.
- Information Sharing: Forwarded to cells from prison authorities.
- Coordination: With Governor and President's offices.
- **Electronic Communication:** Preferred for efficiency.
- State Government to issue executive orders for handling procedures.
- Compliance Reporting: Within three months.
- Guidelines to Sessions Courts: Record cases and notify prosecutors or agencies for pending appeals.
- Execution Warrants: To be issued by the State postdeath penalty enforcement.

# Other Significant Observations by SC

- Impact of Delays: Dehumanizing effect on convicts, violating Article 21.
- Right to Challenge Delay: Under Article 32 (SC) and Article 226 (High Court).
- Case Specific Determination: What constitutes undue or inordinate delay?

# **About Mercy Petition**

- Constitutional Framework: President (Article 72) and Governor (Article 161) have the power to grant pardons or commute sentences.
  - SC in Maru Ram vs. Union of India (1981): President must act based on the Council of Ministers' advice.
- Legal Framework: Covered under Section 472(1) of Bharatiya Nagarik Suraksha Sanhita (BNSS) 2023.

# 1.5.3. e-Courts Mission Mode Project Phase III

Union Cabinet approved Phase III of the e-Courts Mission Mode Project.

 e-Courts Project: Active since 2007 for ICT in Indian Judiciary under National e-Governance Plan. Phases I & II from 2011-15 and 2015-23.

#### About e-Courts Phase III:

- Central Sector Scheme: 4 years (2023-2027), Rs.7,210 crore budget.
- **Objective:** Unified tech platform for judiciary, paperless court-stakeholder interaction.
- Implementation: By High Courts and funds via Department of Justice on e-Committee's (Supreme Court) advice.

## **Components of e-Court Phase**

- **3 S3WAAS Platform:** Secure, efficient data storage.
- e-Seva Kendra: Electronic services for users.
- CLASS System: Live audio-visual courtroom streaming.
- Scanning and Digitization: Converts physical to digital records.
- Cloud Infrastructure: Scalable storage and computing.
- Virtual Courts: Remote court proceedings via digital platforms.

# Significance of Digitalization:

- **Judicial Modernization:** Data-driven decisions, fully digital justice.
- Reducing Case Pendency: AI and OCR integration for efficiency.

# 1.5.4. Amrit Gyaan Kosh Portal

Amrit Gyaan Kosh Portal, **jointly developed by Capacity Building Commission and Karmayogi Bharat**, launched on iGOT platform.

## **About Amrit Gyan Kosh Portal:**

- **Purpose:** Enhances public administration training for educators.
- Repository: Curates best practices aligned with 15 SDGs.
- **Themes:** Health, education, agriculture and digital governance.

**About iGOT Karmayogi Platform:** All-in-one platform for civil service officials, guiding learning, hosting discussions, managing careers, and assessing competencies.



# 1.5.5. E-Daakhil Portal

**The Department of Consumer Affairs** announces the nationwide implementation of the E-Daakhil portal.

#### About E-Daakhil portal:

- Launched in 2020 by the National Consumer Dispute Redressal Commission (NCDRC), a body under the Consumer Protection Act of 1986.
- An online platform for filing consumer complaints and tracking cases, enhancing consumer rights and justice delivery.

# 1.5.6. The Boilers Bill, 2024 Passed in the Rajya Sabha

The Bill **replaces Boilers Act, 1923** and incorporates the provisions in consonance with the Jan Vishwas (Amendment of Provisions) Act, 2023.

- The Bill will ensure the safety of life and property of persons from the dangers of explosions of steam boilers.
- About Boilers: Falling under the concurrent list, boilers are vessels generating steam under pressure.

# **Key Provisions:**

- Regulation: A Central Boilers Board will be constituted to oversee boiler design, manufacture, and use.
- Inspection: To be conducted by State Inspectors or third parties.
- Ease of Doing Business (EoDB): Only 4 serious offences from 7 previous offences remain criminal; others now face penalties via executive action.

#### **Issues:**

- **Safety:** State exemptions could compromise safety.
- Limited Judicial Recourse: Central and state decisions are not challengeable in regular courts; only via High Court under writ petitions (Article 226).
- **EoDB:** No set timelines for inspections or boiler modifications.





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# INTERNATIONAL RELATIONS



# 2.1. India-Sri Lanka relations

# Why in the News?

Sri Lankan President visited Delhi on his first foreign trip after taking office.

## **Key Announcements**

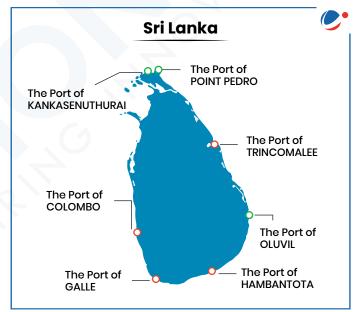
- Economic Cooperation: Discussions on the Economic & Technological Cooperation Agreement (ETCA) to expand the Free Trade Agreement (FTA)-2000.
  - → MOU to amend the Double Taxation Avoidance Agreement (DTAA) to align with global standards.
- Infrastructure: Explore collaboration on rehabilitating the Kankesanthurai port with Indian grant assistance.
- Other
  - Expedite implementation of India-funded grant project of Sri Lanka Unique Digital Identity.
  - Support the development of Trincomalee as a regional energy and industrial hub.

# Significance of India-Sri Lanka Bilateral Relations For Both Nations

- Mutual Support at International Forums
  - → India's support for Sri Lanka's BRICS membership bid.
  - → Sri Lanka's backing for India's non-permanent seat on the UN Security Council (2028-29).
- **•** Maritime Security: Shared commitment to addressing traditional and non-traditional threats in the Indian Ocean Region.
- Energy Cooperation: Ongoing projects include inter-grid connectivity, a multi-product petroleum pipeline, the Sampur Power Project etc.
- **Regional & Multilateral Collaboration:** Active members of **Indian Ocean Rim Association (IORA) and BIMSTEC.**
- Defence Collaboration: E.g., SLINEX (Naval), MITRA SHAKTI (Army) and MILAN, India's multilateral naval exercise.

## For Sri Lanka

- Role of India in Debt Restructuring:
  - → Financial Aid: India provided nearly USD 4 billion in 2022-2023 to support Sri Lanka's economic crisis.
  - → IMF Bailout: India was one of the first to offer financing assurances for IMF's \$2.9 billion bailout package in 2023.
- **Economic Importance:** India is Sri Lanka's largest trade partner, top FDI contributor, and biggest source of tourists.
- Other Key Areas of Support
  - + Humanitarian Assistance: India is Sri Lanka's first responder for disaster relief.
  - → Regional Security: Supports the Colombo Security Conclave and Sri Lanka's regional security initiatives.
  - → Capacity Building: Helped install the Maritime Rescue Coordination Centre (MRCC) under an Indian grant.







Cultural Support: Assisted in the restoration of Thiruketheeswaram Temple and exposition of the Kapilavastu Relics in 2012.

#### For India

- **Security of Indian Ocean:** Sri Lanka plays a pivotal role in safeguarding India's maritime security and stability.
- **Economic Interest:** Safeguarding Colombo Port, crucial for transshipment of Indian container traffic
- Alignment with India's Policy: Central place in India's 'Neighbourhood First' policy and the 'Security and Growth for All in the Region' (S.A.G.A.R) vision.
- **Indian Origin Tamils (IOTs):** About **1.6 million IOTs** work mainly in Sri Lanka's plantations and Colombo's business sector.

# **Challenges in India-Sri Lanka Relations**

- **Chinese Strategic Presence:** Growing Chinese influence through projects like Hambantota Port.
- Fishermen Disputes: Sri Lanka opposes Indian bottom trawlers and their incursions
  - → Territorial dispute over this Kachchatheevu Island, ceded to Sri Lanka in 1974, remains a contentious issue, with Indian fishermen.
- Delayed Implementation of the 13th Amendment: Result of the Indo-Lanka Accord (1987) for resolving ethnic conflict via devolution of power.

# Way Forward

- Bolster 'Neighbourhood First' and SAGAR policies to counter Chinese influence in the Indian Ocean.
  - → Implementing India's Five "S" Diplomacy in letter and spirit.
- Fishing Dispute Resolution:
  - → Shared Zones: Limited fishing access near maritime boundaries for both nations.
  - → **Regulations:** Restrict trawling frequency, hours, and ban bottom trawling.
  - → Kachchatheevu Lease: Allow Indian fishermen access while Sri Lanka retains ownership.
- Implementation of the 13th Amendment

# 2.2. India-Bhutan relations

## Why in the News?

The King and Queen of Bhutan were on an official visit to India.

# Key Highlights of the Visit

Gelephu Mindfulness City Project: India's Prime Minister reassured Bhutan's King of continued support for the zerocarbon, 2500 km<sup>2</sup> co-operative city.

#### Highlighted recent Milestones:

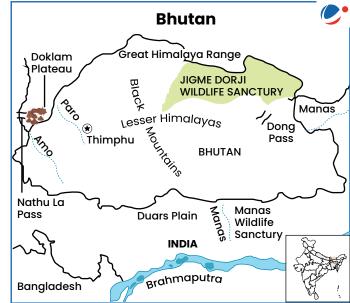
- Inauguration of the first Integrated Check Post (ICP) along the India-Bhutan border in Assam.
- Punatshangchhu-II hydroelectric project is nearing completion.

# Significance of India-Bhutan Bilateral Relations For Both Countries

- Robust Political Relationship: Founded on the Treaty of Friendship.
- Hydropower Cooperation: E.g., Basochhu and Nikachhu hydropower plants now trade in Indian power markets.
- Buddhist Connect: Promotion of Buddhist pilgrimage and cultural exchanges.
- Transboundary Wildlife Conservation: E.g., Transboundary Manas Conservation Area (TraMCA) to protect wildlife in Manas National Park (India) and Royal Manas National Park (Bhutan).

## **For Bhutan**

**Free Trade Agreement:** The **1972 India-Bhutan Trade Agreement**, revised in 2016.



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- **Development Assistance:** India supports **Bhutan's 13th Five-Year Plan (2024-29)** and its **Economic Stimulus Programme**.
- Security Support: During Doklam Standoff (2017), India invoked the Treaty of Perpetual Friendship to protect Bhutanese territory from Chinese aggression.
- Infrastructure Development: India's Border Roads Organisation (BRO) built most of Bhutan's roads under Project 'DANTAK'.
- **Other Support:** 50% of Bhutan's foreign direct investment comes from India.

#### For India

- **Trade:** Largest trade partner, with a favorable trade balance.
- Strategic Location: Acts as a buffer between China and India, especially in the Chumbi Valley.

#### **Cooperation in New and Emerging Areas**

- **Space Cooperation:** India-Bhutan SAT launched in 2022.
- Fin-Tech Collaboration: RuPay Card for cross-border payments (2019-2020) and Introduction Bhim app in Bhutan
- e-Learning & Digital Connectivity: Integration of Bhutan's Druk Research Network with India's National Knowledge Network for enhanced educational connectivity.

#### **Growing Concerns in India-Bhutan Relations**

- **Increasing Proximity with China:** China influences Bhutan's economy, accounting for 25% of its trade.
- Chinese Territorial Assertiveness:
  - China views Bhutan as part of its "five-finger policy" targeting sensitive Indian regions (views Tibet as the palm and Ladakh, Nepal, Sikkim, Bhutan, and Arunachal Pradesh as the fingers).
  - + Bhutan-China border dispute: Bhutan and China signed a roadmap in 2021 for dispute resolution.
  - → India fears China may gain control over the **Doklam plateau**, affecting India's strategic **Siliguri Corridor**.

Other Challenges:

- Militant Groups: North-East Indian militants (such as United Liberation Front of Assam (ULFA) & National Democratic Front of Bodos (NDFB)) use Bhutan as a hideout.
- → Stalled Projects: Bhutan halted the BBIN Motor Vehicle Agreement (Bangladesh, Bhutan, India, Nepal) due to environmental concerns.

#### Conclusion

Strengthening economic ties, security commitments, and fostering educational and cultural collaborations will ensure mutual growth and stability.

# 2.3. India-Kuwait Relations

## Why in the News?

India's Prime Minister visited Kuwait, marking the first visit by an Indian PM in 43 years.

## **Key Outcomes**

- Award Conferment: Indian PM received Kuwait's highest honor, 'The Order of Mubarak Al Kabeer.'
- **Strategic Partnership:** India-Kuwait relations elevated to a strategic partnership.
- India- Gulf Cooperation Council (GCC) Cooperation: Kuwait, as GCC President, pledged stronger ties with India.
- Other:
  - Kuwait joined International Solar Alliance (ISA)
  - → Defence Pact signed to promote cooperation in defense training, personnel exchanges, joint exercises etc
  - → Renewed Cultural Exchange Program (2025–2029) for arts, literature, etc.

#### India-Kuwait Relations: An Overview

- **Diplomatic Ties:** India was among the first to establish relations with Kuwait in 1961.
- **Indian Community: 1 million Indians** live in Kuwait, the largest expatriate group.
- **Energy Trade:** Kuwait is India's 6<sup>th</sup> largest crude oil and 4<sup>th</sup> largest gas supplier.
- Historical Relations: India was a top trading partner; Indian Rupee was the legal tender until 1961.
- **1990 Kuwait Airlift:** India airlifted **1,70,000 Indians** after Iraq's invasion, setting a Guinness World Record.



## **Convergence in India-Kuwait Relations**

- Strategic Location & Connectivity: E.g., Securing busy sea lanes (e.g., Red Sea) and enhancing India's connectivity through projects like the India-Middle East-Europe Economic Corridor (IMEEC).
- Energy Security: Kuwait's oil reserves meet 3.5% of India's energy needs.
- Petrochemical Collaboration: Potential in Kuwait's oil and India's growing petrochemical sector
- Investment Opportunities: Kuwait Investment Authority (KIA) views India as a prime investment destination.
- **Geopolitical Alignment:** Growing political ties reflect India's broader Gulf strategy, positioning it as a **Net Security Provider**.

#### **Divergences in India-Kuwait Relations**

- Expatriate Welfare & Labor Issues: Indian faces labor rights violations and mistreatment, highlighted by the 2024 Mangaf fire that killed 40 Indians.
- Limited Economic Diversification: While energy trade dominates, economic engagement in other sectors remains limited.
   India also has a trade deficit with Kuwait.
- Geopolitical Differences: Kuwait's diplomatic stance during regional crises (e.g., Gulf War, Yemen, and Syria) sometimes diverges from India's non-interventionist policy.

# India and Gulf Cooperation Council (GCC)

- Established: 1981
- **9 Members:** Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and UAE

## **India-GCC Relations**

- **Economic & Trade:** Amajor trading bloc for India, accounting for ~14% of India's total foreign trade in 2023-24.
- **Trade Balance:** GCC has a trade surplus with India due to large oil and gas imports.
- Investment: India received ~US\$25 billion FDI from GCC countries (2000-2024).
- **Energy Security:** GCC provides 50% of India's crude oil and 70% of its natural gas, with Qatar being a top LNG supplier.
- Indian Diaspora: GCC hosts 8 million Indian expatriates, the largest diaspora in the region, and is the second-largest source of remittances to India after the US.

#### **Challenges in India-GCC Relations**

- **Geopolitical Rivalries:** Saudi-Iran rivalry complicates India's relations with both countries.
- Labor Migration Issues: Concerns over the Kafala system, exploitation, and human rights violations against migrant workers.
- Slow Free Trade Agreement (FTA) Progress
- **Discriminatory Crude Pricing:** The "Asian Premium" results in higher oil prices for India and other Asian nations.

# 2.4. Trade Weaponisation

## Why in the News?

India's External Affairs Minister raised concerns about increasing trade weaponization and associated job losses.

## What is Trade Weaponization?

- Definition: The strategic use of trade policies and tools as a foreign policy instrument, aimed at influencing a partner's actions or policies by exploiting trade vulnerabilities.
- **Purpose:** Not just economic gain, but to induce changes in economic or diplomatic practices.
- Example: The 1973 oil embargo, where Arab states used oil supply disruptions to pressure the US and its allies over their support to Israel.

## **Key Tools for Trade Weaponization**

- Selective Import/Export Restrictions: E.g., USA's Countering America's Adversaries Through Sanctions Act (CAATSA)
- Exploitation of Economic Dependencies: E.g., China controls 60% of global production of 20 critical minerals and 85% of rare earth processing

#### VISIONIAS INSPIRING INNOVATION

- Non-Tariff Barriers: E.g., The EU imposes strict agricultural product requirements
- Currency Manipulation: E.g., China has been accused of undervaluing its currency
- Fulfilling National Agenda: E.g., After Liu Xiaobo's Nobel Peace Prize in 2010, China reduced trade with Norway

## **Consequences of Trade Weaponization**

- **Economic:** Disrupts supply chains, reduces trade, and increases inflation, etc.
- Geopolitical: Trade disputes escalate into broader tensions. E.g., U.S.-Russia sanctions over Ukraine
- **O** Multilateral Institutions: Undermines cooperation and erodes trust. E.g., WTO's dysfunctional Dispute Settlement System.

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# Measures to Counter Trade Weaponization

- Supply Chain Resilience: Supply Chain Resilience Initiative (SCRI) (Australia, India, Japan), Indo-Pacific Economic Framework for Prosperity (IPEF), Mineral Security Partnerships (MSP) etc.
- Countering Dominance: E.g. China Plus One (business strategy that prevents investing in China only)
- Strengthening Domestic Production: Launched initiatives like Make in India, Atmanirbhar Bharat, and PLI schemes
- **Strengthening International Cooperation:** Strengthen WTO to enforce trade rules and resolve disputes.

# 2.5. News in Shorts

# 2.5.1. UK Joins CPTPP

UK becomes the first European country to join the Indo-Pacific trade bloc Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).

# Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)

- Genesis: Initially signed by 11 countries in March 2018 in Santiago, Chile, after the US withdrew from the original Trans-Pacific Partnership (TPP) in 2017.
- Membership: 12 member nations UK, Australia, Canada, Japan, New Zealand, Brunei, Chile, Malaysia, Mexico, Peru, Singapore, and Vietnam.
- Significance: Bloc accounts for around 15% of global GDP and a market access of over 500 million people.

# Significance of such Multilateral Groupings for India

- Economic Opportunities: Joining trade blocs like CPTPP and RCEP (Regional Comprehensive Economic Partnership) can open new markets and support the "China plus one" strategy.
- Export Boost: Reduced tariffs and access to large Asia-Pacific markets can enhance exports, especially for MSMEs, which contribute 40% to India's exports.

# 2.5.2. Nepal and China Signed BRI Cooperation Framework

**Framework** is expected to pave the way implementing Belt and Road Initiative (BRI) projects in Nepal.

 Both nations have committed to develop the Trans-Himalayan Connectivity Network.

Key Trade Weaponization measures

India refused to adopt policy changes.

U.S. halted food aid (PL 480) in the 1960s when

in 1974 and 1998 led to a reliance on thorium

Western sanctions following India's nuclear tests

used against India

reserves

Pakistan and Sri Lanka are also part of the BRI.

# **Key Concerns for India**

- Security: Chinese projects, like the Pokhara airport, raise border vulnerabilities.
- Influence: Nepal's alignment with China's "string of pearls" strategy could weaken India's regional influence.
- Debt Trap Diplomacy: China could use debt to gain political leverage.

# Belt and Road Initiative (BRI)

- Genesis: Launched by China as "One Belt One Road," connecting Asia, Africa, and Europe.
- **Aim:** Enhance regional integration, boost trade, and stimulate economic growth.
- Components:
  - Silk Road Economic Belt: A transcontinental land route.
  - → Maritime Silk Road: A sea route linking countries across oceans.

# 2.5.3. Phewa Dialogue

Nepal and China launched the "Phewa Dialogue" series.

#### **Phewa Dialogue**

- Name Origin: Derived from Phewa Lake in Pokhara Valley, Nepal.
- Significance: Nepal's first official think tank forum dedicated to South Asia Regional Economic Integration.



## 2.5.4. Indian Chemical Council Wins OPCW-The Hague Award

The 2024 OPCW The Hague award conferred upon Indian Chemical Council (ICC)

- Conferred by the Organisation for the Prohibition of Chemical Weapons (OPCW) for ICC's contributions to chemical safety and compliance with the Chemical Weapons Convention (CWC).
  - For the First time the award recognizes a chemical industry body.
- Hague Award was established in 2014 to honor OPCW's efforts towards the CWC's goals.

# Indian Chemical Council (ICC), 1938

- Representation: Apex body for all sectors of India's chemical industry, including organic/inorganic chemicals, etc.
- Industry Share: Represents over 80% of India's \$220 billion chemical sector.
- HQ: Mumbai

# Chemical Weapons Convention (CWC)

- **Genesis:** Came into force in 1997.
- Aim: To eliminate chemical weapons by prohibiting their development, production, acquisition, transfer, or use.
- Members: 193 States Parties (India is an original signatory)
- **Implementing Body:** OPCW
  - → In India, the National Authority for Chemical Weapons Convention (NACWC) oversees CWC implementation, established under the Chemical Weapons Convention Act, 2000.

# 2.5.5. United Nations Disengagement Observer Force (UNDOF)

Recently, UN Secretary General paid tribute to Brigadier Amitabh Jha, who was serving with United Nations Disengagement Observer Force (UNDOF) at Golan Heights.

India is third largest military contributor to UNDOF.

## **About UNDOF**

 Genesis: Established by UNSC Resolution 350 (1974), after the 1974 Disengagement of Forces Agreement between Israel and Syria.

- Mandate: Maintain ceasefire and supervise the demilitarized buffer zone and area of limitation where Israeli and Syrian troops are restricted.
- **HQ:** Camp Faouar, Syrian side of the Golan Heights.

2.5.6. "Crossroads of Peace" Initiative

Armenia briefed India and Iran on its regional connectivity proposal **(Crossroads of Peace)** during a trilateral consultation.

# About Crossroads of Peace Initiative

- Objective: Connecting Armenia with its neighboring countries—Turkey, Azerbaijan, Iran, and Georgia by developing infrastructure like roads, railways, pipelines, cables, and electricity lines.
- Significance: Seeks to link the Caspian Sea to the Mediterranean Sea and the Persian Gulf to the Black Sea.

# 2.5.7. Kerch Strait

**Recent Event:** Russian tanker split during a storm, spilling oil in the Kerch Strait.

A strait is a narrow waterway between two pieces of land that connects two large bodies of water.

# **About Kerch Strait**

- Location: Eastern Crimean Peninsula, linking Black Sea and Sea of Azov.
- Significance: Key route for Russian grain and oil exports.







# 3.1. State Finances

## Why in the News?

Reserve Bank of India (RBI) released State Finances: A Study of Budgets Of 2024-25 Report with theme 'Fiscal Reforms by States'.

#### Fiscal Position of the State Governments as per Report

- **Gross fiscal deficit:** Within 3% of GDP (2021-22 to 2023-24).
- Revenue deficit: 0.2% of GDP (2021-22 to 2023-24).
- **Capital Expenditure:** Increased to 2.6% of GDP from 2.2%
- Debt of states: Declined from 31.8% of GDP (2004) to 28.5% of GDP (2024);
  - → Fiscal Responsibility and Budget Management (FRBM) target: 20%.

## Why Fiscal Deficit is still high in some States?

- Power Sector Losses: Losses at ₹6.5lakh crore by 2022-23 (2.4% of GDP).
- Rising subsidy burden: Farmers, electricity, youth, women etc.
- Unreliable fiscal data and reporting
- Other issues in fiscal management in states: Absence of Fiscal Data, Delays in the setting up of State Finance Commissions (SFCs), Economic, climatic and geopolitical uncertainties.

## **Fiscal Reforms undertaken by States**

- Fiscal Responsibility Legislations (FRLs)
- Institutional Reforms: State Institutions of Transformation set up with help of NITI Aayog by several states
- Expenditure Reforms:
  - → Direct Benefit Transfer, National Pension System etc.
- **Tax Reforms:** Adoption of goods and services tax (GST), Modernisation of Tax Administration.
- Market-based financing: increase from 17% in 2005-06 to 79% in 2024-25.
- Power Sector Reforms: UDAY scheme

#### Way Forward: Recommendations of the report

- "Next generation" fiscal rules: States have autonomy to create fiscal rules.
  - Risk-based fiscal framework as per debt and growth; Medium-Term Expenditure Framework (MTEF) which links policymaking to budgeting.
- Data Driven Fiscal Policy Making: Data analytics, machine learning and artificial intelligence can be used for improved taxation system.
- Improving fiscal data generation and dissemination processes
- **Contain DISCOM Losses: enhancing productivity,** reducing transmission and distribution losses etc.
- Other recommended measures: Rationalize subsidies and centrally sponsored schemes (CSS), Implement the 'golden rule' for expenditure, Ensure timely SFC appointments, Use outcome budgeting for accountability, Adopt climate budgeting for sustainable finances.



# Conclusion

The State governments have demonstrated **fiscal prudence**. However, the state finances will increase due to several developmental expenditure and liabilities and **reforms have to be undertaken**.

# 3.2. GDP Base Year Revision

#### Why in the News?

Government has formed 26-member Advisory Committee **on National Accounts Statistics (NAS)** to update the GDP base year from existing 2011-12 to 2022-23.

#### **More on the News**

- Chairman of Advisory Committee on NAS: Biswanath Goldar
- Aim: To identify new data sources & refine methodology for compiling NAS.
  - Advisory Committee on NAS will review data sources to align GDP with inflation and industrial indices.
- The previous base year revision in 2015 changed base year from 2004-05 to 2011-12.
  - → Gross Value Added (GVA) at basic prices was adopted.

#### What is Base Year?

- A base year is the reference year whose prices are used to calculate the real growth (minus inflation) in national income.
- Base year is a **benchmark used for GDP calculation**.
- Revision of base year are also relevant for other metrics such as the Index of Industrial Production (IIPs), the Wholesale Price Index (WPI) and the Consumer Price Index (CPI).
- Why Update needed: Removing Inflation Effects, Enhances Data Quality, enhances more reliable data use, Aids in global comparison, adapts to post-pandemic dynamics, supports policymaking, etc.

#### **About GDP**

- Measurements of GDP: 3 ways (Production, Expenditure, Income Approach)
  - → Nominal GDP: Measured at current market prices, ignores inflation.
  - → Real GDP: Adjusted for inflation using base year prices, showing true economic growth.
- Limitations of GDP: Excludes non-market activities (e.g., household work), Ignores income inequality, Overlooks environmental damage, Misses informal economy contributions, Doesn't measure welfare or living standards

# 3.3. Foreign Direct Investment (FDI)

#### Why in the News?

The **cumulative amount of FDI inflows** into **India** has crossed the **\$1 trillion milestone** (\$1,033.40 billion) in the **April 2000-September 2024 period.** 

#### **More on the News**

- The decade 2014-24 saw an increase of 119% in FDI inflows over the preceding decade (2004-14).
- India's FDI inflows have increased ~20 times from 2000-01 to 2023-24.
- During 2000-2024, India's service sector attracted the highest FDI equity inflow (US\$ 115.18 billion).
- Maharashtra received highest,31%, with Karnataka,21%, Gujarat 16%. Mauritius largest source.

#### What is Foreign Direct Investment (FDI)?

- FDI means investment through capital instruments by a person resident outside India in an unlisted Indian company; or in 10% or more of the post issue paid-up equity capital on a fully diluted basis of a listed Indian company.
- It is usually a long-term investment and is largely a non-debt creating capital flow.
- Routes of FDI
  - → Automatic Route: Informing the Reserve Bank of India (RBI) after the investment is made.





Government Approval Route: Prior nod from the Ministry or department concerned. Mandatory for investments from a land border sharing country.

#### Regulation

- Currently, FDI in India is governed by FDI Policy 2020 and FEMA (Non-debt Instrument) Rules, 2019.
- → DPIIT is the primary regulator of FDI in India alongside RBI (authority to implement the FDI Rules).
- Sectors where FDI is Prohibited: Lottery, Gambling, Betting, Real Estate Business except development of townships, Tobacco Manufacturing, Sectors do not open to Private sector (Atomic Energy and Railway Operations) etc.

# FDI vs. Foreign Portfolio Investment (FPI)

Parameters	Foreign Direct Investment (FDI)	Foreign Portfolio Investment (FPI)	
Form of investment	An investment made by a foreign entity in a business enterprise intended for long-term operations.	Investment in financial assets (e.g., stocks, bonds) of a foreign country intended at short-term gains.	
Type of investment	An investment made by a foreign entity in a business enterprise intended for long-term operations.	Focuses on financial assets such as stock, bonds, etc.	
Volatility	Low volatility	More volatile	
Investor Control	<ul> <li>Higher as they can influence company decisions</li> </ul>	<ul> <li>Limited control</li> </ul>	
Liquidity	Low liquidity	<ul> <li>Highly liquid</li> </ul>	

# Challenges for FDI in India

- Complex Regulation and policy uncertainty: E.g., Retrospective taxation on Vodafone
- Institutional deficiencies: Inadequate enforcement by bodies like Competition Commission of India (E.g., Flipkart controversy)
- Concentration of FDI: Concentrated in few sectors like services as well as regions (urban areas of Maharashtra, Karnataka etc.)
- **Impact on local businesses:** Foreign companies' dominance can harm local businesses (e.g., Walmart's entry).
- Impact on Labour market: Concerns over job security and working conditions, with companies like Amazon and Uber facing legal challenges.
- Challenges faced by Indian Economy due to FDI: Dependency on foreign capital, Development vs. Environment, Intellectual Property concerns

## Steps taken to promote FDI inflows

- **Schemes:** National Industrial Corridor Programme, Production Linked Incentive (PLI) Scheme etc.
- Promoting Ease of Doing Business (EoDB): E.g., Jan Vishwas (Amendment of Provisions) Act, 2023; more than 42,000 compliances reduced
- Project Development Cells (PDCs): To fast-track investments in all concerned Ministries/ Departments.
- **Technological interventions:** National Single Window System (NSWS) and Foreign Investment Facilitation Portal (FIFP)
- Global Investment Summits: E.g., Vibrant Gujarat Global Summit to attract FDI.

#### Way Forward

- Infrastructure and Skill Enhancement
- **Policy reforms for** attracting FDI in manufacturing as well. (Baba Kalyani Committee)
- Dispute resolution and contract enforcement; FDI in Tier-II and Tier-III cities and adopt cluster-based development (Bulk Drug Parks, Mega Food Parks, etc.); Bilateral Investment Treaties (BITs)





# 3.4. The Banking Laws (Amendment) Bill, 2024

## Why in the News?

Recently, the Banking Laws (Amendment) Bill, 2024 was passed by the Lok Sabha which seeks to improve governance standards in India's Banking System.

#### More on the News

- The Bill proposes amendments to the RBI Act, 1934; Banking Regulation Act, 1949; State Bank of India Act, 1955; and the Banking Companies (Acquisition and Transfer of Undertakings) Acts of 1970 and 1980.
- Key Provisions of the Bill
  - Fortnight for cash reserves: Redefined as 1st-15th or 16th-month-end, applicable to all banks.
  - → Substantial interest: Threshold raised from ₹5 lakh to ₹2 crore, subject to revision.
  - Investor Education and Protection Fund (IEPF): Unclaimed dividends, shares, and bonds transferred after seven years.
  - Remuneration of Auditors: Banks can decide without RBI-central government consultation.

## Issues with the Governance of Banking System in India

- Rise in Banking Frauds: RBI's Report 18,461 frauds amounting to ₹21,367 crore.
- Governance and autonomy of Public Sector Banks (PSBs): Duality of control over PSBs from the RBI and the banking division of the Union Ministry of Finance, Fear of 5Cs (CAG, CBI, CVC, CIC, Courts).
  - Regulatory gaps and ambiguity: Coexistence of multiple regulatory bodies like the RBI, SEBI, IRDAI etc.
  - Cooperative banking sector suffers from weaker regulation due to dual control by RBI and state registrar.
- Structural issues:
  - Credit growth outpacing deposit growth: household savings shift from bank deposits to mutual funds etc.
  - → Political considerations like debt waivers disrupting credit culture and balance sheets of banks, etc.
- Cybersecurity and IT Risks, Digital Frauds

## **Recent measures taken to improve Banking Governance in India**

By the Union Government			By the RBI		
0	Reforms in PSBs: Consolidation of PSBs recapitalization of PSBs to Basel III norms, etc.	<b>O</b>	Strengthened risk management framework: Risk- based Supervision, Asset Quality Review and Prompt		
Э	Legislative reforms: Amendments to the Banking Regulation Act, 1949 to empower <b>RBI to supersede</b>		Corrective Action Framework, Prudential Framework for Resolution of Stressed Assets Framework (2019)		
	boards in case of governance failures; implementation	Э	Regulatory reforms for Cooperative Banks: Enhanced		
	of IBC to streamline NPA resolution; etc.		RBI's regulatory control over cooperative banks under		
Э	Reducing stress on Banks.		Banking Regulation (Amendment) Act, 2020.		

# Way Forward

- **Autonomy of PSBs:** Establish Bank Investment Company to manage government stakes. (P J Nayak)
- Performance Incentives: Link executives' pay to profits. (P J Nayak)
- **Transparency:** Strengthen disclosures, reporting, and whistleblower mechanism. (Narasimham-II)
- **Regulatory Coordination:** Improve RBI-SEBI-IRDAI collaboration. (Narasimham-II)



# 3.5. Public-Private Partnership (PPP) Framework in India

#### Why in the News?

**Benchmarking Infrastructure Development** report released by **World Bank** analysing Public-Private Partnership (PPP) regulatory landscapes across 140 economies.

#### **Key Highlights of the report**

- **Public Fiscal Management System (PFMS):** Only 19 economies have adopted specific budgeting, etc.
- **2** Lack of transparency: Online publication of contract amendments was only carried out in 22 per cent of cases
- Monitoring and Evaluation: Only 37% of the economies require payments linked to performance.

## **About PPP and Various PPP Models in India**

PPP is collaboration between governments and private companies to provide public services or infrastructure. Private Investment Unit in the Department of Economic Affairs is responsible for policy-level matters concerning PPPs.

## Various PPP Models in India

- Build Operate Transfer (BOT)
- Build Own Operate (BOO)
  - ➡ BOT-Annuity: Performance payments, granting authority pays the concessionaire annuities on scheduled dates throughout the concession period.
- Operations & Maintenance (Service Contract)
- **Engineering Procurement and Construction (EPC):** The private entity **manages EPC**, **has no role in project management** and funded by government.
- Hybrid Annuity Model (HAM): It combines EPC (40 per cent) and BOT-Annuity (60 percent). The government funds 40% of the project cost, while private developer secures the remaining 60%, often investing only 20-25% of the total cost, with the rest financed through debt.

# Need of PPPs in India

- **Infrastructure Gaps:** India has major infrastructure deficits in transportation, energy, and urban development.
- Resource Mobilization: PPPs help combine public and private financing.
- Efficiency and Innovation
- Risk Sharing: PPPs distribute risks between public and private entities
- Meeting SDGs: SDGs directly linked to social and economic infrastructure sectors
- Focus on Service delivery: Eg. The redevelopment of railway stations, like Rani Kamlapati Station in Bhopal,

## What are the challenges faced by PPPs in India?

- Regulatory Issues: According MoSPI, Rs 5.01 lakh crore projects overrunning due to land acquisition issues, environmental clearance delays etc. (In March 2024)
- Financing Constraints: National Infrastructure Plan requires INR 111 lakh crores over the next five years.
- Long-Term Contract Issues: Private sector loses negotiating power due to economic or policy changes.
- Lack of Dispute Resolution Mechanisms
- Involvement of State-Owned Entities discourages their involvement in PPPs.
- Government Steps to Boost PPP: National Monetization Pipeline, Viability Gap Funding, Infrastructure Project Development Fund, Foreign Direct Investment (FDI): 100% in PPP sector SPVs (automatic) for most sectors etc.

# Way Forward to Improve PPP in India (According to Vijay Kelkar committee)

- Service delivery Focus: Prioritize service delivery over fiscal benefits.
- Risk Management: Use advanced modeling.
- **Expert Mechanisms:** Set up PPP Review Committee, Tribunal.
- Legal Reforms: Amend laws, create PPP Institute.
- **Independent Regulation:** Strengthen sectoral regulators.

# 3.6. Most-Favoured-Nation Clause

# Why in the News?

Starting January 1, 2025, Switzerland has suspended the Most-Favoured-Nation (MFN) clause in the Double Taxation Avoidance Agreement (DTAA) with India.

# About Double Taxation Avoidance Agreement (DTAA)

- About DTAA: A treaty between two or more countries which ensures taxpayers (individuals or businesses) are not taxed on the same income in Residence and Source country.
- How DTAA Works? Residence Country vs. Source Country
  - Residence Country: This is the country where the taxpayer lives or is based (home country).
  - Source Country: This is the country where the income is earned (foreign country).

# MFN Clause in Double Taxation Avoidance Agreement (DTAA)

- Definition: The MFN clause within DTAA is a provision in tax treaties that ensures a country grants the same or better tax benefits to the other country as it provides to any of its other "most favored" treaty partners.
- MFN Principle is also found within WTO Framework.
  - The DTAA MFN clause ensures equal tax benefits between treaty partners, while the WTO MFN principle mandates equal trade treatment by extending any trade advantage granted to one WTO member to all others.
  - WTO's MFN Principle: Codified in General Agreement on Tariffs and Trade (GATT), General Agreement on Trade in Services (GATS), Trade-Related Aspects of Intellectual Property Rights (TRIPS).

# **Significance of DTAA in Global Tax Governance**

- Legal Certainty: Provides clear tax guidelines, aiding financial planning (e.g., India-Japan Mutual Agreement Procedures (MAP) for transfer pricing).
- Prevents Fiscal Evasion: Includes anti-abuse clauses (e.g., India-Mauritius DTAA).
- Tax Savings: Enables lower tax rates.
- Tax Refunds: Reduces double taxation burden.
- Reduced TDS: Lowers tax on dividends.

## **Challenges in DTAA Architecture**

- **Treaty Shopping and Abuse: Example:** Mauritius **used by foreign investors** to route funds into India
- Interpretation and Implementation Issues
- **2** Lack of Harmonization with Domestic Laws: Example: The recent 2023 Nestle issue between India-Switzerland.
- Inadequate Dispute Resolution Mechanisms: Delays and inefficiencies in resolving disputes under the MAP.

## Conclusion

Switzerland's suspension of the MFN clause in the India-Switzerland DTAA reflects evolving global tax norms, emphasizing the need for clear treaty interpretations, compliance with domestic laws, and alignment with international tax standards.

3.6.1. Investment Facilitation for Development Agreement (IFDA)

#### Why in the News?

India and South Africa opposed the China-led IFDA proposal at the World Trade Organization (WTO).

#### **About IFDA**

- **Genesis:** Proposed in 2017 by China and other developing and least-developed (LDCs) WTO members.
- **Objective:** Legally binding provisions to boost FDI for sustainable development in developing economies and LDCs.
- **Plurilateral Agreement:** Binding only for accepting members, open to all WTO members (per Annex 4, WTO Rule Book).
- **MFN Principle:** Ensures equal tariff/regulatory treatment for all members' "like products" in imports/exports.



# **Reasons for India's Opposition to IFDA**

- **Jurisdictional and Structural Issues:** India maintains that Investment is not a trade issue
- **Opposition to Plurilateralism:** India views the plurilateral approach as a threat to WTO's multilateral foundation
- **Chinese Leadership Issues:** Potential risks in formalizing such investment frameworks.
- **Sovereignty Concerns:** foreign corporate lobbying, prioritize foreign investors over domestic interests.

# 3.7. mBridge Project

#### Why in the News?

As per Bank for International Settlements (BIS), Project mBridge reached the minimum viable product (MVP) stage in mid-2024.

## **About Project mBridge**

#### Launched in 2021

- mBridge is a cross-border, decentralised, multiple central bank digital currency (mCBDC) platform.
- A platform based on a new blockchain 'the mBridge Ledger' was also built to support real-time, peer-to-peer, crossborder payments and foreign exchange transactions.
- Participants: Initially led by the BIS Innovation Hub, in collaboration with the other four central banks of China, Thailand, the United Arab Emirates (UAE) and Hong Kong.
- → Saudi Central Bank joined in 2024. There are more than 31 observing members including RBI.

#### Significance of mCBDC:

- Lower Transaction Cost, Increased Efficiency and Transaction Speed.
- Enhanced Security and Transparency through the use of Blockchain technology, AI.
- Monetary Sovereignty, credibility, and trust among countries.
- **Preventing Monopoly and Digital Dollarization** (replacement of other currencies by more influent one) etc.

## **Challenges associated with mCBDC**

- **Global Acceptance and credibility** as BIS have announced backing out
- Regulatory Uncertainty due to lack of a coherent regulatory framework across jurisdictions.
- Volatility and Macroeconomic Stability associated with digital currencies.
- Security Concerns regarding data breaches, Illegal uses such as money laundering, tax evasion etc.
- **Risks of creating Parallel and unregulated structures** of transactions.

#### Conclusion

mBridge represents a potential shift toward a more multipolar global financial system, where digital currencies backed by local economies can play a much larger role in international trade.

# 3.8. Railways Reforms

## Why in the News?

Recently, the **Railways (Amendment) Bill, 2024**, has been passed in the Lok Sabha and **Parliamentary Standing Committee** on **Railways** released **report on Railway Modernization and Financial Sustainability**.

# About Railways (Amendment) Bill, 2024

#### Simplified Legal Framework

- Repeals the Indian Railway Board Act, 1905 and incorporates its provisions into the Railways Act, 1989.
- Aims to avoid referencing two separate laws for railway administration.





#### **Additional Power to Central Government on Constitution of Railway Board:** Central government will prescribe:

- the number of members of the Board,
- + the qualifications, experience, terms and conditions of service, and
- manner of appointment for the Chairman and members of the Board.

The Railways (Amendment) Bill **simplifies** legal structures but retains the centralized framework, leaving many operational and financial challenges unaddressed. The recent Parliamentary Standing committee has also highlighted the need for Structural reforms crucial for improving efficiency, competitiveness, and service quality.

## **Key Recommendations of Parliamentary Standing Committee**

Parameters	Recommendations	
Financial	<ul> <li>Make a comprehensive review of passenger fares in different trains and classes.</li> <li>Most of the earnings of Indian Railways comes from its freight services.</li> <li>Boost non-fare revenue to 20% by 2030 through advertising and commercial development.</li> </ul>	
Operational	Creation and Expedition of new <b>Dedicated Freight Corridors</b> to increase speed, freight loading and earnings.	
Infrastructure and modernisation	<ul> <li>Investment: Boost private sector involvement</li> <li>Land acquisition: Consider policy changes to speed up land acquisition</li> <li>RoBs and RuBs: The Committee commends the new policy allowing Railways to fully fund stalled projects due to state inaction on cost-sharing, ensuring timely completion of pending works.</li> </ul>	
Research	Increase scope of Research & Development to ensure modernisation and assimilation of latest technologies	
Safety	Ensure faster penetration of Kavach	
Green Railways	<ul> <li>Incorporate 'Green Budgeting' (aligning public budgets with climate and environmental objectives) methodologies in financial allocations.</li> <li>Indian Railways have set a target of making themselves Net Zero Carbon Emitter by 2030</li> </ul>	

# Conclusion

Amrit Bharat Station Scheme (2022) for development of railway stations and National Rail Plan (2020) to improve efficiency of freight transportation are steps in positive direction.

# 3.9. Tourism Sector in India

#### Why in the News?

Recently, Union Ministry of Tourism has approved **40 Projects worth ₹ 3295.76 Crore** for development of lesser-known Tourism sites in 23 States.

**Status of Tourism Sector in India:** 39th India's rank in Travel and Tourism Development Index 2024 published by World Economic Forum; 18.89 million International Tourist Arrivals in India during 2023.

#### More on the News

- Aim: To ease pressure on high-traffic sites, promote balanced tourist distribution, enhance experiences, boost local economies, and ensure sustainable tourism growth by enhancing tourism infrastructure.
- Aligned with the Ministry of Tourism's guidelines for Development of Iconic Tourist Centres to Global Scale for developing Iconic Tourist Centres under Special Assistance to States/Union Territories for Capital Investment (SASCI) Scheme of Department of Expenditure, Union Ministry of Finance.
  - SASCI Scheme, provides 50-year interest-free loans to state governments for capital projects, including developing iconic tourist centers and promoting them globally.



## Significance of Tourism for India:

- Cultural: Revival of dying art, Heritage conservation. E.g., 'Adopt a Heritage' scheme, Fosters national integration. E.g., 'Dekho Apna Desh' campaign.
- **Economic:** Tourism sector contributed ~6.8% of India's GDP in 2024.
- **Diplomatic:** Incredible India campaign to showcase India's rich culture. E.g., Yoga and Ayurveda destination.

#### **Challenges in Tourism Sector**

- Infrastructure bottlenecks
- Safety and security concerns: especially Female.
- Environmental degradation, lack of waste disposal systems. E.g. Manali suffering from littering.
- Seasonality of tourism: overcrowding, lack of services, and sub-optimal utilization of facilities. E.g., Char Dham Pilgrimage in Uttarakhand.
- Post-Pandemic Recovery Issues: According to the UN Tourism Barometer, Asia and the Pacific reached only 85% of 2019 levels in international arrivals from January to September 2024.

## Initiatives to promote Tourism in India

- Infrastructure development: Swadesh Darshan 2.0, PRASHAD Scheme, RCS-UDAN
- Policy and legal framework: National Tourism Policy, E-Visa facility
- Niche tourism: medical and wellness tourism, Eco-tourism, Adventure Tourism
- Capacity building and training: Hunar Se Rozgar Tak, launch of an online programme for Linguistic Tourist Facilitators, etc.
- **Campaigns: Incredible India Campaign, Bharat Parv 2024, Travel for LiFE** for sustainable tourism, etc.
- **PPP:** Adopt a Heritage Scheme, Luxury Trains etc.

#### Way Forward

- **Connectivity & Accessibility:** Improve walkability, cycling, and tourist amenities for better last-mile connectivity.
- Niche Tourism: Promote farm stays, cultural tourism, and wellness clusters; support film industry clearances.
- Sustainable Tourism: Implement zoning, environmental audits, and SDG-aligned monitoring.
- Leveraging Technology: Use AI, AR, IoT, and Big Data for personalized travel and efficient tourism management.

# 3.10. Insurance Sector in India

# Why in the News?

The **Standing Committee on Finance** recently tabled an action taken **report** in the Parliament on observations and recommendations on the subject **'Performance Review and Regulation of Insurance Sector.** 

Data Point: 10th largest Insurance sector globally; 4.2% insurance penetration in India in 2021. (Global average: 7%)

## Key Observations by the Committee

- Government Policies: 18% GST and Tax Deducted at Source hinder insurance penetration; IRDAI recommends tax exemptions like Canada and the EU.
- Public Sector Insurance Companies: They face challenges of inadequate capital, lack of level playing field with private companies, overexposure to health insurance and lagging insolvency ratios (~₹ 26,000 crore financial losses)
- Increased private sector participation: Market share in general and health insurance rose from 48.03% (FY20) to 62.5% (FY23).
- Missing Middle in Health Insurance: A large portion of the population lacks adequate coverage.
- Microinsurance: Hindered by high costs, low awareness, and unviable business models.
- **Disaster Coverage:** India ranks 3rd globally for natural disasters, necessitating increased coverage.
- Claim Issues: Discount-driven competition leads to repudiation/delay in large claims.

## Micro insurance

- Micro insurance is specifically intended for the protection of low -income people, with affordable insurance products to help them cope with and recover from financial losses. (sum not exceed Rs 200000)
- Challenges: high transaction and service delivery costs, absence of a business model, lack of basic awareness and knowledge etc.
- Current micro-insurance products include PM Suraksha Bima Yojana, PM Jeevan Jyoti Bima Yojana, Pradhan Mantri Fasal Bima Yojana, Ayushman Bharat Pradhan Mantri Jan Arogya Yojana, etc.

**Reforms in Indian Insurance Sector: Technological Innovations:** YES-TECH (Yield Estimation System Based on Technology), WINDS (weather Information Network and Data System); **Privatization Efforts:** General Insurance Business (Nationalization) Amendment Bill, 2021; **Grievance Resolution Systems:** Insurance Ombudsman etc.

#### **Key Recommendations of the Committee**

- Promote Microinsurance: amend the Insurance Act, 1938 to remove Rs. 100 crore fixed capital limit.
- Composite Licensing: offer both life and non-life insurance products under one entity.
- **Parametric Insurance in disaster-prone areas: for vulnerable areas** and **economically weaker sections**.
- **Filling the Health Insurance gap:** Constituting a **multi-stakeholder Inter-Ministerial Working Group**.
- Reduce GST for health insurance and microinsurance products.
- Level Playing Field for Public Sector Companies
- Unclaimed Policies: Central Portal for unclaimed policies in line with UDGAM (Unclaimed Deposits: Gateway to Access information) of RBI.

# 3.11. Oilfields (Regulation and Development) Amendment Bill, 2024

## Why in the News?

Recently, the Oilfields (Regulation and Development) Amendment Bill, 2024 was passed in the Rajya Sabha to amend the Oilfields (Regulation and Development) Act, 1948.

**Domestic Oil and Natural Gas Sector in India:** 651.8 million Metric tons (MMT) of recoverable crude oil reserves; 1,138.6 billion Cubic meters of recoverable natural gas reserves.

#### **Key Provisions of the Bill**

- Expanded definition of mineral oils: Expands 'mineral oils' to include hydrocarbons, coal bed methane, and shale gas/oil, excluding coal, lignite, and helium.
- Introduction of Petroleum lease: It seeks to replace the mining lease with a petroleum lease.
- Rule-making powers of Central Government: merging petroleum leases, environmental protection and dispute resolution
- Decriminalization of offences: Replaces imprisonment and minor fines with a penalty of ₹25 lakh.
- **Adjudication of penalties:** Designates a Joint Secretary or above as Adjudicating Authority.
- Challenges in Domestic Oil Exploration and Production: Aging Oilfields, High Taxation, Environmental Risks, Geological Data Deficiency, Low Domestic Production, Alternative Energy Growth.

#### How Will the Oilfields Amendment Bill Shape the Future of Oil Exploration?

- Encourages domestic production and reduce import dependency.
- Attracts private investment.
- Policy modernization: Aligns regulatory provisions with contemporary energy needs.
- Clear legislative demarcation: Establishes a clear distinction between the Oilfields Act (for petroleum and mineral oils) and the Mines and Minerals Act (for other minerals).



# 3.12. News in Shorts

# 3.12.1. 55th GST Council meeting

55<sup>th</sup> Goods and Services Tax (GST) Council meeting was held in Jaisalmer, Rajasthan.

**GST Council:** Constitutional body under Article 279A (inserted by 101st constitutional Amendment Act, 2016) for GST-related recommendations.

# **Key-recommendations by GST Council**

- **•** Full exemption of GST on **gene therapy**.
- Exemption of GST on contributions by general insurance companies from third-party motor vehicle premiums for Motor Vehicle Accident Fund.
- Reduction in the GST rate on Fortified Rice Kernel (FRK) to 5%.
- Pepper whether fresh green or dried and raisins when supplied by an agriculturist is not liable to GST.
- When popcorn is mixed with sugar (e.g. caramel popcorn), it would attract 18% GST.

# 3.12.2. All-India House Price Index (HPI)

## Reserve Bank of India released its quarterly House Price Index (HPI)

- HPI: Increased by 4.3% year on year in quarter 2: 2024-25, up from 3.3% in the previous quarter.
- Bengaluru saw the highest growth at 8.8%, while Kanpur experienced a decline of -2.0%.

# About All-India Home Price Index (HPI)

- Base: 2010-11 = 100
- Data Source: Transaction-level data from registration authorities in 10 major cities.
- Cities Covered: Ahmedabad, Bengaluru, Chennai, Delhi, Jaipur, Kanpur, Kochi, Kolkata, Lucknow, Mumbai.

# 3.12.3. Consumer Confidence Survey (CCS)

Latest RBI survey shows weakened consumer confidence in India's economy, employment, and spending.

# About CCS

- It gauges the economy's health from the consumer's perspective. High confidence typically leads to increased consumer spending.
- CCS responses are measured through: Current Situation Index (CSI), Future Expectation Index (FEI)

# 3.12.4. SFBs to extend Credit $\land$ Line through UPI

Reserve Bank of India (RBI) has recently decided to permit Small Finance Banks (SFBs) to extend pre-sanctioned credit lines through Unified Payment Interface (UPI).

# **Credit Line through UPI by SFBs**

- Under this facility, payments through a presanctioned credit line issued by a Bank to individuals, with prior consent of the individual customer, are enabled for transactions using UPI System.
- Significance: Aims to deepen financial inclusion and enhance formal credit, particularly for 'new to credit' customers.

#### **About SFBs**

- Objective: To further financial inclusion by provision of savings vehicles, supply of credit
- Registration: As a public limited company under Companies Act, 2013;
- **Regulated by:** RBI.
- Applicability of CRR and SLR: Similar to CRR and SLR requirements for Scheduled Commercial Banks (SCBs).;
- Capital requirement: Minimum paid-up voting equity capital of ₹200 crore (except for such SFBs which are converted from Urban Cooperative Banks).
- Priority Sector Lending (PSL) norms: Required to extend 75% of its Adjusted Net Bank Credit (ANBC) to the priority sectors.

# 3.12.5. Unified Payments Interface (UPI) Lite

RBI has revised transaction limits to ₹ 1,000 from ₹ 500 earlier for UPI Lite to encourage use of UPI.

RBI also raised the total limit for offline transactions on UPI Lite to ₹ 5,000 from ₹ 2,000.

# **About UPI Lite**

It is a payment solution that leverages trusted NPCI Common Library application to process low value transactions without utilizing a Remitter bank's core banking systems in real-time, while providing adequate risk mitigation.

# 3.12.6. Index of Eight Core \ Industries (ICI)

The **Index of Eight Core Industries** (ICI) increased by 3.1% in October 2024 compared to October 2023.

## About ICI

The ICI measures combined & individual performance of production of eight core industries viz. Coal, Crude

Oil, Natural Gas, Refinery Products, Fertilizers, Steel, Cement & Electricity.

- The Eight Core Industries comprise 40.27 % of the weight of items included in Index of Industrial Production (IIP).
- The Office of Economic Adviser, Department for Promotion of Industry and Internal Trade (DPIIT), Union Ministry of Commerce is responsible for Compiling and releasing monthly ICI.

# 3.12.7. World Bank Released Annual International Debt Report (IDR) 2024

The IDR features external debt statistics and analysis for low- and middle-income countries (LMICs) that report to the **World Bank's Debtor Reporting System (DRS)**.

# **Key highlights**

- Rising External Debt: Total external debt of LMICs rose by 2.4% in 2023, reaching \$8.8 trillion.
- Factors Driving Indebtedness
  - → High Interest Rates: Tight monetary policies in high-income countries pushed interest rates.
  - Other Factors: Inflation, depreciating currencies, and global economic uncertainty etc.
- Impact of rising debt: health, education, and environmental funding.

## Way Ahead

- Global Financial Reforms to prevent a widespread debt crisis
- Mitigating Predatory Lending
- Crisis Resilience: Implement climate-resilient debt clauses and standstill rules to pause repayments during crises
- Improved Restructuring Mechanisms: Establish automatic restructuring rules and a Global Debt Authority to guide and coordinate sovereign debt management.

# 3.12.8. Tax Justice Network Released 'State of Tax Justice 2024' Report

## **Key Observations of Report**

- Countries are losing US\$492 billion a year to global tax abuse.
  - Two-third (US\$347.6 billion) is lost to multinational corporations shifting profit offshore to underpay tax.
  - → Remaining one-third (US\$144.8 billion) is lost to wealthy individuals hiding their wealth offshore.
- Nearly half the losses (43%) are enabled by the eight countries (all OECD members) that remain opposed to a UN tax convention: Australia, Canada, Israel, Japan, New Zealand, South Korea, UK and US.

Countries of Global North lose largest amount of tax revenues in absolute terms while countries of Global South endure the deepest losses as a share of their tax revenues.

## **Policy recommendations**

- Adopt a UN tax convention, Having excess profits and wealth taxes
- Global Tax Reforms: OECD's Global Minimum Tax (GMT), Base Erosion and Profit Shifting etc.

3.12.9. Global Wage Report released by \ International Labour Organization (ILO)

#### **Key Findings**

- Trends in wage growth
  - → Global: After falling in 2022, global real wage growth recovered in 2023.
  - Regional: Average wages are increasing faster in Asia and the Pacific, Central and Western Asia, and Eastern Europe.
- Trends in labour income inequality
  - Wage inequality: Declined, however, it is highest in low-income countries and lowest in high-income countries.
  - Informal Economy: Women and workers are overrepresented, informal employment has increased.
- Labour Productivity (1999-2024): It has increased more rapidly in high-income countries than real wages.

# Way forward

- Increased research for measuring and estimating change in inequality
- National strategies to reduce wage inequality
- Redistribution of Income through system of taxes and social transfers

3.12.10. Windfall Tax

Government abolishes windfall tax on crude oil, ATF, petrol, and diesel exports.

## **About Windfall Tax**

- A windfall tax is a tax imposed by governments on certain industries that experience significantly above the average profits due to favorable economic conditions.
- These taxes are designed to capture a portion of these unexpected gains to fund public projects, reduce deficits, or redistribute wealth.



# 3.12.11. Atmanirbhar Clean Plant Programme (CPP)

Asian Development Bank (ADB) and India signed a \$98 million loan agreement for developing regulatory framework and institutional systems to effectively implement the CPP for horticulture.

# **About CPP**

- Genesis: Approved under the Mission for Integrated Development of Horticulture (MIDH), Centrally Sponsored Scheme.
- Purpose: Provide farmers access to virus-free, highquality planting material, leading to increased crop yields.
- Key Components
  - → 9 world class state-of-the-art Clean Plant Centers (CPCs) equipped with advanced diagnostic therapeutics and tissue culture labs.
  - Certification Framework, supported by a regulatory framework under the Seeds Act 1966.
  - Support for large-scale nurseries for the development of infrastructure.
- Implementing Agencies: Ministry of Agriculture and Farmers Welfare through the National Horticulture Board (NHB) and the Indian Council of Agricultural Research.
  - → It will be Implemented from 2024-30 with 50% assistance from ADB.
- Other Key Initiatives for Horticulture Sector: Coordinated programme on Horticulture Assessment and Management using Geoinformatics (CHAMAN); Kisan Rail services; Capital Investment Subsidy Scheme by NHB.

# 3.12.12. RBI Increases Limit for Collateral-Free Agricultural Loan

The move aims to provide **enhanced financial access to farmers** without the burden of providing collateral.

# Key directives to banks include:

- From ₹1.6 lakh per borrower to ₹2 lakh.
- Timely implementation (from January 01, 2025).
- Awareness campaigns.

## Significance of the Enhanced Limit

- **Enhanced Credit Accessibility: For** small and marginal farmers (over 86% of the sector).
- Simplify Loan Disbursement
- Promotion of Financial Inclusion

**Key issues in disbursement of Agricultural Credit:** Skewed focus on short-term crop loans, rising fiscal burden due to loan waivers, over-reliance on non-institutional credit, etc.

**Other Initiatives:** Primary Agricultural Credit Societies (PACS), Kisan Credit Card (KCC), Modified Interest Subvention Scheme

# 3.12.13. Credit Guarantee Scheme for e-NWR based Pledge Financing (CGS-NPF) Launched

It allows farmers to avail loans against electronic NegotiableWarehouseReceipts (e-NWRs) after depositing their commodities in Warehousing Development and Regulatory Authority (WDRA, HQ New Delhi) accredited warehouses.

#### About e-NWRs

- It is a digital version, mandatory of the traditional warehouse receipt, governed by the Warehousing (Development and Regulation) Act of 2007.
- It allows goods deposited in a registered warehouse to be transferred or sold through endorsement.

# **Key Features of the Scheme**

- Ministry: Ministry of Consumer Affairs, Food & Public Distribution
- **Total Corpus: Rs 1,000-crore** for post-harvest finance
- Coverage: Loans up to Rs. 75 lakhs for agricultural purpose and up to Rs. 200 Lakhs for non-agricultural purpose.
- **Eligible Institutions:** All scheduled banks and cooperative banks.
- Eligible Borrowers: Small and marginal farmers, women, SC/ST/PwD farmers, MSMEs, traders, FPOs, and farmer cooperatives.
- Risks Covered: Credit and warehouseman risks;
- Guarantee coverage: 85% for loans up to Rs. 3 lakh and 80% for loan between 3 to 75 lakhs for small and marginal farmers/women/SC/ST/PwD. 75% for other.

Significance of the Scheme: Minimise distress selling by farmers, Instill confidence in bankers, addressing the default arising out of both credit and warehouseman risk

# 3.12.14. Kisan Pehchan Patra

Centre has advised states to adopt a 'camp-mode approach' to farmer registration.

About Kisan Pehchan Patra

- It is an Aadhaar-linked unique digital identity that is linked dynamically to state's land records, besides having information e.g. demographic, crops sown and ownership details.
- **ID** will form the **core** of the **'Farmers Registry'**.
  - Agri Stack is one of the components of the Digital Agriculture Mission, Other being Krishi Decision Support System
  - Agristack Consists of 3 databases: Farmers' Registry, Geo-referenced Village Maps, and Crop Sown Registry.



# 3.12.15. Kisan Kavach

Scientists affiliated to the Department of Biotechnology (DBT) have developed an Indigenous **'anti-pesticide' suit** called Kisan Kavach.

#### **About Kisan Kavach**

- Developed by BRIC-inStem, Bangalore, it is designed to protect farmers from the harmful effects of pesticide exposure.
- The kit consists of a trouser, pullover, and a facecover made of 'oxime fabric', which can chemically breakdown any of the common pesticides.

## 3.12.16. Initiative for Reshaping Supply Chains of Fashion and Construction Sectors

Recently, **India along with 7 other countries** launched **a new initiative** with respect to the fashion and construction industries.

#### About the Initiative

- Funded by: Global Environment Facility (GEF)-funded Integrated Programme on Eliminating Hazardous Chemicals from Supply Chains
- **Launched**: for 6 years.
- Members: Cambodia, Costa Rica, Ecuador, India, Mongolia, Pakistan, Peru, and Trinidad and Tobago.
- Objectives: To transform fashion (textile) and construction industries to reduce their environmental impact by reshaping supply chains (promote regenerative design, the replacement of nonrenewable materials, resource-efficient production, etc.).

# 3.12.17. SMILE Program

India and Asian Development Bank (ADB) recently signed a \$350 million policy-based loan under the second subprogram of SMILE (Strengthening Multimodal and Integrated Logistics Ecosystem) program.

#### **About SMILE Program**

- It is a programmatic policy-based loan (PBL) by ADB to support the government of India to undertake wide ranging reforms in the logistics sector.
- Objective
  - To incentivizing private sector participation in multimodal logistics projects (MMLPs)
  - To improve efficiencies in external trade logistics and encourage the use of smart and automated systems for improved service delivery.

# 3.12.18. National Legal Metrology Portal (eMaap)

Department of Consumer Affairs is developing eMaap to integrate State Legal Metrology Departments and their portals into a unified National System.

Presently, State Governments are using their own portals for registration of packaged commodities, issue of licenses and verification/stamping of weighing & measuring instruments

#### **About eMaap**

- Aim: Streamline processes for issuing licenses, conducting verifications and managing enforcement and compliance.
- Benefits: Foster ease of doing business and Transparency in trade practices by minimizing compliance burdens, reducing paperwork under Legal Metrology Act, 2009; Enables data-driven decisionmaking.

# 3.12.19. Merchant Shipping Bill, 2024

Ministry of Ports, Shipping and Waterways introduced Merchant Shipping Bill, 2024 in Lok Sabha.

- Bill seeks to repeal Merchant Shipping Act, 1958.
- Bill aims to consolidate and amend law relating to merchant shipping.

# **Key Highlights of Bill**

- Establishment of National Shipping Board
- Maritime Administration: Central Government appoint a person to be Director-General of Maritime Administration.
- Registration of Vessels: Ownership allowed by
  - → Citizen of India including Non-Resident Indian or an Overseas Citizen of India.
  - Company/ body established by any Central Act or State Act having its registered office of business in India.
- Transfer of Indian vessel or share: No person shall transfer/acquire any Indian vessel at any time during which India's security or any part of territory is threatened by sanction, war or external aggression and proclamation of emergency.
- Prevention and containment of pollution: Every vessel shall comply with provisions of international conventions, as applicable, namely MARPOL Convention; Anti-Fouling Systems Convention; etc. to prevent pollution.



# 3.12.20. Coastal Shipping Bill, 2024 introduced in the Lok Sabha

Bill's purpose is to **consolidate and amend laws governing coastal shipping (Uniformity in regulation)**, promote coastal trade, connectivity and encourage domestic participation.

Coastal shipping in India holds great potential owing to its vast coastline (~ 7,500 km) and proximity to important global shipping routes.

# **Key Highlights of Bill**

- Prohibition of coasting trade; National Coastal and Inland Shipping Strategic Plan; National Database of Coastal Shipping; Licensing of chartered vessels
- Other Provisions: Provision for compounding of certain offences and imposition of penalty by the principal officer; and provision for empowering the Director-General to call for information in respect of certain matters.

# 3.12.21. 'Jalvahak' Scheme to boost Inland Waterways

Union Government unveiled 'Jalvahak' Scheme which aims to encourage business enterprises with safe and timely delivery of cargo through inland waterways, in a cost-effective manner.

# About the Jalvahak scheme

- **Ministry:** Union Ministry of Ports, Shipping & Waterways.
  - → To be jointly implemented by the Inland Waterways Authority of India (IWAI) and Inland & Coastal Shipping Ltd (ICSL), a subsidiary of the Shipping Corporation of India.
- Aim: Schemes aim at Incentivizing Modal Shift of 800 million Tonnes KMs with an investment of ₹95.4 crores.
- **Time frame:** Valid for an initial period of 3 years.
- Route: Fixed Day Scheduled Sailing Service will ply vessels between Kolkata Patna Varanasi Patna Kolkata stretches of National Waterways (NW)-1, between Kolkata and Pandu in Guwahati on NW 2, and NW 16 via Indo Bangladesh Protocol Route (IBPR).
- Incentive: Offers reimbursement upto 35% of total operating expenditure incurred while transporting cargo.
- Criteria: Provides direct incentive to transport their goods via inland waterways for a distance of more than 300 km.
- Significance: Reduced logistics costs, decongestion of road and railways, and adapting to a sustainable mode of transportation.

# 3.12.22. Network Readiness Index (NRI) 2024

The 2024 edition of the Network Readiness Index (NRI) has officially launched.

- The theme of this year is "Building a Digital Tomorrow: Public-Private Investments and Global Collaboration for Digital Readiness."
- India climbed 11 ranks, securing the 49<sup>th</sup> position in NRI 2024.
- The report maps the network-based readiness landscape of 133 economies based on their performances in four different pillars: Technology, People, Governance, and Impact.
- It is co-published by Portulans Institute and Saïd Business School, University of Oxford.

# 3.12.23. First Ever Auction of Minerals in Offshore Areas

Ministry of Mines Launched first ever tranche of auction of mineral blocks in offshore areas

It is a major step forward in exploring India's extensive offshore mineral resources within its Exclusive Economic Zone (EEZ).

# Key Details of the Offshore Mining Auction

- Mineral Blocks: Auction includes 13 mineral blocks spanning across the Arabian Sea and Andaman Sea.
- Types of Mineral and corresponding Region: Construction sand (Off the coast of Kerala, Arabian Sea), lime-mud (Off the coast of Gujarat, Arabian Sea) and polymetallic nodules and crusts (Off Great Nicobar Islands, Andaman Sea).

# **Offshore Mining or Deep-Sea Mining**

- It is the process of retrieving mineral deposits from the deep seabed, at a depth of more than 200 meters.
  - India's offshore mineral reserves include gold, diamond, copper, nickel, cobalt, copper, manganese, and rare earth elements
- Step Taken for Offshore Mining: National Geological Data Repository (NGDR) portal, Offshore Areas (Existence of Mineral Resources) Rules, 2024.

# Significance of Offshore Mining for India

- Increase availability of minerals, unlock India's blue economy, reduce imports.
- Infrastructure development, high-tech manufacturing and green energy transition.

# **Challenges in Offshore Mining**

 Lack of private participation, requirement of highly skilled labour and capital, environmental challenges like habitat destruction, disruption of marine ecosystems etc.





# 4.1. National Investigation Agency (NIA)

# Why in the news?

Supreme Court in **Ankush Vipan Kapoor vs. NIA** clarified that the NIA's powers are not limited to investigating only scheduled offences mentioned under NIA Act.

#### More on the news

- The ruling upheld the Punjab & Haryana High Court's decision to cancel bail in a heroin smuggling case involving nonscheduled offences.
- The case had connections to drug trafficking, hawala channels, and terrorism funding.

## **Supreme Court Ruling**

- The Supreme Court supported NIA's authority to investigate non-scheduled offences related to scheduled ones.
- Under Section 8 of the NIA Act, NIA can investigate connected non-scheduled offences and any other accused linked to the scheduled offence, with central government approval.
- Investigations should be conducted jointly where possible.

# Schedule of Offences Under the NIA Act

- Key Laws: Explosive Substances Act, 1908, Atomic Energy Act, 1962, Unlawful Activities (Prevention) Act, 1967, Anti-Hijacking Act, 2016
- Aviation and Maritime Safety Laws: Suppression of Unlawful Acts against Safety of Civil Aviation Act, 1982, Suppression of Unlawful Acts against Safety of Maritime Navigation and Fixed Platforms Act, 2002
- Security and Terrorism Laws: Weapons of Mass Destruction and their Delivery Systems Act, 2005, SAARC Convention (Suppression of Terrorism) Act, 1993
- Indian Penal Code and Other Specific Sections: Chapter VI of IPC, Sections 370 and 370A (related to trafficking), Sections 489-A to 489-E (currency-related offences), Section 25(1AA) of Arms Act, 1959, Section 66F of Information Technology Act, 2000

# About National Investigation Agency (NIA)

- **Establishment:** Post-26/11 Mumbai attacks under the NIA Act, 2008.
- Objective: To investigate and prosecute offences that threatens India's sovereignty, security, and integrity, friendly relations with foreign States matters relating to international treaties etc
- Headquarters: New Delhi, with zonal offices in Guwahati and Jammu
- **Headed by:** A Director-General from the IPS.
- Jurisdiction: Nationwide and extends to Indian citizens abroad including,
  - → the persons in the service of the Government
  - → To persons on ships and aircrafts registered in India
  - → To persons who commit a Scheduled Offence beyond India against the Indian citizen or affecting the interest of India.





#### Powers:

- Investigation upon central government directive.
- Prosecution in designated NIA courts.
- Coordination with the state police.
- Extraterritorial operations under international agreements.
- **Conviction rate:** 95.23% in 147 cases out of 640 registered since inception.

## Initiatives taken to enhance the capacity of NIA

- National Terror Data Fusion and Analysis Centre
- NIA amendment act 2019
- Made Nodal agency at central level for investigating Terror funding and fake Indian currency notes cases.
- MoU between NIA and National forensic science University for capacity building of officers.

# 4.2. United Nations Convention on Cybercrime

# Why in the News?

The UN General Assembly recently adopted the **United Nations Convention on Cybercrime**, marking the first **legally binding UN instrument** on this issue.

#### More on the News

- Adopted by consensus among **193 UN Member States**
- To be signed in Hanoi, Vietnam in 2025
- **United Nations Office on Drugs and Crime (UNODC)** serve as secretariat
- Enters into force after 40 states ratify
- 3 Key Focus: Preventing, investigating, and prosecuting cybercrimes, including electronic evidence collection and sharing

## **Key Provisions of the Convention**

- International Cooperation & Data Sharing: Mutual legal assistance, Extradition, 24/7 network for immediate assistance
- **Procedural Measures:** Guidelines for electronic data management
- Protection Aspects: Personal data compliance, Respect for human rights, Bilateral/multilateral data sharing agreements
- **Additional Provisions:** Extradition, Transfer of sentenced persons, Transfer of criminal proceedings, Joint investigations

## **UN Cybercrime Convention Requires State Parties to**

- Criminalize Offences: Illegal system access, Child sexual abuse production/distribution, Cybercrime money laundering, Non-consensual content dissemination
- **Take Measures for:** Establishing criminal records, protecting witnesses, Assisting and protecting victims
- Purposes of the UN cybercrime convention
  - Technical assistance and capacity building
  - To combat cybercrime
  - International cooperation

# Why the Convention against Cybercrime matters?

- Increased Connectivity and Vulnerability: Over 67% of the world's population is online, increasing cybercrime risks, especially in Southeast Asia.
- **Around-the-Clock Cooperation:** Essential for handling electronic evidence across jurisdictions.
- Transnational Nature of Cybercrime: Requires a coordinated global response given the cross-border nature of cybercrimes.
- Adapting to Technological Advancements: Addressing the dual-use risks of new technologies like AI.
- **Protecting Children:** Equips governments with tools to combat online child exploitation.
- **Rehabilitation and Justice for Victims:** Acknowledges the need for justice and support for cybercrime victims.





# 4.3. Smuggling in India Report 2023-24

# Why in the News?

Recently, Directorate of Revenue Intelligence (DRI) released 'Smuggling in India' report 2023-24.

#### Key Highlights of the Report

Provides insights into smuggling trends, focusing on drugs, wildlife products, currencies, indicating a rise in these activities.

# Smuggling and Import Fraud in 2023-24

- Rise in seizures of Narcotics and Psychotropic substances by 8223 kg.
- Import fraud worth of 6000 crore detected.
- Gold smuggling operates through hub and spoke model, entry via land borders and air routes.

## Directorate of Revenue Intelligence (DRI)

- An anti-smuggling enforcement agency under the Central Board of Indirect Taxes & Customs (CBIC), Ministry of Finance.
- Objective includes detecting smuggling and combating related commercial frauds.

# **Reasons behind increased cases of Smuggling in India**

- **Geography and Borders:** Extensive coastline and porous borders facilitate smuggling.
- Market Demand: High demand for gold, especially from Gulf states that drives illegal trade.
- **Sophisticated Techniques:** Use of advanced concealment methods and technology like Darknet and cryptocurrencies.
- **Misuse of Legal Loopholes:** Exploitation of Free Trade Agreements by smugglers.
- **Transnational Networks:** Complex international smuggling networks makes it hard to detect.

## Nexus of Smuggling and India's Security Risks

- Narco-Terrorism: Due to location between the Death Crescent and Death Triangle India is particularly vulnerable to narco-terrorism.
- Financial Instability: Smuggling foreign currency weakens India's financial system whereas tax evasion distorts economic stability.
- Commercial Fraud: Revenue losses from trade misrepresentations.
- **Wildlife and Environmental Crimes:** trade in endangered species threatens India's biodiversity.
- Human Trafficking: often overlaps with smuggling routes and networks.

## Steps Taken to prevent smuggling and associated crimes By India

- Strengthening Enforcement: Significant contraband seizures through increased surveillance and intelligence
- Legal Empowerment: 2023 Wildlife Protection Act amendment allows illegal wildlife product seizures, Directorate general of Foreign trade (DGFT) empowered to define trade procedures, Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985 restricts narcotics outside medical contexts
- Technology and Collaboration: Advanced data analytics for smuggling detection, Customs agreements with 65+ countries, Partnerships with world Customs Organization (WCO) and Interpol, Participation in global operations like Operation SESHA

#### **Global Level**

- United Nations Office on Drugs and Crime (UNODC) combats global drug production/trafficking
- UN Convention against Transnational Organized Crime
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) regulates wildlife trade to prevent species extinction

# UN Commission on Narcotic Drugs (UNCND)

**Recent Development:** India has been selected to chair the 68th Session of the UNCND for the first time.

#### **About UNCND**

- **Origin:** Formed in 1946 by an ECOSOC resolution to oversee international drug control treaties.
- **Members:** Comprises 53-member states chosen by the Economic and Social Council (ECOSOC).
- **Functions:** Serves as the governing body for the United Nations Office on Drugs and Crime (UNODC).
- Mandate: Focuses on reviewing and analyzing the global drug situation, with emphasis on reducing both supply and demand.

# 4.4. News in Shorts

# 4.4.1. United Nations Peacebuilding Commission

India has been re-elected to U.N. Peacebuilding Commission for 2025–2026.

## **About U.N. Peacebuilding Commission**

- Genesis: Established in 2005 as an advisory body for peace efforts in conflict zones.
- Composition: 31 Member States elected from General Assembly, Security Council, and Economic and Social Council (ECOSOC), including top financial and troop contributors.
- Mandate: Coordinates resources and strategies for post-conflict peacebuilding and recovery.
- India's Role: One of the largest UN Peacekeeping personnel contributors, with over 6,000 currently deployed globally.

# 4.4.2. Kaveri Engine

The Kaveri engine, developed by the **Gas Turbine Research Establishment under DRDO**, has been approved **for inflight testing**.

## **About Kaveri Engine project**

- Initiation: Started in the late 1980s to provide propulsion for the LCA Tejas, later adapted for UAV use.
- Current Capability: Delivers 49–51 kN of thrust, ideal for UAVs like the Ghatak stealth UCAV.
- Significance: Represents a key advancement in India's aerospace autonomy, particularly in aeroengine technology.

# 4.4.3. 'Satan 2'

Russia is set to deploy the RS-28 Sarmat intercontinental ballistic missile, known as 'Satan 2'

## About Satan 2

- Overview: 'Satan 2' or RS-28 Sarmat is Russia's nextgen ICBM, recognized as one of the world's most potent nuclear weapons.
- Capabilities: Features MIRV technology for multiple simultaneous target strikes, with a range of 10,000 to 18,000 km, and can carry a payload of up to 10 tons.

## 4.4.4. Search and Rescue Aid Tool (SARAT)

# Indian National Centre for Ocean Information Services (INCOIS) develops an advanced version of SARAT.

This upgrade aims to increase precision in aiding Indian Search and Rescue (SAR) agencies, such as the Indian Coast Guard, during maritime operations.

#### **About SARAT**

- Origin: Developed in 2016 under the 'Make in India' initiative to expedite sea rescue operations.
- Features: Includes a mobile application for public use to assist in locating distressed individuals or vessels.

#### **About INCOIS**

- Genesis: Formed in 1999 as an autonomous entity under the Ministry of Earth Sciences.
- Mandate: To deliver ocean information and advisory services effectively.
- Activities: Offers continuous monitoring and alerts for coastal threats like tsunamis and storm surges

# 4.4.5. Exercises in News

- 11th SAREX-24: Indian coast Guard conducted National Maritime Search and Rescue Exercises & Workshop at Kochi
- SLINEX: Bilateral naval exercise between Sri Lanka and India.
- Desert Knight: Trilateral air combat exercise for better interoperability among India, France, and UAE.
- Harimau Shakti 2024: Annual Joint Military Exercise between India and Malaysia. (2023: Umroi cantonment, Meghalaya)
- Agni Warrior: 13th edition of Joint Military Exercise between Indian Army and Singapore Armed Forces.
- CINBAX: 1st edition of Joint Table Top Exercise between Indian Army and Cambodian Army, focusing on counter-terrorism under UN Charter Chapter VII at Pune.
  - CINBAX simulates joint Counter Terrorism operations, covering: Information operations, Cyber warfare, Hybrid warfare, Logistics, Casualty management, Humanitarian Assistance and Disaster Relief (HADR).





# 5.1. India State of Forest Report (ISFR) 2023

#### Why in the News?

The Ministry of Environment, Forests and Climate Change (MoEFCC) recently released the India State of Forest Report (ISFR) 2023.

#### **Overview**

- Prepared by Forest Survey of India (FSI)
- Published every two years since 1987

### **Assessment Method**

- Used satellite data
- National Forest Inventory data
- Field verification
- Covered 751 districts (up from 636 in previous report)

# **Key Definitions Used in ISFR 2023**

- Tree Cover: Comprises all tree patches outside the forest area, less than one hectare in extent.
- Forest Cover: Lands over one hectare with a tree canopy density of at least 10%.
- Forest Area: Known as Recorded Forest Area (RFA), it includes lands notified as forest under government acts or records. It includes
  - → Forest Area: Legal status of land according to government records
  - Forest Cover: Indicates the actual presence of trees on any land.



**Forest Density Hierarchy** Very Dense Tree canopy density 01 70% and above **Moderately Dense** Tree canopy density 02 40% to 70% **Open Forest** Tree canopy density 03 10% to 10% Scrub Tree canopy density 04 less than 10%



# Key Findings of the ISFR 2023

•	<ul> <li>Change in Forest and Green Cover in India (2021-23)</li> <li>→ Net forest cover: 156.41 sq.km</li> <li>→ Total Green cover: 1445.18 sq.km</li> <li>→ Outside RFAs: 149.13sq.km</li> <li>tside RFAs</li> </ul>	<ul> <li>Change in Forest density</li> <li>→ Very dense forest: 2431.50 sq.km(increase)</li> <li>→ Moderately Dense Forest: 12343.95 sq.km(decrease)</li> <li>Open forest: 1189.27 sq.km(decrease)</li> </ul>
	gional Trends	States' perfoWrmance
9	Forest Cover and Mangrove Loss by Region	Top forest and Tree cover states
	→ Western Ghats: 58.22 sq.km	→ MP: 85724 sq.km
	→ Northeast: 327.30 sq.km	→ Arunachal: 67083 sq.km
	→ Mangroves: 7.43 sq.km	→ Maharashtra: 65383 sq.km
	Mangroves <western ghats<northeast<="" th=""><th>Maharashtra<arunachal<mp< th=""></arunachal<mp<></th></western>	Maharashtra <arunachal<mp< th=""></arunachal<mp<>
Э	Largest increase in forest and tree cover	Largest decrease in forest and tree cover
	→ Chattisgarh:683.62 sq.km	→ MP: 612.41 sq.km
	→ UP: 559.19sq.km	→ Karnataka: 459.3 <mark>6 sq</mark> .km
	→ Odisha: 558.57 sq.km	→ Ladakh: 159.26 sq.km
	→ Rajasthan: 397.48 sq.km	→ Nagaland: 125.22 sq.km
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# **Other Key findings:**

- **Carbon Stock:** Increased by 81.5 million tonnes compared to the previous assessment.
- Top Bamboo Resources states: Madhya Pradesh, Arunachal Pradesh and Maharashtra
- **Top 3 States/UTs for Mangrove Cover:** West Bengal, Gujarat and Andaman & Nicobar Islands
- Top 3 States for Agroforestry: Maharashtra, Karnataka and Odisha
- Forest Fire: Forest Fire has decreased during 2021-22 season.
- Tiger Reserves with highest Forest Fires: Nagarjunsagar Srisailam Tiger Reserve (Andhra Pradesh), Indravati Tiger Reserve (Chhattisgarh) and Valmiki Tiger Reserve (Bihar)

# 5.2. Sacred Groves

#### Why in the news?

SC pronounced direction on an application for identification of sacred groves like Orans by Rajasthan Government following the **T.N. Godavarman judgment (1996).** 

### **About Sacred Groves**

- **Definition:** Patches of forests with religious and spiritual significance to the **indigenous communities**
- Scale: Estimated 100,000 to 150,000 sacred groves in India (IUCN)
- Notable Feature: Living Root Bridges (Jingkieng Jri) of Meghalaya on UNESCO's tentative World Heritage list

# Key Directives/Suggestions of the Supreme Court

- Legal protection via Wildlife Protection Act, 1972
- **D**raft comprehensive policy for sacred grove governance
- Nationwide survey to identify sacred groves
- Policies for community rights and conservation with active participation under the FRA Act 2006.
- Promote Piplantari model (Rajasthan) of sustainable practices

# Why Sacred Groves need protection?

- Integral to traditions, host community events like Sabarimala in Kerala.
- Refuge for endemic species like Meghalaya's 50 rare and endangered species confined to sacred groves.
- Prevents erosion in highland regions like highland groves in Western Ghats



- Source of resources and medicinal plants.
- Critical for local economies

#### **Threats and challenges**

- Disappearance of traditional beliefs
- Development activities
- Overgrazing causing soil degradation
- Invasive species: Exotic plants threatening native biodiversity, Eg. Eupatorium odoratum, Lantana camara and Prosopis juliflora

# **5.3. River Linking Project**

#### Why in the News?

Prime Minister laid the foundation stone of the Ken-Betwa River Linking National Project.

#### **About Ken-Betwa Link Project**

- Overview: Part of India's National River Linking Project, aiming to transfer surplus water from the Ken to the Betwa basin by 2030.
- Location: Covers Madhya Pradesh and Uttar Pradesh, targeting the drought-prone Bundelkhand region.

#### **Key Components**

- Phase I: Includes Daudhan Dam in Panna Tiger Reserve (77 m high) for irrigation and power generation and a 221 km Ken-Betwa Link Canal to transfer water.
- Phase II: Involves Lower Orr Dam, Bina Complex, and Kotha Barrage to address water scarcity in Betwa basin.

### National River Linking Project (NRLP)

- Background: Idea conceived by Sir Arthur Cotton in 1850s which was then revived in 1972 by K.L. Rao, then India's minister of power and irrigation.
- In 1982 National Water Development Agency (NWDA) was set up to study the feasibility of the river linking.
- Objectives: Aims to irrigate 30 million hectares, generate 20,000-25,000 MW of power to mitigate water-related issues.
- **Components:** Includes Himalayan River Development, Peninsular River Development, and Intra-State river links.

### Significance of Ken- Betwa River Linking Project

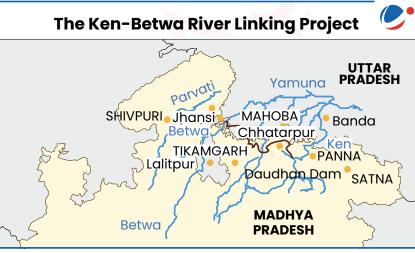
- Economic Growth: Promoting agro-industries and tourism.
- Flood and Drought Management: Balancing the water distribution.
- Renewable Energy: To generate 103MW hydropower and 27MW solar power.
- Drinking Water Supply: Provide water for 62 lakh people.
- Agriculture: irrigate 10.62 lakh hectares in Bundelkhand.

#### **Other Proposed Links**

- **Himalayan**: Kosi-Mechi, Gandak-Ganga, Ghagra-Yamuna, Sarda-Yamuna
- **Peninsular:** Mahanadi-Godavari, Godavari-Krishna, Krishna-Pennar, Damanganga-Pinjal

### **Challenges of River Linking Projects**

- Environmental Impact: Significant habitat disruption, deforestation, potential climate changes and rainfall deficit due to water transfers
- **Economic Concerns:** High implementation cost and maintenance expenses.
- **Social Implications:** Displacement, complex rehabilitation, and livelihood disruptions.
- Technical Challenges: Uncertain water availability and quality, sustainability concerns.







# 5.4. Draft Solid Waste Management Rules, 2024

#### Why in the News?

The Ministry of Environment, Forest and Climate Change (MoEFCC) has released the Draft Solid Waste Management (SWM) Rules, 2024 for wider public consultations.

#### More on the News

- Statutory Provisions: These rules amend the SWM Rules of 2016, under the Environment Protection Act, 1986, with enforcement by The Central Pollution Control Board (CPCB) and State Pollution Control Boards (SPCBs).
- **Implementation Date:** Effective from October 1, 2025.

### Key Features of Draft Solid Waste Management Rules, 2024

- Monitoring and compliance: central online registration by CPCB.
- **Circular Economy Focus: MoHUA** is an apex coordinating body.
- **Waste Segregation into biodegradable and non-biodegradable:** Safai karamcharis authorized to fine violators.
- Extended Producer Responsibility (EPR): Compensation based on "Polluter Pays" principle.
- Agriculture Waste Management: Local bodies, mandated to prevent burning of agriculture waste.
- Processing Requirement: Encourages on-site waste processing.

### **About SWM in India**

- **Definition:** Includes garbage, trash, and refuse.
- Categorization: Waste types include Municipal, Hazardous, Electronic, Biomedical, Plastic, and Construction waste.
- Current Status: Generates over 62 million tons annually, with only 43 million tons collected and 12 million treated.

#### Solid Waste Management Challenges in India

- **Basic Service Issues:** Poor collection, limited waste separation, lack of trained workers, low public awareness, and insufficient disposal land.
- **Financial Constraints:** Budgetary issues at the local level lead to outdated practices.
- **Overlapping Jurisdiction:** Coordination issues between multiple agencies.
- Technology Gap: High cost and low awareness of the modern solutions (like blockchain and AI).

#### **Consequences of Improper Waste Management Practices**

- Water Pollution: Contaminates water sources
- Air Pollution: Releases harmful substances that contribute to the climate change
- Soil Pollution: Hazardous Waste in landfills can contaminate soil.
- Ecosystem Disruption: Toxins disrupt natural habitats.
- **Economic Consequences:** Increased cost of waste management due to the contamination

### **Key Initiatives for Promoting Effective SWM**

- **India:** Smart Cities Mission, Swachh Bharat Mission (Grameen & Urban)
- **Global:** UNEP International Environmental Technology Centre (IETC) in Japan

# 5.5. Urban Air Pollution

#### Why in the News?

As per **World Cities Report 2024: Cities and Climate Action of UN-Habitat**, urban air pollution caused 6.7 million premature deaths in 2019, making it the top environmental risk factor for disease and death.

### More on the News

6<sup>th</sup> Annual World Air Quality Report by IQAir: New Delhi is the world's most polluted capital, with 9 out of 10 of the most polluted cities in India.



### Reasons for urban air pollution in India

- **O** Meteorological Factors: Low rainfall, stagnant winds, dust storms, temperature inversion
- Agricultural Practices: Stubble burning in Punjab and Haryana
- **O** Urban/Industrial Sources: Construction dust, vehicle emissions, waste disposal
- **Additional Sources:** Biomass burning, firecracker use

### Concerns and Issues arising because of air pollution

- **9 Health Impacts:** Respiratory and cardiovascular diseases
- Economic Losses: \$36.8 billion annually (1.36% of GDP in 2019)
- **D** Environmental Damage: Urban heat island effect, ecosystem degradation
- Structural Impact: Damage to landmarks like Taj Mahal

# Steps Taken by the Government of India to Curb Air Pollution

- Policy Frameworks: National Clean Air Programme (NCAP), Graded Response Action Plan (GRAP), 2019, Commission for Air Quality Management (CAQM), 2021, Central Pollution Control Board (CPCB)
- National Air Quality Index
  - → Monitored pollutants: PM10, PM2.5, NO2, SO2, CO, O3, NH3, Pb
  - → Good (0-50), Satisfactory (51-100), Moderately Polluted (101-200), Poor (201-300), Very poor (301-400), Severe (401-500)
- Transport Initiatives: National Electric Mobility Mission Plan
- Clean Energy Goals: 50% non-fossil fuel electricity by 2030

# Ways to curb urban air pollution in India

- **O** Urban Planning and Green Initiatives: Green spaces and clean air zones.
- **Sustainable Transportation:** Enhancing public and non-motorized transport options.
- **Technological and Scientific Solutions:** Adoption of cleaner technologies, artificial rain via cloud seeding.
- Waste Management: Bioremediation and biomining to handle landfill waste.
- **Integrated Policy Approaches:** Airshed management, international cooperation to address pollution issues.

# 5.6. News in Shorts

### 5.6.1. IPBES Nexus Assessment Report

Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) released Nexus Assessment Report

Report is also known as: The Assessment Report on the Interlinkages Among Biodiversity, Water, Food and Health.

# **Key Findings**

- **Hidden economic costs:** \$10-25 trillion annually
- Biodiversity declining 2-6% per decade over 30-50 years
- Growing socio-economic pressures driving biodiversity loss
- Water quality and climate resilience deteriorating
- 50% of emerging diseases linked to ecosystemanimal-human interactions

#### About IPBES

- Established 2012 for science-policy interface
- 150-member countries including India
- UN Environment Programme provides secretariat services

# 5.6.2. Global Status of Salt-Affected Soils report by FAO

# FAO's first major assessment of soil 'Global Status of Salt-Affected Soils', report released

Salt-affected soils: Defined by high levels of soluble salts or sodium ions, reducing soil fertility and plant growth.

# Factors increasing salinization and sodification

- Anthropogenic factors: Inefficient agricultural practices, deforestation, over-pumping of water, and mining activities.
- **Natural factors:** Increased aridity due to climate change, permafrost thawing.

# Key findings of the report

#### Global:

- **Coverage:** About 10% (1.4 billion hectares) of land is affected, potentially increasing to 24–32%.
- Most affected countries: Australia by area, Oman by percentage.





#### India specific:

- Coverage: 2.1% (6.72 million hectares) of India's land is affected.
- Э Most affected states: Gujarat, U.P., Maharashtra, West Bengal, Rajasthan.
- Э 17% of irrigated land affected due to brackish aroundwater use.
- Э management Sustainable practices include mulching, breeding salt-tolerant plants, and bioremediation.

# 5.6.3. Programme of Action for Landlocked Developing Countries for Decade 2024-2034

UN General Assembly adopted Programme of Action for Landlocked Developing Countries for Decade 2024-2034

# **Foundation and Priorities**

- Built on Vienna programme of action (2014-2024) and Almaty programme of action (2003)
- Э 5 priorities: Economic growth, regional trade integration, transport connectivity, climate resilience, implementation strategies

### **Key Targets**

- 50% increase in labor productivity by 2034
- Develop economic zones and industrial parks
- Э Double global exports, reduce trade barriers
- Э Implement WTO Trade Facilitation Agreement
- Э Apply Sendai Framework for disaster risk reduction

### About LLDCs

- 32 landlocked countries with 570 million people
- Э Two doubly landlocked: Liechtenstein and Uzbekistan

# Challenges faced by LLDCs

- Э Trade: Higher costs and reduced competitiveness
- Economy: Limited trade and FDI (1.1% global exports in Э 2022)

# 5.6.4. Business4Land Initiative

The Business 4 Land Forum at COP16 of UNCCD highlights the private sector's key role in promoting sustainable land use.

Э UNCCD (United Nations Convention to Combat Desertification), 1994: The only legally binding international agreement connecting environment, development, and sustainable land management.

# About Business 4 Land Forum (2024)

Э Engagement: UNCCD's primary platform for involving the private sector in sustainable land and water management.

Goals: Restore 1.5 billion hectares of land by 2030, 0 support Land Degradation Neutrality (LDN), and enhance drought resilience.

# 5.6.5. Plastic Pollution Treaty Negotiations Adjourn in Busan, South Korea

Countries negotiating a legally binding instrument on plastic pollution concluded their fifth session without finalization of a treaty.

The Treaty: Mandated by a 2022 UN Environment Assembly resolution, aims to manage the full lifecycle of plastic.

# Factors leading to non-finalization of treaty

- Production Capping: Opposition from countries like India and China to EU, Latin American, and African countries' demand for production caps.
- Э Unclear Definition: Ambiguities in defining microplastics, nanoplastics, primary plastic polymers, and recycling terms.

#### India's stance

- Impact on Development: India opposes measures Ð on primary plastic polymer production due to development concerns.
- Defining Scope: Advocates for limiting the treaty Ð to plastic pollution, avoiding overlap with other environmental agreements.
- C Phase Out Period: Against setting phase-out dates at this stage.
- C Assistance: Calls for considerations of national capabilities and support through financial, technical aid, and technology transfer to developing countries.

# 5.6.6. Champions of Earth Award, 2024

UNEP has announced Champions of Earth Award, 2024.

Lifetime Achievement award was given to Madhav Э Gadgil for protecting people and planet through research and community engagement in Western Ghat.

# About Champions of Earth Award

- Э History: Established in 2005, it's the United Nation's highest environmental award.
- Э 2024 Focus: Honors innovative solutions for land and drought issues.
- Categories: Policy leadership, Inspiration and action, Entrepreneurial vision, Science and innovation.

**A**2



# 5.6.7. Amendment to ALMM Order, 2019

Ministry of New and Renewable Energy (MNRE) approved amendment to ALMM Order, 2019

The amendment Aims to enhance domestic solar manufacturing through the Approved Models and Manufacturers of Solar Photovoltaic Modules (ALMM) Order, 2019.

# Key Highlights of Amendment:

- ALMM List-II: Solar PV modules for government projects must use cells from ALMM List-II, complementing List-I from 2021.
- Exemption: Applies only to projects awarded postamendment.
- Innovation Support: Thin-film modules from integrated units are compliant.
- Implementation: Effective from June 1, 2026.
- Initiatives Promoting Domestic Solar Manufacturing: Production linked Incentives scheme (PLIs), Solar Parks development, 100% FDI allowed, Domestic Content Requirement
- Challenges for India's solar Manufacturing Sector: Heavy import dependence on China, Limited technology access, Insufficient R&D, raw materials and skilled labor shortage

# 5.6.8. Corporate Average Fuel Efficiency (I) norms

Centre is likely to impose penalties on some carmakers in violation of Corporate Average Fuel Efficiency (I) norms.

# **About | Norms**

- Introduction: Notified in 2017 under the Energy Conservation Act, 2001.
- Objective: To reduce fuel consumption, CO<sub>2</sub> emissions, oil dependency, and air pollution.
- Mechanism: Links fuel consumption (litres/100 km) to the average kerb weight of cars sold by original equipment manufacturer (OEM) annually.
- Scope: Applies to vehicles using petrol, diesel, LPG, CNG, with gross vehicle weight under 3500 kg.

# 5.6.9. India Launched the World's First Green Steel Taxonomy

Taxonomy (or classification) was launched by the Union Ministry of Steel.

### **Key features of Green Steel Taxonomy**

- **Definition of Green Steel:** Steel with CO2 emissions below 2.2 tonnes CO2e per tonne of finished steel.
- Star Rating System: Based on emission intensity, with thresholds reviewed every three years.

- → Five-star: < 1.6 tonnes CO2e,Four-star: 1.6 2.0 tonnes CO2e, Three-star: 2.0 2.2 tonnes CO2e.</p>
- Nodal Agency: National Institute of Secondary Steel Technology (NISST) handles measurement, reporting, verification, and issues annual greenness certificates and star ratings.

#### **Importance of Green Steel Taxonomy**

- Supports ₹15,000 crore Green Steel Policy
- Enhances global competitiveness
- Promotes low-carbon steel innovation

# Key Initiatives to decarbonize steel sector in India

- National Mission for Enhanced Energy Efficiency
- Perform Achieve and Trade scheme
- Green Hydrogen Energy Mission, National Solar Mission, etc.

# 5.6.10. India Conducts First-Ever Ganges River Dolphin Tagging in Assam

The tagging exercise has been conducted under Project Dolphin, it involves attaching tracking devices to animals for identification and study.

# About the Tagging initiative

- Objective: To study migratory patterns, range, distribution, and habitat use in fragmented river systems.
  - → Implementation: By Ministry of Environment, Forest and Climate Change (MoEFCC), executed by the Wildlife Institute of India (WII) with Assam Forest Department, funded by National CAMPA Authority (manage National Compensatory Afforestation Fund under the Public Account of India).

# About Ganges River dolphin (Platanista gangetica)

- Status: National Aquatic Animal of India, endemic to the sub-continent.
- Habitat: Freshwater systems of Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu, with 90% of the global population in India.
- **IUCN Status:** Endangered.

# **Key Features of Ganges River Dolphin**

- **9** Blind, uses echolocation
- Long snout, rounded belly, larger females
- S Known as "Tiger of the Ganges"
- **Called "SUSU" for its sound**



### 5.6.11. Ratapani Wildlife Sanctuary Declared As 8<sup>th</sup> Tiger Reserve of Madhya Pradesh

Existing Reserves of MP: Includes Kanha, Satpura, Bandhavgarh, Pench, Sanjay Dubri, Panna, and Veerangana Durgavati.

#### **About Ratapani Wildlife Sanctury**

- **D** Location: Raisen and Sehore districts, Madhya Pradesh.
- Major Sites: Bhimbetka Rock Shelters, Ginnourgarh Fort, POW camp, Keri Mahadeo, Jholiyapur dam.
- Flora and Fauna: Dry and moist deciduous forests, 55% teak; includes tigers, leopards, sloth bears, hyenas, spotted and sambar deer.
- Indian Government efforts to protect Tigers: Project Tiger, Conservation Assured Tiger Standards (CA|TS), International Big Cat Alliance

### Process of declaring Tiger Reserves in India

- Legal Framework: Notified by State Governments under Section 38V of the Wildlife (Protection) Act, 1972, advised by the National Tiger Conservation Authority (NTCA)
  - → Proposal obtained from state
  - → In-principle approval by NTCA.
  - → Recommendation by NTCA after due diligence.
  - Then, the state government notifies the area as a Tiger Reserve

### 5.6.12. Madhav National Park

National Tiger Conservation Authority (NTCA) approves Madhav National Park as the newest Tiger Reserve of Madhya Pradesh.

### About Madhav National Park

- Location: Northern Madhya Pradesh in Shivpuri District, Upper Vindhyan Hills.
- Background: Once a hunting ground for Mughals and Gwalior Maharajas, became a National Park in 1958.
- Fauna: Includes antelopes (Nilgai, Chinkara), various deer, leopards, wolves, jackals, foxes, wild dogs, and wild pigs.
- Flora: Features Northern Tropical dry deciduous and Dry thorn forests.
- Other Features: Contains Sakhya Sagar and Madhav Sagar lakes; Madikhera dam in the North Western part.

# 5.6.13. Sponge City

The emerging concept and construction **of "sponge cities"** is an effective approach to solving urban floods.

### **About Sponge city:**

- **Concept:** Sustainable urban development with features like flood control, water conservation, improved water quality, and ecosystem protection.
  - → Examples: Green roofs, constructed wetlands, and increased tree cover.
- Benefits: Enhances air humidity, regulates microclimates, and lowers public health risks.
- Global Examples: Tirana's ring forest for air purification; Berlin's green roofs and vertical gardens

### 5.6.14. Denali Fault

New research shows that three sites **spread along Denali Fault** were once a smaller united geologic feature.

**Decation:** In Alaska, USA, part of the Pacific Ring of Fire.

# Fault and its Types:

**Definition**: A fault is a sharp break in Earth's crust.

#### **Types:**

- **O** Normal fault: Plates slide past each other vertically.
- **Reverse faults:** One plate slide under another, causing vertical offset.
- Strike-slip faults: Plates move horizontally past each other.
- **Oblique slip fault:** Combines vertical and horizontal movements.

# 5.6.15. Kilauea Volcano

Recently, Kilauea volcano erupted on Hawaii's Big Island

**Gas Emissions:** 99% are H2O, CO2, and SO2; 1% includes hydrogen sulfide, carbon monoxide, hydrogen chloride, and hydrogen fluoride.

### About Kilauea volcano

- **Activity:** One of the world's most active volcanoes.
- **Decation:** Southeastern Hawaii Island, U.S.
- Features: Summit has a collapsed caldera.
  - → Slopes merge with Mauna Loa in Hawaii's Volcanoes National Park.

#### **VISIONIAS** INSPIRING INNOVATION



# 6.1. Digital Content Creators (DCC)

# Why in the News?

UNESCO's "Behind the Screens" survey highlights the growing influence of **Digital Content Creators (DCCs)** but questions their credibility.

# About Digital Content Creators (DCCs)

- Definition: Individuals creating and sharing digital content across platforms like YouTube, Instagram, and TikTok.
- DCCs play a crucial role in the broader Creator Economy (or Orange Economy), includes cultural and creative industries producing goods, services, and content rooted in cultural or artistic origins.
  - Globally, the creative economy generates over \$2 trillion annually (Creative Economy Outlook 2024)
     In India, it is valued at \$30 billion.

# **Risks & Implications**

- Social & Ethical Risks:
  - → Misinformation: 62% DCCs lack systematic fact-checking.
  - + Privacy Violations: E.g., Cambridge Analytica scandal.
  - + Algorithmic Amplification: Focus on popularity promotes sensationalism.
  - → Training Gaps: Limited knowledge of rights, laws, and ethics.
- Regulatory Challenges:
  - No unified framework: multiple agencies like MeitY and TRAI involved.
  - → Jurisdictional conflicts and overlaps.
- **Economic Risks:** Financial losses for traditional media due to unequal bargaining power.

	Ways to Mitigate Risks Posed by DCC								
Ð	Promote Media Literacy	C	Implement Data Protection	0	Establish Fair Revenue Models	9	Promoting Transparency in	Э	Encourage ethical Content Creation
•	E.g. Google News Initiative provides training and tools for journalists and content creators to verify information.	•	E.g. General Data Protection Regulation (GDPR) (EU) and India's Digital Personal Data Protection Act, 2023.	0	E.g. Australia's News Media Bargaining Code, requires tech giants like Google to pay news publishers for using their content.	0	Advertising E.g. Advertising Standards Council of India's (ASCI) guidelines for influencers	•	E.g. IT Rules 2021 promoting trust and accountability and UNESCO's Media and Information Literacy (MIL) Program



The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021

- Purpose: To govern digital intermediaries, social media platforms, online gaming intermediaries, and digital media publishers.
- Key Provisions:
  - Social Media Platforms:
    - Prohibit unlawful content (defamatory, obscene, and harmful)
    - Grievance Officer to resolve complaints in 15 days (urgent cases: 72 hours)
  - News Publishers:
    - Follow Journalistic Conduct Norms and Programme Code under the Cable Television Networks Regulation Act, 1995.
    - Prohibit publishing content banned by law.

# 6.2. Social Media Addiction in Children

#### Why in the News?

Australia passed the Online Safety Amendment (social media Minimum Age) Bill 2024, banning social media for children under 16.

#### **Key Provisions**

- Minimum Age Requirement: Platforms must prevent users under 16 from creating accounts.
- **Provider Responsibility:** Companies are accountable for enforcing age restrictions.

### **Reasons for Childs addiction to social media**

- Peer Influence: Validation through likes and comments.
- Instant Gratification: Dopamine release fosters addictive behavior.
- Parental Gaps: Busy parents inadvertently create "iPad kids."
- Escapism: Social media is a distraction from real-world issues.
- **Algorithms:** Personalized content keeps children engaged longer.

<ul> <li>Health Issues: Excessive screen time disrupts sleep and physical activity</li> <li>Academic Impact: Reduces focus and learning</li> <li>Enforcement Issues: Age bans can pus unsafe spaces.</li> <li>Impracticality: Maturity varies; age limits do</li> </ul>	and <b>Conforcement Issues:</b> Age bans can push children to	Arguments in favour of Ban		
<ul> <li>Academic Impact: Reduces focus and learning</li> <li>Impracticality: Maturity varies; age limits do</li> </ul>		<b>Health Issues:</b> Excessive screen time disrupts sleep and		
	Impracticality: Maturity varies; age limits don't guarantee	Academic Impact: Reduces focus and learning		
<ul> <li>Risky Trends: Viral challenges causing harm (e.g., "Blackout Challenge", "Devious Lick" (stealing)).</li> <li>Platform Improvement: Safer designs are bans.</li> </ul>	<ul> <li>ans.</li> <li><b>Resilience Building:</b> Exposure helps children navigate</li> </ul>			

### **Government Initiatives to Protect Children Online**

- IT Act, 2000 (Section 67B): Strict action against child sexual abuse content.
- Digital Personal Data Protection Act, 2023: Requires parental consent for children under 18.
- **The National Commission of Protection of Child Rights (NCPCR):** Online complaint system for child protection.



# Global steps to protect children online

Country	Policy/Regulation	Details		
United States	<ul> <li>Children's Online Privacy Protection Act (COPPA) (1998) &amp; Children's Internet Protection Act (CIPA) (2000)</li> </ul>	Parental consent for data collection; restricts content in schools/libraries.		
European Union	General Data Protection Regulation (GDPR)	Parental consent required for processing personal data under 16.		
ик	Online Safety Act (2023)	Enforces age restrictions on platforms like Facebook, YouTube, and TikTok.		

# Way Ahead

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- Safety-by-Design: Privacy by Default (e.g., UK's Age-Appropriate Design Code) and AI Content Moderation (detect and remove harmful content automatically)
- **Regulations:** Hold companies accountable for safer platforms (e.g., Meta's 13+ age limits).
- Education & Skills: Promote digital literacy for children and parents (e.g., Kerala's Digital De-Addiction Centers)
- Parental Involvement:
  - Set up accounts together with privacy controls.
  - Limit screen time and review activity reports.
  - Teach children to protect personal information and block harmful interactions.

# 6.3. Manual Scavenging

### Why in the News?

The Supreme Court sought an action report on its directions in the Dr. Balram Singh v. Union of India & Ors (2023) case to eradicate manual scavenging.

# Directions in the Dr Balram Singh V. Union of India & Ors case

- **Rehabilitation of Sewage Workers:** Provide Employment, education, and skill training for next of kin.
- Sever deaths compensation shall be raised to ₹30 lakh and in disability cases to ₹20 lakh.
- Conduct Comprehensive National Survey: To identify manual scavengers within one year.
- Training and Education Modules: NCSK, NCSC, NCST, and Union government to coordinate for modules under the Prohibition of Employment as Manual Scavengers and their Rehabilitation (PEMSR) Act, 2013

### **About Manual Scavenging**

- Definition (PEMSR Act, 2013): The practice of manually cleaning, carrying, or handling human excreta from insanitary latrines, open drains, or pits.
- **Ban:** Officially banned since 1993 under the **Employment of Manual Scavengers and its Prohibition Act, 1993**.
- **Progress:** As of July 31, 2024, 732 out of 766 districts reported as manual scavenging-free.

#### **Factors Sustaining Manual Scavenging**

- Underreported Data: Social stigma leads to underreporting as workers hide their identity during official manual scavenging surveys.
- Cultural Resistance: Caste prejudices support manual scavenging
- Lack of Enforcement: Weak implementation of laws allows violations
- Poor Sewer Design: Sewer designs prevent mechanized cleaning
- Lack of Regulation: Absence of safety measures and equipment

### **Government Steps to End Manual Scavenging**

- Legislative Measures:
  - → Every offence under PEMSR Act, 2013 is a cognizable and non-bailable offence.
  - → Other: Protection of Civil Rights Act, 1955; SC/ST (Prevention of Atrocities) Act, 1989, etc.





#### Schemes:

- NAMASTE Scheme (2023): Ensures safety, dignity, and rehabilitation for hazardous sanitation workers.
- Swachh Bharat Mission (Urban 2.0): Promotes sanitation through mechanization.
- Dedicated Institutions:
  - National Commission for Safai Karamcharis (NCSK): Established to address the issues of safai karamcharis.
  - National Safai Karamchari Financial Development Corporation (1997): Supports safai karamcharis through loans and rehabilitation.

#### Way Forward

- Implementing suggestion of National Human Rights Commission
  - → Clarify the difference between sanitation workers and manual scavengers under 2013 Act.
  - Empanelment & Regulation of de-sledging market operations.
  - → Provide safety equipment and conduct workshops for workers.
- Promoting Technological Intervention: E.g., Kerala's Bandicoot robot)
- Other: Upgrading Infrastructure, conduct Periodic surveys to identify manual scavengers, etc.

# 6.4. Female Labor Force Participation in India

#### Why in the News?

The Economic Advisory Council to the Prime Minister (EAC-PM) has released a working paper highlighting a **dramatic increase** in female Labor Force Participation Rate (LFPR).

#### **Key Findings**

- Rural LFPR: Increased from 24.6% (2017-18) to 47.6% (2023-24) (~69% growth).
- **Urban LFPR:** Rose from **20.4% to 25.4% (~25% growth)**.
- Regional Variations: Lower LFPR in Bihar, Punjab, Haryana; higher in northeastern and southern states.

#### **Factors Influencing Female LFPR**

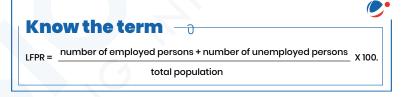
- **3** Age: Rises between ages 20-30, peaking during 30-40 years, and declining sharply thereafter (Bell shape curve)
- **3** Marriage: Reduces female LFPR, especially in urban areas, due to household responsibilities.
- Parenthood: Presence of children under 14 reduces LFPR, particularly for women aged 20-35 in urban areas.

### **Reasons for Low Participation of Women in the Workforce**

- Safety Concerns: Workplace sexual harassment cases rose from 402 (2018) to 422 (2022) (NCRB).
- Double Burden: Women's unpaid care work contributes 3.1% to GDP, compared to men's 0.4% (Economic Survey 2024).
- **Education: 37.94% of women** stay out of the workforce to pursue education (PLFS).
- Digital Divide: Only 33% of women in India use the internet (NFHS-5).
- Social Protection: Women comprise 52.7% of 287 million registered unorganized workers (eShram database, 2022).
- Increased Household Income: Rising income leads to women prioritizing domestic non-market work over market work (International Labor Organisation).

### Government Steps to Enhance Female Labor Force Participation

- Survival and Education of Females: Beti Bachao Beti Padhao Scheme and National Education Policy (NEP) 2020
- **Safe and Convenient Accommodation:** E.g., Working Women Hostel
- Support for Women Affected by Violence: One Stop Centre (OSC) and Women Helpline
- Equal Opportunity and Promoting Work Environment: Includes maternity leave (26 weeks), crèche facilities, and Sexual Harassment of Women at Workplace Act, 2013.
- Economic Empowerment:
  - Mahila Shakti Kendra (MSK) empowers rural women via community participation.
  - NAMO Drone Didi, distributed drones to 15,000 women SHGs for agricultural rentals.
- Other: Codification of Labor Laws (Wages, Industrial Relations, Social Security, Occupational Safety, Health and Working Conditions), etc.





# Way Ahead for Women's Workforce Participation

- Social Norms & Education: Promote girls' education, especially in STEM.
- **Safety & Infrastructure:** Ensure safe streets, transport, and childcare. E.g. *Mobile crèches in Burkina Faso*
- **Bridging the Digital Divide:** Enhance digital literacy and internet access. E.g. *Google's Internet Saathi*
- **Wage Gap:** Implement equal pay and flexible work policies.
- **Formalizing the Informal Sector:** Integrate women into the formal economy.

# 6.5. News in Shorts

#### 6.5.1. South Korea Becomes 'Super-Aged' Society

South Korea's declared a 'super-aged' society as 65+ populations surpassed 20%.

- Second country in Asia, after Japan, to reach this status.
- According to the UN, a country is defined as "aging" when the share of people aged 65+ is above 7%, "aged" when it is 14% or more, and "super-aged" when it exceeds 20%.

### **Status of Aging**

- 1 billion aged 60+ in 2020, projected to reach 2.1 billion by 2050.
  - Aging, once seen in high-income countries, is accelerating in low- and middle-income countries; two-thirds of the elderly will live in these countries by 2050.
- India's Projection: Elderly population will exceed 20% by 2050 (UNFPA 2023).

#### Challenges

- **Economic:** Shrinking workforce, rising **healthcare** costs, increased social security spending.
- Social: Increased caregiving responsibilities, bridging generational gaps, and maintaining social cohesion.
- Infrastructure: Need for age-friendly urban spaces, improved accessibility in transportation systems, etc.

#### **Steps Taken**

#### Global

- UN Madrid International Plan of Action on Ageing (2002): Promotes better quality of life for older adults
- WHO Global Strategy (2016-2020): Focuses on healthy aging and age-friendly environments
- UN SDGs: Address aging through Goals 3 (Health) and 10 (Reduced Inequality)
- UN Decade of Healthy Ageing (2021-2030)

#### India

- Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) for public health insurance
- National Programme for the Health Care for the Elderly (NPHCE)
- Maintenance and Welfare of Parents and Senior Citizens Act, 2007, etc.

#### 6.5.2. JJM and Women empowerment

Prime Minister's highlight's role of Jal Jeevan Mission (JJM) in empowering rural women.

#### Significance of JJM for Women Empowerment

- Skill Development: Water at doorstep enables women to focus on skill development and self-reliance.
  - Time saved results in a 7.4% increase in women's participation in agriculture and businesses.
  - → 9 crore women no longer fetch water from outside due to JJM: Har Ghar Jal initiative (SBI Report)
- Leadership: 50% of village water and sanitation committees must be women.
- Employment Opportunities: JJM will generate 59.9 lakh direct employment.

#### **About JJM: Har Ghar Jal**

- **Nodal Ministry:** Ministry of Jal Shakti
- Type: Centrally Sponsored Scheme
- Objective: Ensure access to safe and reliable tap water for every rural household by 2024.
- **Goal:** Develop **'WASH enlightened villages**.
- Focus on Children: Provide piped water to schools, anganwadis, and ashramshalas
- Key Components: Water quality, Bottom-up planning, Source sustainability, Greywater management, Skill development & employment.
- Key Achievement: Rural tap water coverage increased to 79.31% from 17% (3.23 crore households) in 2019.

6.5.3. Global One-Stop Centres (OSC)

Government has approved 9 global OSCs for Indian women in distress by Ministry of External Affairs.

#### **About Global OSCs**

- Aim: Provide comprehensive assistance to women in vulnerable situations.
- Indian Community Welfare Fund (ICWF) will play a vital role in extending welfare measures to distressed Indian nationals, particularly women.



# 6.5.4. Bal Vivah Mukt Bharat Campaign Launched

**Ministry of Women and Child Development** launched the campaign to oppose child marriage.

#### About the Campaign

- **Focus Areas:** Targeting **7 states** and **300 districts** with high child marriage prevalence.
- Objective: Reduce child marriage rates below 5% by 2029 in collaboration with States and Union Territories.
- Under it, Child Marriage Free Bharat Portal has been launched; it enables reporting incidents and accessing Child Marriage Prohibition Officers (CMPOs).

# Status of Child Marriage in India

- NFHS-5: Child marriage decreased from 47.4% (2005–06) to 23.3% (2019–21).
- Wealth Variation: 40% of females in the lowest wealth quintile married before 18.
- High Prevalence States: West Bengal, Bihar, Tripura, Jharkhand, Assam, AP, Rajasthan, and Telangana

#### Consequences

Child marriages lead to forced sexual activity, domestic violence, low education, health risks from early pregnancies, and violate human rights.

#### **Government Measures**

- Prohibition of Child Marriage Act, 2006 (PCMA), prohibits child marriage for females under 18 and males under 21.
- Signatory to the UN Convention on Rights of the Child
- Campaign by the National Commission for Protection of Child Rights (NCPCR)
- Working on SDG 5 (includes elimination of child marriage by 2030)
- Ratified Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)

# 6.5.5. Domestic Migration Report

**Report '400 Million Dreams' released by** Economic Advisory Council to the Prime Minister (EAC-PM)

### **Key Findings**

Status of Domestic Migrant Numbers: 12% drop from 45.57 crore (2011) to 40.20 crore (2023); migration rate fell from ~38% to ~29%.

#### Migration Dynamics:

- Short-distance migration dominates; long distances hinder labor mobility.
- Migration originates primarily from areas around major urban centers like Delhi, Mumbai, Chennai, Bangalore, and Kolkata

Major Routes: UP-Delhi, Gujarat-Maharashtra, Telangana-AP, and Bihar-Delhi.

#### Migrant Share Changes:

- → Increase: West Bengal, Rajasthan and Karnataka.
- Decrease: Maharashtra and Andhra Pradesh.

#### **Reasons for Decline**

- Improved local infrastructure (roads, schools, healthcare, transport).
- Localized economic growth generating rural jobs.

#### Steps taken for welfare of Domestic Migrants in India

- Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 prevent human rights violations.
- Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PMJAY) offers Rs.5 lakh health coverage for secondary and tertiary health benefits to migrant workers.
- One Nation One Ration Card Scheme enables ration card portability nationwide for migrants and their families.

# 6.5.6. Right to Disconnect in India

The death of a young female employee due to work stress has sparked calls for a '**Right to Disconnect**' law in India.

### What is Right to Disconnect?

- Definition: Employees are not obligated to respond to work-related calls/messages after work hours without facing disciplinary action.
- Need:
  - Psycho-Social Impact: Weakens social bonds, increases mental health issues, and cardiovascular risks.
  - Impact on Women: Professional women in India work over 55 hours/week, leading to stress.
  - Other Effects: Reduced productivity, insomnia, and sleep disruptions due to prolonged screen time.
- Currently, India lacks specific laws recognizing right to disconnect from work.

# **Global Position on 'Right to Disconnect'**

- **France:** Employees are not obligated to work from home or handle tasks outside work hours.
- **Spain:** Public workers and employees can switch off devices outside working hours.
- Australia: Parliament grants employees the right to disconnect from work beyond official hours.

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# 6.5.7. Global Report on Trafficking in Persons 2024

**Released by:** United Nations Office on Drugs and Crime (UNODC)

#### **Key Findings**

- Victims: 2022 saw a 25% rise in known victims compared to 2019.
- Demographics: Women and girls comprised 61% of victims in 2022.

#### **About UNODC**

- Established: 1997
- Focus: Combating illicit drugs, organized crime, and terrorism.
- HQ: Vienna, Austria

# 6.5.8. No Detention Policy

Ministry of Education: Scrapped the no-detention policy for Classes 5 and 8 under the Right of Children to Free and Compulsory Education (RTE) (Amendment) Rules, 2024, allowing schools to fail students who do not pass year-end exams.

The no-detention policy was part of the RTE Act, 2009 aiming to reduce dropout rates.

### **Key Provisions of New Policy**

- Re-examination: Failing students get extra instruction and a chance for re-examination within two months.
- **Expulsion:** No child can be expelled until completing elementary education.

### Arguments in Favour and Against of Detention

# Arguments in Fayour of Arguments against Detention

•	Learning Outcomes:	0	Stigmatization:
	Over 65 lakh students		Fear of failure and
	failed in Classes 10		repeating classes
	and 12 (2023).		increases dropout
Э	Motivation: Automatic		rates.
	promotion reduces	•	Holistic Development:
		9	Supports a system
	promotion reduc <mark>es</mark>	0	
	promotion reduces students' motivation	0	Supports a system

# 6.5.9. WFP Global Outlook for 2025

World Food Programme (WFP) released 'Global Outlook for 2025' Report.

# **Key Highlights**

Global Hunger Crisis: 343 million people across 74

countries are acutely food insecure, with **1.9 million** on the brink of hunger.

#### India Specific Issues:

- India hosts a quarter of the world's undernourished population.
- → 21.25% of people live on less than US\$1.90/day.
- → 38% of children (6-59 months) suffer from chronic malnutrition.

#### WFP's Approach to Combating Hunger

- Local Food Solutions: Investment in nutritious food, fortification, and social protection systems.
- Empowering Communities: Improving livelihoods and climate protection to reduce future needs.
- **Other:** Strengthening local institutions and addressing gender inequalities, etc.

# **About World Food Programme**

- Genesis: Established in 1961 by UN General Assembly (UNGA) & Food and Agriculture Organization (FAO).
- About: Largest humanitarian agency saving lives in emergencies & using assistance to help communities become self- sufficient and resilient to shocks.
- Reach: Presence over 120 countries.
- Recognition: WFP is awarded Nobel Peace Prize in 2020.
- HQ: Rome, Italy

# 6.5.10. Anna Chakra Tool

Union Minister of Consumer Affairs, Food and Public Distribution launched the 'Anna Chakra' PDS Supply Chain optimization tool and SCAN Portal to modernize the PDS system.

### Anna Chakra Tool

- Purpose: Optimizes the Public Distribution System (PDS) supply chain using advanced algorithms to find optimal routes for seamless food grain movement.
  - It is integrated with PM Gati Shakti and FOIS (Freight Operations Information System) through ULIP(Unified Logistics Interface Platform).
- Developed By: Department of Food & Public Distribution, in collaboration with WFP and IIT-Delhi.

# SCAN Portal (Subsidy Claim Application for NFSA):

Purpose: Facilitates a single-window submission, scrutiny, and approval of subsidy claims by states, streamlining the settlement process via end-to-end workflow automation.



# SCIENCE AND TECHNOLOGY

# 7.1. CE20 Cryogenic Engine

# Why in the News?

ISRO's CE20 cryogenic engine passed a critical sea-level test, marking a major breakthrough in propulsion technology.

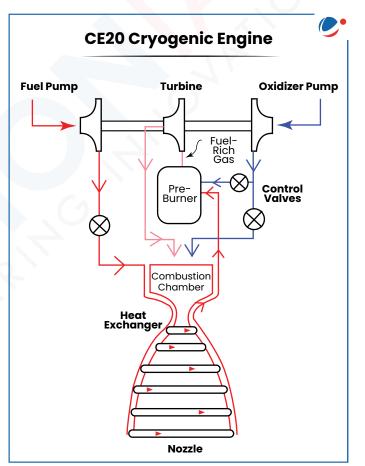
### More on the News

- The test introduced a 'Nozzle Protection System' to address flow separation issues, preventing vibrations, thermal problems, and potential damage.
- ISRO is developing the engine for India's Gaganyaan mission, the first manned spaceflight.

#### How does a Cryogenic Engine Work?

- Working Principle: Thrust is produced by internal combustion or pressure difference, following Newton's Third Law of Motion (Every action has an equal and opposite reaction).
- Uses: Cryogenic engines are primarily used in the upper stage of space launch vehicles.
- **Fuel and Oxidizer:** 
  - Cryogenic fuel and oxidizer are liquefied gases stored at extremely low temperatures.

Note: Semi-Cryogenic Engine - Uses refined kerosene instead of liquid hydrogen, offering benefits like lighter weight and normal temperature storage.



Advantages of Cryogenic Engine			allenges of Cryogenic Engine
0	<b>Efficiency and Thrust:</b> Cryogenic propulsion offers <b>superior thrust</b> with <b>LOX+LH2</b> .	0	<b>Complexity:</b> Cryogenic engines are more complex due to low-temperature propellants.
0	<ul> <li>Fuel Efficiency: Cryogenic engines burn less fuel (2 kg/sec) for the same thrust as the PSLV Vikas engine (3.4 kg/sec).</li> <li>Other: Eco-friendly, efficient for heavy Payloads, etc.</li> </ul>		Thermal Stresses: High gradients lead to cracks, blockages, and distortions in key components.
0			High Pressures: High operational pressures require super alloys, increasing engine weight.
			Other: Low Temperature Maintenance, high cost, etc.

#### About CE20

**Developed by:** Liquid Propulsion Systems Centre (LPSC), Valiamala, Kerala.



- Successful Missions: Successfully operated in six LVM3 missions, including Chandrayaan-2, Chandrayaan-3, and two OneWebcommercial missions.
  - LVM3 (Geosynchronous Satellite Launch Vehicle Mk III) is a three-stage vehicle capable of lifting 4,000 kg payloads.

# Cryogenic Engine comparison with other engines

Characteristics	Cryogenic Engine	Jet Engine	Solid Propellant Engine	<ul> <li>Liquid Propellant Engine</li> </ul>
Air Intake	<ul> <li>No air intake is required.</li> </ul>	<ul> <li>Air intake is required.</li> </ul>	<ul> <li>Air intake is required as oxidizer.</li> </ul>	<ul> <li>Air intake is required as oxidizer.</li> </ul>
Fuels	<ul> <li>Generally super cooled Hydrogen and Oxygen.</li> </ul>	<ul> <li>(Jet A-1, kerosene),</li> <li>Kerosene-gasoline mixture,</li> <li>Aviation gasoline (avgas),</li> <li>Bio-kerosene.</li> </ul>	Fuels for composite propellants are generally metallic powders, with aluminum being the most common.	<ul> <li>Hydrazine, mono-methyl hydrazine (MMH), unsymmetrical dimethyl hydrazine (UDMH) etc.</li> </ul>
Purpose	<ul> <li>Third stage/ last stage of rocket.</li> </ul>	<ul> <li>Used in the Airplanes etc.</li> </ul>	Used as boosters in initial liftoff.	<ul> <li>Act as main stage of rocket after booster separation.</li> </ul>

# 7.2. Quantum Chip

### Why in the News?

Google unveiled Willow, its latest quantum chip, marking a milestone in quantum computing.

#### More on the News

- Performance: Willow excels in the random circuit sampling (RCS) benchmark, achieving:
  - Error reduction as systems scale with more qubits.
  - Completing a benchmark task in five minutes, this would take today's fastest supercomputers 10 septillion (that is, 10<sup>25</sup>) years.
- Improved Coherence: Willow shows enhanced coherence time, allowing qubits to maintain their state longer.

### **About Quantum Chips**

- Qubits vs. Bits: Quantum chips use qubits instead of classical bits.
  - While a bit can only be in a state of 0 or 1, qubits can exist in superposition, representing 0, 1, and all positions inbetween simultaneously.
  - Qubits can be also entangled, meaning the state of one qubit directly affects the state of another.
- Working: Quantum chips use quantum gates to manipulate qubits, just as classical computers use gate operations to manage bits.
- Quantum gates enable qubits to perform complex calculations beyond the capabilities of traditional computing.

# **Quantum Computing's Impact on Emerging Technologies**

- **Quantum AI**: Quantum computing can accelerate AI training by processing large data sets faster.
- Encryption: Quantum computers could break encryption methods like RSA (Rivest, Shamir, Adleman algorithm), which secure digital communications.
- **Cryptocurrency:** Quantum computing may threaten the security of cryptocurrencies like **Bitcoin** by breaking their cryptographic algorithms.



#### **Key Challenges**

- **Fragile Quantum States:** Qubits are sensitive and collapse easily.
- Noise in Qubits: Interference causes qubits to lose information.
- **Temperature Control:** Qubits require near absolute zero temperatures to avoid disturbances that affect accuracy.

#### Conclusion

Advancing quantum computing requires research on efficient qubits, global collaboration through initiatives like the **Quad Critical and Emerging Technology Working Group, QUIN, and the Quantum Center of Excellence,** etc.

# 7.3. Hyperloop

#### Why in the News?

IIT Madras' Avishkar Hyperloop team, in collaboration with TuTr (a startup), has completed a 410-meter Hyperloop test track—the first experiment of its kind in India.

# What is Hyperloop Technology?

- Definition: A high-speed transport system where pressurized pods travel through low-pressure tubes.
  - Proposed by Elon Musk in 2013 as an open-source ultrahigh-speed rail (UHSR).
- Historical Roots: Inspired by the 1865 concept of "gravity vacuum transit."
- Functioning
  - Magnetic Levitation (Maglev): Magnets lift pods above the track and propel them forward.
  - → Low-Pressure Tube: Vacuums remove air resistance, enabling speeds up to 1,200 km/h.
  - → Goal: Reduce travel time significantly to enhance city accessibility over long distances.

### **Advantages of Hyperloop Technology**

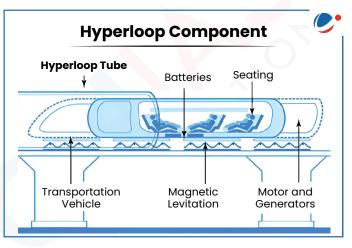
- **Reshapes Shipping and Logistics:** Can Carry Large Containers load equivalent to 40 feet
- **Speed:** Over 1000 km/h; 3x Faster than High-Speed Rail and 10x faster than traditional Rail
- **Driverless:** Eliminates Human Errors
- Cutting Carbon Emissions: 2-3 Times More Energy-Efficient than High Speed Rail;
- **Weatherproof:** Less Vulnerable to Bad Weather
- Less Invasive: Easier Tunnel Integration

#### Some of the issues with Hyperloop technology

- Costs: NASA estimates \$25-\$27 million per mile, excluding land acquisition.
- **Safety Concerns:** Fire risks inside pods, communication challenges, and limited evacuation exits in tubes.
- Vacuum Maintenance: Maintaining air vacuum over long distances demands significant energy and effort.
- **Acceleration Impact:** Excessive acceleration (7x Shinkansen limits) can cause nausea and discomfort.
- Straight-Line Layout: Requires stable, elevated, or tunneled structures over long distances for safety, etc.

### **Other Emerging Modern Transit Systems**

- Autonomous Helicopters: Airbus tested its Vahana eVTOL aircraft.
- Smart Roads:
  - Portugal: EU-backed project to create 1,000 km of smart roads enabling wireless communication between infrastructure and smart cars.
  - → Sweden: Electrified road pilot recharges electric vehicles while driving.
- India's Bullet Train Project: Mumbai-Ahmedabad High-Speed Rail (MAHSR), leveraging Japan's Shinkansen technology.





# **Way Forward**

- Financial Backing: Substantial investment by private companies and governments is vital for R&D, particularly for efficient tube depressurization.
- R&D Focus: Prioritize advancements in Linear Induction Motors (LIM) for efficient propulsion.
- Infrastructure Development: Build Hyperloop stations and integrate them with existing transport networks.
- Regulations & Standards: India can adopt policies like Europe's 2020 Joint Technical Committee (JTC 20) for Hyperloop safety and standards.

# 7.4.10 Years of Ministry of Ayush

#### Why in the News?

The Ministry of Ayush recently celebrated its 10<sup>th</sup> anniversary.

#### **About Ministry of Ayush**

- Establishment: Founded in 2014, the Ministry of Ayush promotes ancient medical knowledge while aligning with the UN's SDGs and Universal Health Coverage.
- Evolution: It originated as the Department of Indian System of Medicine & Homoeopathy in 1995, renamed the Department of Ayush in 2003, and later upgraded to a ministry.

#### **Key Achievements of Ministry of Ayush**

- Expanding Ayush Infrastructure:
  - → Over 755,780 registered Ayush practitioners.
  - Established three advanced National Ayush Institutes.
- Research and Innovation:
  - Ayush Research Portal hosts over 43,000 studies.
  - → Key developments like AYUSH-64 and Kabasur Kudineer for COVID-19 management.
- Economic Impact: Ayush market grew from USD 2.85 billion in 2014 to USD 43.4 billion in 2023.
- Technology Integration: Digital platforms like Ayush Grid, e-Sanjeevani, and Ayush Telemedicine improved healthcare access.
- Other:
  - Adoption of International Day of Yoga (IDY)
  - → Launched National Ayush Mission (NAM), a Centrally Sponsored Scheme in 2014.

#### **Steps Taken by India to Promote Traditional Medicines**

- **Quality Assurance:** Introduced Ayush Mark and Ayush Premium Mark certification programs.
- **WHO Collaboration:** Agreement to establish **WHO Global Centre for Traditional Medicine** in Jamnagar.
- Capacity Building: Launched Champion Sector Services Scheme (CSSS) to develop skilled human resources.
- Education Reforms: Established National Commission for Indian System of Medicine (NCISM) and National Commission for Homeopathy (NCH) under the NCISM Act, 2020.
- Policy Support: MoUs with various departments, and establishment of Strategic Policy and Facilitation Bureau (SPFB) to facilitate AYUSH sector investment.

### **Challenges in Mainstreaming AYUSH**

- Lack of Standardisation: No standardized protocols for diagnosis, treatment, and drug formulations.
- **Cack of Trials:** Insufficient scientific evidence and clinical trials to validate efficacy.
- Lack of Synergy with Allopathy: Allopathy follows a biomedical model, while AYUSH, like Ayurveda, takes a holistic approach.
- **Regional Variations:** AYUSH systems are influenced by cultural practices that vary across regions.

#### **Way Ahead**

- Quality Control and Standardization (Invest in labs, testing, etc.)
- Research and Evidence-Based Practice: Use local health data for epidemiological studies.
- **Bridging the Integration Gap:** Develop **referral pathways** between AYUSH and **allopathy**.
- Consumer Confidence and Advocacy: Promote responsible advertising, educate on safe use, and encourage insurance coverage for AYUSH treatments.



# 7.5. Rare Diseases

#### Why in the News?

India's Central Drugs Standard Control Organisation (CDSCO) approves the first anti-complement therapy for rare diseases.

#### What are Rare Diseases?

- WHO defines rare diseases as debilitating lifelong conditions, with a prevalence of 1 or less, per 1,000 people (e.g., Fanconi Anemia, Osteopetrosis).
  - However, Different countries have their own definitions.
- The National Policy for Rare Diseases 2021 (NPRD, 2021) categorized rare disease into 3 groups.

# Classification of Rare Diseases in India (as per NPRD 2021)

_ L					
ſ	Group 1	Group 2	Group 3		
	Amenable to one-time curative treatment	with relatively lower costs and	<ul> <li>Definitive treatment is available but challenges in optimal patient selection</li> </ul>		
	<ul> <li>E.g., Disorders amenable to organ transplantation like Urea cycle disorders, etc.</li> </ul>		<ul> <li>for benefit, very high cost and lifelong therapy</li> <li>E.g., Gaucher Disease, Pom</li> </ul>		
		Phenylketonuria, etc.			

# **Initiatives to Tackle Rare Diseases**

#### Global

- WHO's Fair Pricing Forum: Promotes dialogue among regulators, insurers, pharmaceutical companies, and patient groups for sustainable access to medicines, including orphan drugs.
- **Rare Diseases International (RDI)**: A **global alliance** for individuals with **rare diseases** of all nationalities.

#### India

- National Policy for Rare Diseases, 2021: Aims to reduce incidence and prevalence with an integrated preventive strategy.
  - Financial support of up to Rs. 50 lakhs per patient for treatment at notified Centres of Excellence (CoEs).
- **Rashtriya Arogya Nidhi:** Provides financial assistance for **poor patients** with rare diseases.
- Exemptions: From GST and Basic Customs Duty on drugs for rare diseases.

# Issues in Managing Rare Diseases in India

- **High prevalence:** India has **one-third** of global rare disease cases, with **450+ diseases**.
- Limited trials: Out of 8000+ global trials, only 80 are in India.
- **2** Lack of definition: No standard definition due to insufficient epidemiological data.
- Other: Low funding, delayed diagnosis/ Misdiagnosis, etc.

#### Way Forward:

- Implement Delhi High Court Directives:
  - Establish National Fund for Rare Diseases (NFRD) for FY 2024-25 and FY 2025-26.
  - Extend National Rare Diseases Committee (NRDC)'s work for five more years, chaired by Director General of ICMR.
  - Create a Fast Track approval process for rare disease therapies.
  - Add Corporate Social Responsibility contributions for rare diseases in the Companies Act Schedule VII.
  - → Flexibility in ₹50 lakhs limit for Group 3 category treatments under NPRD, 2021.

#### Other Steps:

- Strengthen epidemiological data for rare diseases.
- Expand Centers of Excellence (CoEs) in underserved regions.
- Incentivize domestic manufacturing through Production-Linked Incentive Scheme.

# 7.6. News in Shorts

# 7.6.1. ISRO Launches Proba-3 Satellites

PSLV-C59 vehicle carried Proba-3 spacecraft into a highly elliptical orbit as a dedicated **commercial mission of NewSpace India Limited (NSIL).** 

- It was launched from Satish Dhawan Space Centre (SDSC-SHAR), Sriharikota
- It is ESA's first launch from India since Proba-1 mission in 2001.
- Polar Satellite Launch Vehicle (PSLV) is the third generation launch vehicle.

#### **Proba-3 Mission**

- Type: In-Orbit Demonstration (IOD) mission.
- Aim: Observe the Sun's corona through innovative satellite formation flight.
- Achievement: World's first precision formation-flying mission.

# Benefits of Commercial Space Launches for India

- Increase Global Space Economy Share: India currently holds 2-3% of the total space economy.
- Revenue Generation: Over \$279 million generated from foreign satellite launches (as of 2022).
- Soft Power: Commercial satellite launches act as a form of soft power, enhancing diplomatic relations.
- Other Benefits: Potential for technology transfer and fostering international cooperation.

### Key Initiatives Facilitating India's Commercial Launch Capability

- Establishment of IN-SPACe (Indian National Space Promotion and Authorization Center)
- Indian Space Policy 2023
- Promoting private space startups and industries, like Skyroot Aerospace, Agnikul Cosmos.
- Development of Small Satellite Launch Vehicle (SSLV)

# NewSpace India Limited (NSIL)

- Genesis: Set up by the Department of Space in 2019 to manage ISRO's commercial activities.
- Primary Role: Helps Indian industries engage in high-technology space-related activities.
- **Focus:** Enables **ISRO** to concentrate on **future space endeavors.**

# 7.6.2. Axiom Mission 4 (AX-4)

Indian astronauts selected for the **Axiom-4 mission** mission have completed initial training.

# Axiom Mission 4 (Ax-4)

- Ax-4 is the fourth private astronaut mission to the International Space Station (ISS).
- Collaboration: The mission is coordinated by NASA and Axiom Space (a private US company).
  - Ax-1: The first all-private mission, launched in 2022.

# 7.6.3. Dark Comet

NASA researchers have discovered more dark Comets, Oumuamua-like (means "a messenger from afar arriving first in Hawaiian) objects.

#### **Dark Comets**

- Resemble **asteroids** but behave like **comets**.
- Have less surface area for material to form tails.
- Deviate from expected orbits, with deviation not explained by the Yarkovsky effect (heat radiation causing orbital changes).
- Follow elongated elliptical paths, coming close to the Sun and then sweeping back to the outer Solar System.

#### 7.6.4. FSSAI Issues Advisory for E-commerce Food Business Operators (FBOs)

The Food Safety and Standards Authority of India (FSSAI) advisory aims to ensure the safety, quality, and authenticity of food products being sold online.

# **Key Points of the FSSAI Advisory**

- Regulatory Compliance: E-commerce platforms must ensure food products comply with Food Safety and Standards (Labelling and Display) Regulations 2020, and online claims must align with physical labels.
- Food Safety and Hygiene: Last-mile delivery personnel must be trained in food safety and hygiene practices.
- Shelf-Life Requirements: Delivered food products must have at least 30% shelf life remaining or 45 days before expiry.
- Seller Accountability: Platforms must display the FSSAI licence and registration numbers of sellers and hygiene ratings of food business operators.

#### **About FSSAI**

- Genesis: Established under the Food Safety and Standards Act, 2006
- **Ministry:** Ministry of Health and Family Welfare
- Role:
  - Lays down science-based standards for food articles.
  - Regulates the manufacture, storage, distribution, and sale of food.



# 7.6.5. High Risk Food

FSSAI has classified packaged drinking water as 'High Risk Food Category'.

### About High-Risk Food

- Definition: Ready-to-eat items that support the multiplication of pathogenic bacteria, posing health risks.
  - Examples: Dairy products, meat (including poultry), fish, and related products.
- Inspections: High-risk foods undergo mandatory riskbased inspections.
- Audits: Central Licensed Manufacturers/Processors of high-risk foods must undergo annual audits by FSSAIapproved food safety auditing agencies

# 7.6.6. Notifiable Disease

The **Ministry of Health and Family Welfare (MoHFW)** has designated **snakebite cases and deaths** as a **notifiable disease.** 

Ministry launched National Action Plan for Prevention and Control of Snakebite Envenoming (NAPSE) aims to halve snakebite-related deaths and disabilities by 2030.

#### What are Notifiable Diseases?

- Definition: Diseases required by law to be reported to government authorities.
  - Responsibility of reporting lies with state governments.
- Purpose: Enables authorities to monitor diseases and provides early warnings for outbreaks.
- Examples: AIDS, hepatitis, dengue, etc.

# 7.6.7. World Malaria Report 2024

World Malaria Report 2024 was released by **WHO**.

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

- Global Malaria Cases: Increased to 263 million in 2023, with an incidence of 60.4 per 1000 population at risk, up from 58.6 in 2022.
- WHO African Region: Accounted for 94% of global cases.
- India-Specific Findings:
  - Decline in Malaria Cases: Dropped by 69% from 6.4 million (2017) to 2 million (2023).
  - Decline in Malaria Deaths: Reduced by 68% from 11,100 (2017) to 3,500 (2023).
  - HBHI Exit: India officially exited the High Burden to High Impact (HBHI) group in 2024.

### **About Malaria**

Caused by Plasmodium parasites (a genus of parasitic protozoans), transmitted to humans via bites of infected female Anopheles mosquitoes.

- **Malaria Vaccines:** RTS, S/AS01 and R21/Matrix-M
- Initiatives
  - WHO Global Technical Strategy for Malaria 2016–2030
  - National Strategic Plan: Malaria Elimination 2023-27
  - Promoting Genetically Modified (GM) Mosquitoes for effective mosquito control

# 7.6.8. Nanoplastics as Agents of Antibiotic Resistance

According to a study, nanoplastics derived from single-use plastic bottles (SUPBs) contribute to the spread of antibiotic resistance (AR).

# **Key Findings of the Study**

- Nanoplastics and Microorganisms: Coexist in diverse environments, including the human gut.
- Polyethylene Terephthalate Bottle-derived Nanoplastics (PBNPs): Facilitate cross-species gene transfer from E. coli to Lactobacillus acidophilus (a key human gut bacteria) through horizontal gene transfer (HGT).
  - Horizontal Gene Transfer (HGT): Movement of genetic material between organisms, not from parent to offspring.

### **About Nanoplastics**

- Definition: Solid particles of synthetic or heavily modified natural polymers, sized between 1 nm to 1000 nm.
- Sources:
  - Primary: Cosmetics, paints, drugs, electronics.
  - Secondary: Breakdown and fragmentation of microplastics.
- Impact:
  - Easily penetrate cells and tissues in living organisms.
  - → Found in human blood, liver, lung cells, and reproductive tissues.

# 7.6.9. Extrachromosomal DNA (ecDNA)

Studies reveal how ecDNA drives cancer progression and drug resistance.

# About Extrachromosomal DNA (ecDNA)

- **Definition:** Small circular DNA fragments that float freely in the nucleus, separate from chromosomes.
- **Evoluation:** Formed due to **DNA damage** (e.g., chromothripsis) or errors during DNA replication.
- Role in Cancer:
  - Found in up to 90% of certain tumour types like brain tumours, liposarcomas, and breast cancers.
  - Contains multiple oncogenes, promoting tumour growth and drug resistance.
  - Oncogenes are mutated genes capable of causing cancer by activating tumour growth.



# 7.6.10. Marburg Virus Disease

A recent outbreak of Marburg Virus Disease (MVD) in **Rwanda** has killed at least 15 people, and infected at least 66.

#### About Marburg Virus Disease (MVD) or Marburg Haemorrhagic Fever

- Causative Agents: Marburg virus (MARV) and Ravn virus (RAVV) of the species Orthomarburgvirus marburgense.
  - Primarily through prolonged exposure to caves or mines inhabited by Rousettus fruit bats, particularly the Egyptian fruit bat (Rousettus aegyptiacus).
- Transmission: Human-to-human transmission occurs via direct contact with the blood, etc.

# 7.6.11. Diamond Battery

Scientists from **University of Bristol and UKAEA** have created world's **first carbon-14 diamond battery**, a sustainable power source that can last thousands of years.

#### **About Diamond Battery**

- Principle: Uses a man-made diamond to generate a small electrical current when placed in a radioactive field.
  - Incorporates carbon-14 (half-life of 5,700 years), an isotope used in radiocarbon dating.
- Energy Conversion: Similar to a solar panel, it converts energy using fast-moving electrons from radioactive decay, absorbing short-range radiation without leakage.
- Potential Applications: Medical Devices (can power pacemakers, hearing aids, etc.), Space Missions (Ideal for long-lasting power for satellites), etc.

### 7.6.12. Milkweed Fiber

Ministry of Textiles encouraging research & development into new natural fibers, including milkweed fiber.

#### **About Milkweed Fiber**

- Unique natural fiber extracted from seed pods of the milkweed plant (Asclepias syriaca L), found in parts of India (Rajasthan, Karnataka, Tamil Nadu).
- Properties: Contains oily material and lignin, making it brittle for spinning; etc.
- Applications: Used in absorbent materials and watersafety equipment like life jackets and belts.

# 7.6.13. Bio-Bitumen

Union Transport Minister inaugurated India's first National Highway made with **Bio-Bitumen** on the **Nagpur-Mansar Bypass** (NH 44).

Bitumen, a black substance from crude oil distillation, is used in road paving and waterproofing due to its adhesive properties.

#### About Bio-Bitumen

- Definition: Petroleum-free alternative to bitumen made from organic materials like bio-char, stubble, lignin, etc.
- Benefits: Reduces imports, addresses stubble burning, boosts the bio-economy.
- Other Sustainable Methods: Copper slag, geotextiles, cold asphalt mix



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#### **VISIONIAS** INSPIRING INNOVATION



# 8.1. Communist Party of India

# Why in the News?

2025 marks the Communist Party of India's (CPI) 100<sup>th</sup> foundation day.

### **About Communist Party of India**

- Formation (outside India): In 1920 in Tashkent, by M.N. Roy and six others due to disenchantment with the noncooperation movement and inspiration from the 1917 October Revolution.
- Formation (inside India): Announced at the Kanpur Communist Conference in 1925.
  - First President: Malayapuram Singaravelu Chettiar. The I<sup>st</sup> May Day celebration started in India in May 1923 under him.
  - → First general secretaries: S.V.Ghate and J P Bagerhatta.
  - → Founding members of the party: Satyabhakta, M.N.Roy, E.T.Roy, etc.
- Prominent Leaders: M.N. Roy, Abani Mukherjee, A. K. Gopalan, S.A. Dange, E.M.S. Namboodiripad, etc.
- Ideology: Marxism-Leninism, focusing on a socialist state and communist society.
- Publications: Ganavani (Bengali), Mehnatkash (Urdu), Kranti (Marathi).
- Major Goals: Nationalization of banks, workers' and peasants' rights, land reforms, etc.
- Sey Events:
  - → Ban: Declared illegal in 1934, lifted in 1942.
  - → Split: In 1964 into CPI (pro-Soviet) and CPI(M)(pro-China) over ideological differences.

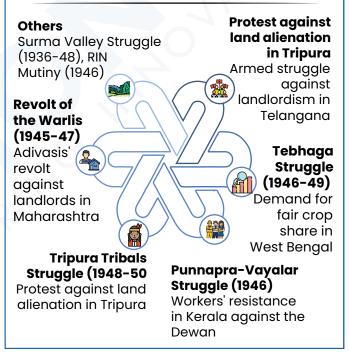
### **Role of CPI in Indian Freedom Struggle**

- Mobilization: Through All India Trade Union Congress (AITUC), All India Kisan Sabha (AIKS), etc., mobilized various societal sections such as women, workers, etc.
- Social Reforms: Advocated for Dalit equality, Hindu-Muslim unity, and fought against colonial repression. E.g. Satyagraha in Guruvayur for temple entry.
- **Demand for Full Independence:** First demanded by CPI **in 1921 at Indian National Congress' (INC) Ahmedabad session.**
- Ideological Influence: All India Students Federation, leading to arrests in Meerut Conspiracy case 1929.

### **Role in Constitution Making**

- **Idea of Constitution:** Proposed **by M.N. Roy in 1934**; CPI supported the idea of a constituent assembly.
- **Jideals of Constitution**: Influenced by CPI's push for secularism, justice, land reforms, etc.

# **Overview of CPI-Supported Revolts**





# 8.2. News in Shorts

# 8.2.1. Geographical Indication (GI) Tag

- Gharchola, a traditional wedding sari from Gujarat, has received the GI tag.
- Chown for auspicious colors like red, maroon, green, yellow, used in Hindu and Jain weddings.

#### **About GI Tag:**

- GI indicates products with specific geographical origin qualities or reputation.
- In India, given under the Geographical Indications (GI) of Goods Act, 1999.
  - → Valid for 10 years which is renewable.
- **Benefits:** Legal protection, preventing unauthorized use, and enhancing exports.

# 8.2.2. 1924 Belgaum Congress Session

**Centenary of 1924 Belgaum Congress Session** was celebrated in **Belagavi (earlier Belgaum)**, Karnataka on December 26-27.

#### About 1924 Belgaum Congress session

- 39<sup>th</sup> and the only session presided over by Mahatma Gandhi.
- Significance:
  - → Discussed 'Swaraj' and 'Sarvodaya'.
  - Revamped Congress structure with a 90% fee cut, focusing on social change.
  - → Held conferences against untouchability.
  - → Resolutions for Hindu-Muslim unity, social service, and mandatory khadi spinning.

# 8.2.3. Indira Gandhi Prize

Former Chile President Michelle Bachelet to receive the 2024 Indira Gandhi Prize for Peace, Disarmament and Development for her work on gender equality, human rights, and democracy.

#### About Indira Gandhi Prize:

- Awarded annually (persons or organization).
- Includes ₹10 million, a trophy, and a citation.
- Selection by a jury of 5-9 eminent persons appointed by the Indira Gandhi Memorial Trust's Chairperson.

# 8.2.4. Sahitya Akademi

Naga writer Easterine Kire's "Spirit Nights" wins Sahitya Akademi Award 2024.

#### **About Sahitya Akademi**

- Genesis: 1954, registered under the Societies Registration Act, 1860.
- **O** Ministry: Autonomous body under Ministry of Culture.
- Role: Literary activities in 24 languages (22 scheduled languages, English, and Rajasthani).
- **2** Recognized as 'India's National academy of letters'.
- Major Awards: Sahitya Akademi Award, Bhasha Samman.





# 9.1. Indic Idea of Good Governance

#### Introduction

Recent emphasis on P2G2 (Pro-People Good Governance) and the U.S. Department of Government Efficiency signifies a shift towards better governance.

This prompts revisiting India's traditional Rajadharma concepts, focusing on justice, fairness, and public welfare.

#### **About Good Governance**

- Governance is managing resources for development, ensuring inclusivity and future-focused decisions.
- According to UN, good governance includes characteristics such as participatory, consensus-oriented, accountable, etc.
- Challenges include corruption, accountability, judicial delays, etc.

#### Indic Idea of Good Governance

- Brihadaranya Upanishad: Stresses the king's duty for equality and protecting the weak.
- Mundaka Upanishad: Emphasizes "Satyamev Jayate" as a governance principle.
- **Epic Ramayana:** Describes **Ram-Rajya**, ideal governance supporting all.
  - → Ayodhya Kanda discusses governance promoting equality.
- **Bhagwat Gita:** Introduces Adhishthan (seat of action) for stable governance decisions.
- **Atharvaveda:** Advocates harmony with nature via **Bhumi Suktam hymn**.
- **Thirukural:** Promotes societal order and environmental care.
- S Kautilya's Arthashastra: Focuses on citizen welfare and public service.
- **Antyodaya:** Aims for upliftment through the weakest, achieving **Sarvodaya**.

#### **Relevance of the Indic Ideas of Good Governance**

- Globalisation: Indic ideas address public welfare amidst global influences with philosophies like Vasudhaiva Kutumbakam.
- Sustainable Living: Aligns with commitments to SDGs and LiFE from ancient texts like Atharvaveda.
- **Preserving Democracy:** Encourages government-citizen cooperation. **E.g. Karmayogi project.**
- S Welfare for All: Concept of Antodaya seen in inclusive programs like MGNREGA.
- Diplomatic Relations: Kautilya's pragmatism aids modern diplomacy.
- Conflict Resolution: Nyaya system suggests mediation-focused justice.

#### Conclusion

Modern governance aligns with Indic philosophies, aiming for public happiness. Delving into ancient texts can inspire a SMART (simple, moral, accountable, responsive, transparent) administration.

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# 9.2. Aspects of Peace

#### Introduction

At the 10<sup>th</sup> Global Forum, UN leaders adopted the **Cascais Declaration** for peace. It stressed intergenerational dialogue for peace, development, and rights.

Previously, the **UNESCO HK Association's 2012 project** described peace as personal and societal harmony.

#### **Five Aspects of Peace**

Aspect	Concept	Challenges
Individual/ Inner Peace	Enables handling life's challenges, reducing stress.	Mental health issues, consumerism.
Social Peace Promotes harmony in commutation and just		Discrimination, misinformation, prejudice.
Ecological Peace	<ul> <li>Stresses sustainable development and environmental balance.</li> </ul>	Climate change, lack of environmental cooperation.
Cultural Peace	<ul> <li>Encourages respect for cultural diversity.</li> </ul>	Ethnocentrism, cultural intolerance.
Political Peace       Image: Supports non-violent relationships across various societal sectors.		Territorial disputes, weak governance, corruption.

#### **Some Philosophical Aspects of Peace**

- Gandhian Conception of Peace: Gandhi's peace rooted in Ahimsa (nonviolence) and Satya (truth), emphasizing selfpurification and compassion.
- **Utilitarian Concept of Peace:** Peace maximizes happiness, minimizing suffering for collective well-being.
- S Kantian Notion of Peace: Peace is a moral duty, requiring rationality and international cooperation.

### **Key Stakeholders in Promoting Peace**

Category	Role in Promoting Peace
Governments	Set policies, enact laws, enforce regulations, etc.
International Organizations	Mediate conflicts, promote diplomacy, coordinate efforts for global peace and development.
Civil Society Organizations	Advocate for peace, human rights, and social change at local, national, and global levels.
Community Leaders	Resolve conflicts, advocate for justice, etc.
Religious & Spiritual Leaders	Promote peace by advocating for love, compassion, forgiveness, etc.
Mainstream Media & social media	Ensure peace by promoting truthful information, countering misinformation and hate speech.
Individuals	Contribute to peace through tolerance, empathy, etc. in daily life.
Families	Instill values of non-violence, respect, etc. within the family unit.
Educational Institutions	Shape future generations by teaching peaceful values, critical thinking, etc.



#### Initiatives Undertaken to Restore and Promote Peace

- **Global Peace:** Institutions like the **World Bank and UN** enhance dialogue and cooperation for stability.
- Political Peace: The ICJ and peace treaties facilitate dispute resolution.
- Ecological Peace: The Paris Agreement and initiatives like Earth Hour tackle environmental issues.
- Inner Peace: Events like International Yoga Day promote mental health.
- C Cultural Peace: UNESCO's World Culture Forums and Culture Heritage Programs foster cultural understanding and preservation.

#### Conclusion

Peace transcends absence of conflict, embracing harmony, justice, and sustainability in human rights, environment, and economy.

# 9.3. Concept of Liberty

#### Introduction

The Supreme Court, in Arvind Kejriwal vs CBI, ruled that his detention infringes on his liberty rights under Article 21, emphasizing bail as the norm.

### **Concept of Liberty**

- Liberty is the freedom to act without undue external restraint. There are two main aspects to liberty.
  - **Negative Liberty** 
    - Not concerned with the conditions of society.
    - Focuses on 'freedom from' external constraints.
    - Personal domain of the individual.
    - More negative liberty leads to more individual freedom.
  - **Positive Liberty** 
    - Concerned with the enabling conditions of society.
    - Focuses on 'freedom to' engage in actions.
    - Social domain of the individual.
    - More positive liberty checks the excess of individual freedom, which might obstruct social stability.
- Constraints on liberty include legal, social, and economic restrictions.
  - Need for Constraints: Reasonable restraints are required to allow debate without coercion.

#### **Ethical Frameworks Surrounding Liberty**

- John Stuart Mill's Harm Principle: Mill advocates for minimal state interference in the exercise of liberties, except to Ð prevent harm to others.
  - **Constraints:** -
    - Self-regarding Actions: These involve only the actor and state or societal restrictions are unjustified.
    - Other-regarding Actions: Regulation is permissible if actions affect others.
    - Example: In Navtej Singh Johar vs. Union of India the Supreme Court decriminalized homosexuality, viewing it as ٥ a self-regarding action.
- Ð Liberty and Rights:

Connection: Liberty is linked to rights, ensuring freedom within society.

- Principle-based Framework:
  - Focuses on moral principles and human rights, where rights might conflict.
  - Civil Liberty: Relies on legal protections for freedom.
- 1 Isaiah Berlin's Ethical Pluralism: Berlin suggests multiple, conflicting values are fundamental, emphasizing both positive and negative liberty.

#### Constitutional Framework surrounding Liberty

- C Article 21: Guarantees no deprivation of life or personal liberty except by law.
- C Article 19: Grants freedom of speech and expression.
- C Other Fundamental Rights: Includes equality (Article 14), equal opportunities (Article 16), and freedom of conscience (Article 25).







# **Key Stakeholders**

Stakeholders	Roles/Interests	Ethical Considerations		
Individual	Primary beneficiary with personal freedom and dignified life.	Freedom with social responsibility.		
Society	Preserving order and harmony.	Establish reasonable limits on individual liberty.		
Government	Upholding law and order, maintain social order and national security.	Protecting individual liberty, Keep checks on arbitrary exercise of power.		
Judiciary	Ensuring rule of law, promoting justice, etc.	Upholding impartiality and ensuring accountability of Government.		
Civil Society	<ul> <li>Protecting and promoting liberties and social justice.</li> </ul>	Work transparently and avoiding conflict of interest in prioritizing public good.		

# Ethical Issues with Liberty

- Liberty vs Security: Laws like UAPA and NSA balance freedom with security and are often criticized.
- **Speech vs Hate:** Social media exacerbates hate speech and unclear laws lead to enforcement issues.
- Tradition vs Women's Rights: Cultural norms challenge women's and transgender rights.
- **Privacy vs Surveillance**: Privacy rights clash with data collection practices.
- Economic Inequality vs Liberty: Economic freedom is limited by inequality, affecting access to essentials.



# Conclusion

Liberty encompasses autonomy and ethical responsibility. The Supreme Court emphasizes its importance, while Mill's harm principal guides when liberty should be limited, highlighting the need for balance with justice in democracies.

# 9.4. Personality In Focus: Shri Tulsi Gowda (1944-2024)

# Introduction

Recently, Shri Tulsi Gowda, an Indian environmentalist, passed away. Known as the **"Encyclopedia of the Forest"** and the **"tree goddess"** for her profound forest knowledge, her legacy continues to inspire environmental conservation.

# Brief about the life of Shri Tulsi Gowda

- **Birth:** Born in 1944 in a Halakki tribal family in Karnataka, where matriarchy is deeply connected to nature.
- **Early Life and Education:** She did not receive formal education and lost her father at two.
- Accolades: Honoured with Padma Shri in 2021, India's 4th highest civilian award.
  - Also received the Indira Priyadarshini Vriksha Mitra Award.



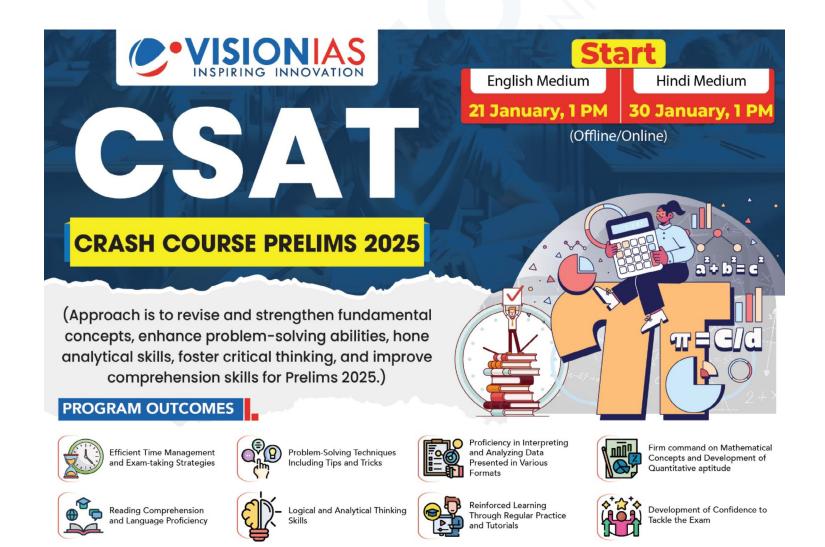
#### Key contributions of Shri Tulsi Gowda

- Respecting Traditional Knowledge: Her tree planting was based on ecological principles, focusing on native species suited to local conditions.
- **Dedicated Afforestation Efforts:** Planted over 30,000 trees in her lifetime.
- Reversing Environmental Destruction: Her work revitalized barren landscapes and restored ecological balance in Karnataka.
- Fostering Environmental Justice: Educated communities on conservation, ensuring the welfare of all.
- Promoting Ecofeminism: Highlighted women's roles in environmental conservation and economic empowerment.
- **Collective Responsibility:** Involved the community in environmental protection, fostering a collective responsibility.

#### Conclusion

Shri Tulsi Gowda's legacy is one of inspiration and empowerment, demonstrating how **community-led initiatives** can lead to significant ecological change and emphasizing a culture of care for the environment.





AHMEDABAD | BENGALURU| BHOPAL | CHANDIGARH | DELHI | GUWAHATI | HYDERABAD | JAIPUR | JODHPUR | LUCKNOW | PRAYAGRAJ | PUNE | RANCHI

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# 10.1. Samarth (Scheme for Capacity Building in Textiles Sector)

# Why in the News?

Recently, Government extended Samarth scheme till March 2026, with a budget of ₹495 crores to train 3 lakh persons in textile-related skills.

### **Objectives:**

- To deliver NSQF-compliant training in textiles (excluding spinning/weaving) for better job prospects.
- To skill, upskill/reskill in handlooms, handicrafts, etc. for sustainable livelihoods through wage or self-employment nationwide.

### **Salient Features**

- Ministry: Ministry of Textiles; Launch year: 2017.
- Valid till: March 2026.
- Implementing Agencies: Textile industry, Institutions of Ministry of Textiles/State Governments with training infrastructure and industry tie-ups and reputed training bodies (NGOs, Trust, etc.).
- Implementation Framework: Aligned with Ministry of Skill Development & Entrepreneurship's (MSDE) policy for skill development such as National Skills Qualifications Framework (NSQF).
- Branding of the Training Centre: Must follow government branding guidelines.
- Selection of Trainees: Preference to marginalized groups like women, SC/ST, differently abled, minorities, BPL, and Aspirational Districts.
- Current Status: Trained 3.27 lakh (88.3% women) of which 79.5% are already employed.
- Funding: Covers costs under MSDE's Common Norms.
- Management Information System (MIS): Web-based platform for monitoring and registration.
- **Aadhaar Based Biometric Attendance:** Mandatory with **minimum 80% attendance** for assessment.
- Soft Skills: Like life management skills included alongside hard skills.
- Assessment and Certification: Third-party mandatory.
- Grievance Redressal: Via call center, mobile app, or scheme website, escalated if unresolved in 15 days.
- **Employment linkage:** Mandatory placements with 70% placement for entry-level and 90% for upskilling.





Topics	Key facts/Data
One Nation, One Election Bill	<ul> <li>Constitutional Provisions: Articles 82A, 83, 172, 327</li> <li>Previous Recommendations: Election Commission of India (1983), Law Commission (1999), Parliament Standing Committee (79th report), NITI Aayog (2017), Law Commission (2018)</li> </ul>
Atrocities against Scheduled Castes	<ul> <li>Constitutional Provisions:</li> <li>Articles 14, 15, 16, 17 (Fundamental Rights)</li> <li>Article 46 (Directive Principles of State Policy, promotes educational and economic interests of SCs)</li> <li>Article 338 (National Commission for Scheduled Castes)</li> <li>Article 341 (President's power to notify Scheduled Castes)</li> <li>Article 366 (defines the term 'Scheduled Caste')</li> <li>Initiatives Taken:</li> <li>National Action for Mechanised Sanitation Ecosystem Scheme (NAMASTE)</li> <li>Pradhan Mantri Adarsh Gram Yojana (PMAGY)</li> <li>Scheme of Residential Education for Students in High School in Targeted Area (SHRESHTA) for SCs</li> <li>Pradhan Mantri Anusuchit Jaati Abhudaya Yojana (PM-AJAY)</li> <li>Scholarship for Higher Education for Young Achievers Scheme (SHREYAS)</li> <li>Pradhan Mantri Dakshta aur Kushalta Sampaan Hitgrahi (PM-DAKSH)</li> </ul>
Bharatiya Vayuyan Vidheyak, 2024	<ul> <li>Constitutional Provisions: Article 14 (Right to Equality)</li> <li>Statutory Provisions: <ul> <li>Aircraft Act, 1934</li> <li>The Airports Economic Regulatory Authority of India (AERA) Act, 2008</li> <li>Government Initiatives:</li> <li>National Civil Aviation Policy, 2016</li> <li>Vision 2040 for the Civil Aviation Industry in India</li> <li>RCS-UDAN Scheme</li> <li>Privatization of Airports under the National Monetization Pipeline</li> <li>Technological Interventions: NABH Nirman, Digi Yatra, AirSewa, GAGAN</li> <li>International Cooperation: Delhi Declaration on Civil Aviation (2024); Standardization of Carbon Accounting and Reporting at airports.</li> </ul> </li> </ul>







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Overseas Citizen of India (OCI)	<ul> <li>Constitutional Provisions: Articles 58, 66, 124, 217, 16</li> <li>Statutory Provisions: Citizenship Act, 1955</li> <li>Government Initiatives: OCI Scheme, 2005</li> </ul>
India-Sri Lanka Relations	<ul> <li>Regional &amp; Multilateral Collaboration: Both countries are active members of the Indian Ocean Rim Association (IORA) and BIMSTEC.</li> <li>Military Collaboration: Joint exercises include SLINEX (Naval) and MITRA SHAKTI (Army)</li> </ul>
India-Bhutan Relations	<ul> <li>Recent Developments: India supports Bhutan in advancing the Gelephu Mindfulness City project, a zero-carbon cooperative city,</li> <li>Integrated Check Post (ICP) at Darranga (Assam) was inaugrated.</li> <li>The Punatshangchhu-II hydroelectric project (1020 MW) is nearing completion.</li> <li>Wildlife Cooperation: Transboundary wildlife conservation in the Transboundary Manas Conservation Area (TraMCA).</li> </ul>
India-Kuwait Relations	<ul> <li>Kuwait joined the International Solar Alliance (ISA).</li> <li>Kuwait is India's 6<sup>th</sup> largest crude oil and 4<sup>th</sup> largest gas supplier.</li> </ul>
Trade Weaponization	<ul> <li>Definition: Strategic use of trade policies to influence a partner's actions. Eg: 1973 oil embargo by Arab states targeting the US for its support of Israel.</li> <li>Key Tools:         <ul> <li>Selective Restrictions: USA's CAATSA sanctions on Iran, Russia, North Korea.</li> <li>Currency Manipulation: China's undervaluation to enhance exports.</li> </ul> </li> </ul>
UK Joins CPTPP	CPTPP Members: Includes 12 nations: UK, Australia, Canada, Japan, New Zealand, Brunei, Chile, Malaysia, Mexico, Peru, Singapore, and Vietnam.
Indian Chemical Council Wins OPCW-The Hague Award	<ul> <li>Indian Chemical Council (ICC): Founded in 1938, it represents over 80% of India's \$220 billion chemical sector.</li> <li>CWC: The Chemical Weapons Convention aims to eliminate chemical weapons, with India being an original signatory.</li> <li>The Organization for the Prohibition of Chemical Weapons (OPCW) is the implementing body for CWC.</li> </ul>
Kerch Strait	Location: A narrow waterway between the Crimean Peninsula and the Taman Peninsula, linking the Black Sea and Sea of Azov.
State Finances	<ul> <li>Fiscal Position of the State Governments as per Report         <ul> <li>Gross fiscal deficit: Within 3% of GDP (2021-22 to 2023-24).</li> <li>Revenue deficit: 0.2% of GDP (2021-22 to 2023-24).</li> <li>Capital Expenditure: Increased to 2.6% of GDP from 2.2%</li> <li>Debt of states: Declined from 31.8% of GDP (2004) to 28.5% of GDP (2024)</li> </ul> </li> <li>Golden Rule: All current/revenue expenditures be financed from current revenue while capital expenditure is financed through borrowings,</li> </ul>
Foreign Direct Investment (FDI)	<ul> <li>2014-24 saw an increase of 119% in FDI inflows over 2004-14.</li> <li>India's FDI inflows have increased ~20 times from 2000-01 to 2023-24.</li> <li>During 2000-2024, India's service sector attracted the highest FDI equity inflow (US\$ 115.18 billion).</li> <li>Maharashtra received highest,31%, with Karnataka,21%, Gujarat 16%. Mauritius largest source.</li> </ul>







Public-private partnership (ppp) framework in india	Various PPP Models in India
	Build Operate Transfer (BOT)
	Build Own Operate (BOO)
	BOT-Annuity: Performance payments, granting authority pays the concessionaire annuities on scheduled dates throughout the concession period.
	Operations & Maintenance (Service Contract)
	Engineering Procurement and Construction (EPC): The private entity manages EPC, has no role in project management and funded by government.
	Hybrid Annuity Model (HAM): It combines EPC (40 per cent) and BOT-Annuity (60 percent).
mBridge Project	Launched in 2021
	mBridge is a cross-border, decentralised, multiple central bank digital currency (mCBDC) platform.
	Status of Tourism Sector in India: 39th India's rank in Travel and Tourism Development Index 2024 published by World Economic Forum; 18.89 million International Tourist Arrivals in India during 2023.
Tourism Sector in India	Initiatives to promote Tourism in India
	Infrastructure development: Swadesh Darshan 2.0, PRASHAD Scheme, RCS-UDAN
	<ul> <li>Policy and legal framework: National Tourism Policy, E-Visa facility</li> <li>Nick a transitional data from the second second</li></ul>
	Niche tourism: medical and wellness tourism, Eco-tourism, Adventure Tourism
Insurance Sector in India	<ul> <li>Status: 10th largest Insurance sector globally; 4.2% insurance penetration in India in 2021. (Global average: 7%)</li> </ul>
	SLINEX: Bilateral naval exercise between Sri Lanka and India.
	Desert Knight: Trilateral air combat exercise for better interoperability among India, France, and UAE.
Defense Exercises	<ul> <li>Harimau Shakti 2024: Annual Joint Military Exercise between India and Malaysia.</li> </ul>
	Agni Warrior: 13th edition of Joint Military Exercise between Indian Army and Singapore Armed Forces.
India State of Forest Report (ISFR) 2023	Change in Forest and Green Cover in India (2021-23): Outside Recorded Forest Area (RFA) <net cover<="" cover<total="" forest="" green="" p=""></net>
	<ul> <li>Largest increase in forest and tree cover: Rajasthan<odisha<up <="" chhattisgarh.<="" li=""> </odisha<up></li></ul>
	<ul> <li>Largest decrease in forest and tree cover: Nagasinan (Galand Karnataka &lt; MP)</li> </ul>
	<ul> <li>Top forest and Tree cover states: Maharashtra<arunachal<mp< li=""> </arunachal<mp<></li></ul>
Sacred Groves	<b>Definition:</b> Patches of forests with religious and spiritual significance to the indigenous
	World Heritage list
River Interlinkage	The Idea of National River Linking Project (NRLP) was conceived by Sir Arthur Cotton in 1850s which was then revived in 1972 by K L Rap then India's minister of power and
	irrigation.
	In 1982 National Water Development Agency (NWDA) was set up to study the feasibility of the river linking.
	<ul> <li>The Idea of National River Linking Project (NRLP) was conceived by Sir Arthur Cotton in 1850s which was then revived in 1972 by K.L. Rao, then India's minister of power a irrigation.</li> <li>In 1982 National Water Development Agency (NWDA) was set up to study the feasibility</li> </ul>







Digital Content Creators (DCC)	<ul> <li>Creator Economy (or Orange Economy) includes cultural and creative industries producing goods, services, and content rooted in cultural or artistic origins.</li> <li>→ Globally, the creative economy generates over \$2 trillion annually (Creative Economy Outlook 2024)</li> <li>→ In India, it is valued at \$30 billion.</li> </ul>
Manual Scavenging	<ul> <li>Definition: Manual handling of human excreta from insanitary latrines, open drains, or pits (banned under PEMSR Act, 2013).</li> <li>Key Initiatives:         <ul> <li>National Commission for Safai Karamcharis (NCSK): Established to address the issues of safai karamcharis.</li> <li>NAMASTE Scheme (2023): Focuses on the safety, dignity, and rehabilitation of sanitation workers.</li> <li>National Safai Karamchari Financial Development Corporation (1997): Provides loans and rehabilitation support for safai karamcharis.</li> </ul> </li> </ul>
Female Labor Force Participation in India	<ul> <li>Rural LFPR increased from 24.6% (2017-18) to 47.6% (2023-24) (~69% growth).</li> <li>Urban LFPR rose from 20.4% to 25.4% (~25% growth).</li> <li>Regional variations: Lower LFPR in Bihar, Punjab, Haryana, higher in northeastern and southern states.</li> </ul>
South Korea's 'Super- Aged' Society	<ul> <li>South Korea's 65+ population surpasses 20%, becoming a 'super-aged' society, second in Asia, after Japan, to achieve this status.</li> <li>UN definitions: Aging society (7%+ aged 65+), Aged society (14%+ aged 65+), and Super-Aged society (20%+ aged 65+)</li> </ul>
Jal Jeevan Mission (JJM): Har Ghar Jal	<ul> <li>JJM: Har Ghar Jal is a centrally sponsored scheme under the Ministry of Jal Shakti.</li> <li>Objective: Provide safe and reliable tap water to every rural household by 2024.</li> <li>Key achievement: Rural tap water coverage increased to 79.31% from 17% (3.23 crore households) in 2019.</li> </ul>
No Detention Policy Scrapped	<ul> <li>No-detention policy has been scrapped for Classes 5 and 8 by the RTE (Amendment) Rules, 2024, allowing schools to fail students.</li> <li>RTE Act, 2009 guarantees free education for children aged 6 to 14 years under Article 21A.</li> </ul>
Reports released	<ul> <li>'Global Outlook for 2025' Report by World Food Programme (WFP).</li> <li>Global Report on Trafficking in Persons 2024 by the United Nations Office on Drugs and Crime (UNODC)</li> </ul>
CE20 Cryogenic Engine	<ul> <li>Working Principle: Follows Newton's Third Law – "Every action has an equal and opposite reaction." Thrust is produced by high-speed ejection of gases.</li> <li>Fuel &amp; Oxidizer: Uses Liquid Hydrogen (-253°C) &amp; Liquid Oxygen (-183°C) for high efficiency.</li> <li>Advantages: High thrust, fuel efficiency, eco-friendly, ideal for heavy payloads.</li> </ul>
Quantum Chip	<ul> <li>Google's Willow Quantum Chip: Achieved record-breaking error reduction and completed a task in 5 minutes that would take supercomputers 10<sup>25</sup> years.</li> <li>Core Principle of Quantum Mechanics: Operates on superposition (qubits exist in multiple states) and entanglement (linked qubits affect each other instantly).</li> </ul>





Hyperloop	<ul> <li>Concept: Proposed by Elon Musk in 2013 as an ultra-high-speed transport system using pressurized pods in low-pressure tubes.</li> <li>Core Technology: Uses Magnetic Levitation (Maglev) to lift pods and vacuum tubes to reduce air resistance.</li> <li>Components: Includes linear induction motors for propulsion, air-bearing suspension, and compressed air systems.</li> </ul>
Axiom Mission 4 (AX-4)	<ul> <li>Mission: Fourth private astronaut mission to the International Space Station</li> <li>Collaboration: A joint mission coordinated by NASA and Axiom Space (private US company).</li> </ul>
Dark Comet Discovery by NASA	<ul> <li>Characteristics: Resemble asteroids but behave like comets.</li> <li>Tails: Less surface area means material cannot form prominent tails.</li> <li>Orbit: Deviate from expected orbits, with deviation not explained by the Yarkovsky effect.</li> </ul>
High-Risk Food Classification by FSSAI	<ul> <li>Definition: High-risk foods support pathogenic bacteria growth and pose health risks (e.g., dairy products, meat, poultry, fish).</li> <li>Mandatory Inspections: High-risk foods require risk-based inspections and annual audits by FSSAI-approved auditing agencies.</li> </ul>
Notifiable Disease	Notifiable Diseases: Diseases that must be reported to authorities for monitoring and early warning (e.g., AIDS, hepatitis).
World Malaria Report 2024	<ul> <li>Malaria is caused by Plasmodium parasites, transmitted by female Anopheles mosquitoes.</li> <li>Malaria Vaccines: WHO-approved vaccines include RTS, S/AS01 (2021) and R21/Matrix-M (2023).</li> </ul>
Nanoplastics	<ul> <li>Nanoplastics: Solid particles made from synthetic polymers or heavily modified natural polymers, sized between 1 nm to 1000 nm.</li> <li>Sources:         <ul> <li>Primary: Cosmetics, paints, drugs, and electronics.</li> <li>Secondary: Breakdown of microplastics into smaller particles.</li> </ul> </li> </ul>
Extrachromosomal DNA (ecDNA) and Cancer	<ul> <li>Definition: Small circular DNA fragments that exist freely in the nucleus, separate from chromosomes.</li> <li>Genesis: Formed due to DNA damage (e.g., chromothripsis) or errors in DNA replication.</li> </ul>
Marburg Virus Disease (MVD) Outbreak	<ul> <li>Causative Agents: Marburg virus (MARV) and Ravn virus (RAVV) from the species Orthomarburgvirus marburgense.</li> <li>Transmission: Human-to-human via direct contact with infected blood, secretions, or bodily fluids.</li> </ul>
Communist Party of India (CPI)	<ul> <li>Formed: In 1925 in India by M.N. Roy and others.</li> <li>Inspiration: October revolution of 1917</li> <li>First President: Malayapuram Singaravelu Chettiar</li> </ul>
Sahitya Akademi	<ul> <li>Ministry: Ministry of Culture</li> <li>Languages: 24 (22 scheduled, English and Rajasthani).</li> </ul>



# ACTIVITIES

# 12.1. MCQS

- 1. What is the primary intention of the Constitution (One Hundred and Twenty-Ninth Amendment) Bill, 2024?
  - (a) To amend the term of office for the President
  - (b) To enable simultaneous elections for Lok Sabha and State Assemblies
  - (c) To increase the number of seats in Lok Sabha
  - (d) To regulate the election process for local bodies
- 2. What new regulatory power does the Bhartiya Vayuyan Vidheyak (BVV), 2024 confer on the DGCA?
  - (a) Power over airport tariffs
  - (b) Authority to regulate the design of aircraft
  - (c) Control over flight schedules
  - (d) Regulation of international flight routes
- 3. Which of the following is NOT a member of the Gulf Cooperation Council (GCC)?
  - (a) Iran
  - (b) Saudi Arabia
  - (c) Oman
  - (d) Kuwait
- 4. In the recent context, what does "Trade Weaponization" primarily refer to?
  - (a) The use of trade policies to foster unrestricted global trade.
  - (b) The strategic use of trade policies to influence a partner's diplomatic or economic actions.
  - (c) The creation of global trade alliances for mutual economic benefits.
  - (d) The application of trade tariffs to protect domestic industries.

- 5. Consider the following statements about the Belt and Road Initiative (BRI):
  - 1. The BRI was launched by China in 2013 with the goal of enhancing regional integration, boosting trade, and stimulating economic growth through land and sea networks.
  - 2. The BRI includes two major components: the Silk Road Economic Belt and the Maritime Silk Road.

Which of the following statements is/are correct?

- (a) Only statement 1
- (b) Only statement 2
- (c) Both statements are correct
- (d) Neither statement is correct
- 6. Which of the following statements is/are correct about mBridge Project?
  - 1. It is a central bank digital currency (mCBDC) platform.
  - 2. Blockchain technology is used in this.
  - 3. Reserve Bank of India is one of the observing members.
  - 4. It will give countries more control over financial transactions.
  - (a) All statements
  - (b) Only One statement
  - (c) Only two statements
  - (d) None
- 7. Which of the following statement/statements about GDP Base Year is/are correct:
  - 1. A base year is the reference year whose prices are used to calculate the real growth in national income.
  - 2. It has been annually changed since 2015.
  - (a) 1 only
  - (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2





- 8. Which of the statements is/are correct regarding Small Finance Banks (SFBs)?
  - 1. SFBs are registered as public limited company under Companies Act, 2013.
  - 2. SFBs will lead to better financial inclusion.
  - 3. 10000 crore minimum paid-up voting equity capital is required for SFBs.
  - 4. Priority Sector Lending (PSL) norms do not apply to these.
  - (a) 1 and 2
  - (b) 1, 2 and 3
  - (c) 1 Only
  - (d) 3 and 4 Only
- 9. 9. Consider the following statements about National Investigation Agency (NIA)
  - 1. NIA can investigate both schedules and nonschedules offences under the NIA act.
  - 2. It was established Post 26/11 Mumbai attacks under the NIA Act, 2008.

Which of the above statements are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- 10. Consider the following statements about the UN Convention on Cybercrime
  - 1. It is the first legally binding UN instrument on this issue.
  - 2. Adopted by consensus among UN Member States. Which of the above Statements is/are correct?
  - (a) Only 1
  - (b) Only 2
  - (c) Both 1 and 2
  - (d) None of the above
- 11. Arrange the following states according to largest increase in forest and tree cover ( as per State Forest Report, 2023).
  - (a) Rajasthan<Odisha<UP<Chhattisgarh
  - (b) Chhattisgarh<UP<Odisha<Rajasthan
  - (c) Odisha<Rajasthan< Chhattisgarh<UP
  - (d) Rajasthan<UP<Odisha<Chhattisgarh

# 12. Consider the following sacred groves and their locations:

Sa	cred grove	State		
1.	Pavitrakhsetralu	Kerala		
2.	Jahera	Odisha		
3.	Bugyal	Uttarakhand		

How many of the above pairs are correct?

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

#### 13. Consider the following statements:

- 1. Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) released Nexus Assessment Report
- 2. UN Environment Programme provides secretariat services to IPBES.

Which of the above statement are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) None of the above

#### 14. What is the main objective of the NAMASTE Scheme?

- (a) Ensuring safety, dignity, and rehabilitation of hazardous sanitation workers
- (b) Enhancing education for sanitation workers' children
- (c) Providing financial aid to manual scavengers
- (d) Mechanizing the cleaning of rivers and drains
- 15. Which organization released the Global Report on Trafficking in Persons 2024?
  - (a) World Health Organization (WHO)
  - (b) United Nations High Commissioner for Refugees (UNHCR)
  - (c) United Nations Office on Drugs and Crime (UNODC)
  - (d) International Criminal Police Organization (INTERPOL)
- 16. With reference to qubits in quantum computing, consider the following statements:
  - 1. Qubits can exist in superposition, representing multiple states at once.
  - 2. Qubits are entangled, influencing each other's state.
  - 3. Qubits function in a binary system, like classical bits.
  - 4. Qubits are identical to classical bits in their operations.
  - Which of the above statements is/are correct?
  - (a) 1 only
  - (b) 1 and 2 only
  - (c) 2 and 3 only
  - (d) 1, 2, and 3
- 17. What technology does Hyperloop uses to lift its pods above the track?
  - (a) Magnetic levitation (Maglev)
  - (b) Air suspension
  - (c) Hydraulics
  - (d) Friction-based wheels



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#### Consider the following statements about rare diseases:

- 1. Rare diseases are defined by the WHO as conditions affecting fewer than 5 per 1,000 people.
- 2. The National Policy for Rare Diseases includes a group for diseases that are amenable to onetime curative treatment.
- Which of the above statements is/are correct?
- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- 19. What is the significance of the 1924 Belgaum **Congress Session?**

# 12.2. True/False Statements

- 1. The One Nation One Election Bill includes provisions for simultaneous elections for local bodies. (T/F)
- The Vice President can be removed from the office of 2. Rajya Sabha Chairperson by a simple majority. (T/F)
- Kerch Strait is a narrow waterway connecting the 3. Mediterranean Sea to the Black Sea. (T/F)
- 4. Kachchatheevu Island was ceded to Sri Lanka in 1974 under the Indo-Sri Lanka Agreement. (T/F)
- 5. India's offshore mineral reserves include gold, diamond, copper, nickel, cobalt, copper, manganese, and rare earth elements. (T/F)
- 'Jalvahak' Scheme which aims to encourage 6. business enterprises with safe and timely delivery of cargo through inland waterways is unveiled on all waterways. (T/F)
- 7. National Legal Metrology Portal (eMaap) is developed by Department of Consumer Affairs to integrate State Legal Metrology Departments and their portals into a unified National System. (T/F)
- 8. Directorate of Revenue Intelligence (DRI) released 'Smuggling in India' report 2023-24. (T/F)
- 9. Hindustan Aeronautics Limited (HAL) has developed the Kaveri engine<mark>,</mark> which has been approved for inflight testing. (T/F)
- 10. Indian National Centre for Ocean Information Services (INCOIS) is autonomous body under the Ministry of Earth Sciences. (T/F)

# **12.3. Mains Practice Questions**

- (a) It was the first session outside British India.
- (b) It was the only session presided over by Mahatma Gandhi.
- (c) It marked the beginning of the Quit India Movement.
- (d) It led to the formation of the Swaraj Party.
- 20. What is the primary objective of the SAMARTH scheme?
  - (a) To provide housing for textile workers
  - (b) To deliver industry-aligned NSQF-compliant training in the textile sector
  - (c) To export textiles
  - (d) To increase the production of spinning and weaving
- 11. UN General Assembly adopted Programme of Action for Landlocked Developing Countries for Decade 2024-2034 (T/F)
- 12. Convention of Biological Diversity is the only legally binding international agreement connecting environment, development, and sustainable land management. (T/F)
- 13. Ganges River dolphin (Platanista gangetica) is critically endangered. (T/F)
- 14. The Jal Jeevan Mission aims to provide safe and reliable tap water to every rural household by 2024. (T/F)
- 15. India is not a signatory to the UN Convention on the Rights of the Child. (T/F)
- 16. The One Nation One Ration Card Scheme enables ration card portability for migrants and their families. (T/F)
- 17. Bio-bitumen is made entirely from petroleum-based products. (T/F)
- 18. Horizontal gene transfer (HGT) refers to the transfer of genetic material from parent to offspring. (T/F)
- 19. The Indira Gandhi Price for Peace, Disarmament and Development does not include a monetary award. (T/F)
- Third-party assessment and certification are optional for trainees in the SAMARTH scheme. (T/F)
- 1. Discuss the constitutional implications and challenges of implementing the One Nation One Election policy in India. (150 words, 10 marks)
- 2. Examine the effectiveness of existing legal mechanisms in curbing atrocities against Scheduled Castes in India. Suggest further reforms. (150 words, 10 marks)
- 3. Examine the significance of India-Sri Lanka relations, focusing on economic, strategic, and security cooperation. How can India address challenges like Chinese influence and maritime disputes? (150 words, 10 marks)





- 4. Foreign Direct Investment is not just an economic tool for the growth and development of the country. In this context, discuss the challenges for attracting FDI in India. What steps have been taken so far by the government in India? Also, suggest further reforms. (250 words, 15 marks)
- 5. Tourism is significant for country. Discuss the challenges faced by tourism sector and initiatives taken to promote tourism. What can be the way forward? (150 words, 10 marks)
- 6. Critically analyze the powers and functions of the National Investigation Agency (NIA) in light of recent judicial interpretations. How does the expansion of NIA's investigative scope contribute to addressing complex security challenges in India? (150 words, 10 marks)
- 7. Discuss the role of Digital Content Creators (DCCs) in the global Creator Economy and examine the associated risks and regulatory challenges. Suggest measures to mitigate these risks. (150 words, 10 marks)
- 8. Discuss the challenges and initiatives associated with managing rare diseases in India. (150 words, 10 marks)
- 9. Discuss the role of the Communist Party of India during the Indian freedom struggle. How did its activities influence the broader nationalist movement? (150 words, 10 marks)
- 10. Analyze the role of the SAMARTH scheme in bridging the skill gap in India's textile sector. (150 words, 10 marks)
- Trade weaponization is increasingly being used to influence global politics and economic decisions. Analyze the concept
  of trade weaponization, its key tools, consequences, and the measures India has adopted to counter it. (250 words, 15
  marks)
- 12. Railways in India require modernization and management. In this context, discuss the various issues faced by the railways. What can be the solution to the above in view of recent report released by Parliamentary Standing Committee on Railways. (250 words, 15 marks)
- 13. "India's geographical location and extensive borders make it particularly vulnerable to smuggling and related security challenges." In light of the recent DRI report, analyze the multifaceted impact of smuggling on India's security and economy, and evaluate the effectiveness of current preventive measures. (250 words, 15 marks)
- 14. "Despite numerous policy initiatives, urban air pollution remains a critical challenge for Indian cities." Analyze the key reasons for persistent urban air pollution and suggest comprehensive measures for its mitigation. (250 words, 15 marks)
- 15. "The Draft Solid Waste Management Rules, 2024 mark a shift towards a more comprehensive and circular approach to waste management in India." Critically analyze the key features of the new rules and examine the challenges in their implementation. (250 words, 15 marks)
- 16. "Sacred groves represent a unique intersection of cultural heritage, biodiversity conservation, and community-based natural resource management." In light of the recent Supreme Court directives, analyze the significance of sacred groves and suggest measures for their effective conservation. (250 words, 15 marks)
- 17. Examine the implications of social media addiction in children, discussing the measures taken globally and in India to protect children online. Should there be a ban on social media for children under 16? Justify your answer with arguments for and against the ban. (250 words, 15 marks)
- 18. Analyze the factors influencing Female Labor Force Participation (LFPR) in India and discuss the steps taken by the government to enhance women's participation in the workforce. What further measures can be implemented to improve female LFPR in the country? (250 words, 15 marks)
- 19. Evaluate the progress made by the Ministry of Ayush over the past decade in promoting traditional medicine systems in India. What are the key challenges it faces, and how can these be addressed to integrate Ayush effectively with modern healthcare practices? (250 words, 15 marks)
- 20. Discuss the significance of quantum chips in advancing quantum computing. Highlight their impact on emerging technologies, challenges, and the steps required to overcome these challenges. (250 words, 15 marks)

## 12.4. Ethics Case Studies

You have recently taken charge as the District Magistrate of a remote district X. On interacting with the public and the officials there, you find out that the district has a very poor governance track record with corruption among officials, poor service delivery, and complacent attitude among officials. On further inquiry you find that both the officials and the citizens are quite traditional in their beliefs and do not connect with modern governance ideas. Therefore, you feel the urgent need to revamp the administrative strategy by linking it with Indic ideas of Good Governance so that it not only resonates with the beliefs of the people but also the officials ensure their implementation with full spirit.

On the basis of the above case study, answer the following questions.

- 1. What are the key foundational notions of Indic Idea of Good Governance?
- 2. Citing few examples, suggest how Indic ideas help in the dealing with the problems being faced by governance of district X?



# ANSWERS AND EXPLANATION



# **13.1. MCQs Answer and Explanation**

#### 1. Answer: (b)

#### Explanation:

Statement B is correct. The Bill proposes amendments to enable simultaneous elections for both Lok Sabha and State Legislative Assemblies, aiming to streamline the election process.

#### 2. Answer: (b)

#### Explanation:

Statement B is correct. The Bhartiya Vayuyan Vidheyak (BVV), 2024 gives DGCA the authority to regulate the design of aircraft, which was not explicitly mentioned in the previous act.

#### 3. Answer: (a)

#### **Explanation:**

The Gulf Cooperation Council (GCC) is a political and economic union of six Middle Eastern countries: Saudi Arabia, Oman, Kuwait, Bahrain, Qatar, and the United Arab Emirates (UAE).

#### 4. Answer: (b)

#### Explanation:

**Trade Weaponization** refers to the strategic use of trade policies and tools as a foreign policy instrument, aimed at influencing a partner's actions or policies by exploiting trade vulnerabilities.

#### 5. Answer: (c)

**Explanation:** 

- Statement 1 is correct. The BRI was indeed launched by China in 2013 with the primary goal of enhancing regional integration, boosting trade, and stimulating economic growth through land and sea networks.
- Statement 2 is correct. The BRI consists of two major components: the Silk Road Economic Belt (land route) and the Maritime Silk Road (sea route), which are designed to connect Asia, Africa, and Europe.

### 6. Answer: (a) Explanation:

#### About mBridge Project

- It is a cross-border, decentralised, central bank digital currency (mCBDC) platform.
- A platform based on a new blockchain 'the mBridge Ledger' was also built to support realtime, peer-to-peer, cross-border payments and foreign exchange transactions.
- Reserve Bank of India is one of the observing members.
- It will give countries more control over financial transactions and economic sovereignty.

#### 7. Answer: (a)

#### Explanation:

- Statement l is correct: A base year is the reference year whose prices are used to calculate the real growth (minus inflation) in national income. Base year is a benchmark used for GDP calculation.
- Statement 2 is not correct: The previous base year revision in 2015 changed base year from 2004-05 to 2011-12. It is not changed annually.

#### 8. Answer: (a)

#### Explanation:

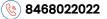
- **Statement 1 is correct:** SFBs are registered as public limited company under Companies Act, 2013.
- **Statement 2 is correct:** SFBs will lead to better financial inclusion.
- **Statement 3 is incorrect:** 200 crore minimum paid-up voting equity capital is required for SFBs.
- Statement 4 is incorrect: Priority Sector Lending (PSL) norms required to extend 75% of its Adjusted Net Bank Credit (ANBC) to the priority sectors.
- 9. Answer: (c)

#### **Explanation:**

**Statement A is correct.** NIA can investigate both schedules and non-schedules offences under the







NIA Act. Under Section 8 of the NIA Act, NIA can investigate connected non-scheduled offences and any other accused linked to the scheduled offence, with central government approval

Statement B is correct. It was established in the aftermath of 26/11 Mumbai attacks under the NIA Act, 2008.

#### 10. Answer: (c)

#### Explanation:

- Statement 1 is correct. The UN General Assembly recently adopted the United Nations Convention on Cybercrime, it is the first legally binding UN instrument on this issue.
- Statement 2 is correct. It was adopted by consensus among 193 UN Member States.

#### 11. Answer: (a)

#### **Explanation:**

- According to the India State of Forest Report (ISFR) 2023, the largest increase in forest and tree cover is:
- o Chattisgarh:683.62 sq.km
- o UP: 559.19sq.km
- o Odisha: 558.57 sq.km
- o Rajasthan: 397.48 sq.km
- So, the correct sequence is: Rajasthan<Odisha<UP<Chhattisgarh</p>

#### 12. Answer: (b)

#### **Explanation**:

 Pavitrakhsetralu sacred grove is located in Andhra Pradesh.

#### 13. Answer: (c)

#### **Explanation:**

Both the given statements are correct. Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) released Nexus Assessment Report and UN Environment Programme provides secretariat services to IPBES.

#### 14. Answer: (a)

#### **Explanation:**

- The NAMASTE Scheme, launched in 2023, focuses on providing safety, dignity, and rehabilitation to hazardous sanitation workers.
- It is aimed at eliminating manual scavenging and ensuring a safer and more dignified livelihood for those involved in sanitation work

#### 15. Answer: (c)

#### **Explanation:**

The UNODC released the Global Report on Trafficking in Persons 2024, which provides a comprehensive analysis of global human trafficking trends. 16. Answer: (b)

#### **Explanation:**

- Statement 1 (Correct): Qubits can exist in superposition, meaning they can represent both 0 and 1 simultaneously. This is a fundamental feature of quantum computing.
- Statement 2 (Correct): Qubits can be entangled, meaning that the state of one qubit is directly influenced by the state of another, regardless of distance. This is a key property used in quantum computation.
- Statement 3 (Incorrect): Qubits do not function in a strict binary system like classical bits. While classical bits can only be in one state (either 0 or 1), qubits use superposition to exist in multiple states simultaneously.
- Statement 4 (Incorrect): Qubits are not identical to classical bits. Classical bits are strictly in one state (0 or 1), while qubits leverage quantum phenomena like superposition and entanglement, making them much more complex.

#### 17. Answer: (a)

#### **Explanation:**

- Hyperloop uses magnetic levitation (Maglev) to lift its pods above the track. This eliminates friction, allowing for high speeds and smooth travel.
- The use of magnets enables the pod to float and move forward without touching the track, providing efficient and fast transportation.

#### 18. Answer: (c)

#### **Explanation:**

- Statement 1 is incorrect: The WHO defines rare diseases as conditions affecting 1 or fewer per 1,000 people, not fewer than 5.
- Statement 2 is correct: The National Policy for Rare Diseases (NPRD 2021) categorizes diseases into groups, one of which includes diseases that are amenable to one-time curative treatment

#### 19. Answer: (b)

#### **Explanation:**

1924 Belgaum Congress Session was the only session presided over by Mahatma Gandhi. The session discussed 'Swaraj' and 'Sarvodaya' and revamped Congress's structure with a 90% fee cut, focusing on social change

#### 20. Answer: (b)

#### **Explanation:**

The Objectives of the SAMARTH scheme is to provide NSQF-compliant training in textile sectors (excluding spinning and weaving), enhance skills in traditional areas like handlooms and handicrafts, and promote sustainable livelihoods through employment or entrepreneurship across the country.



# 13.2. True/False Answers

#### Answers

1. F	2. F	3. F	4. T	5. T	6. F	7. T	8. T	9. F	10. T
11. т	12. F	13. F	14. T	15. F	16. T	17. F	18. F	19. F	20. F

## 13.3. Approach to the Mains Practice Questions

 Introduction: Mention about the new Bill introduced.
 Main Body: Highlight the constitutional implications and challenges in implementation.

**Conclusion:** Take a balanced approach, keeping in mind the spirit of cooperative federalism.

 Introduction: Mention the observations by the Standing Committee on Social Justice and Empowerment.
 Main Body: Highlighting the available legal provisions bring out the challenges in their property.

provisions, bring out the challenges in their proper implementation. Also, suggest improvements in legal frameworks, enforcement, and social awareness.

**Conclusion:** Emphasize upon the ideas of Equality, Justice, etc. in India's constitution.

 Introduction: Briefly define the importance of India-Sri Lanka relations.

Body:

- Significance: Highlight key areas of economic, security, and humanitarian cooperation.
- Challenges: Discuss Chinese influence, maritime disputes (Kachchatheevu), and political tensions (13th Amendment).
- Way Forward: Suggest measures to counter Chinese presence, resolve maritime disputes, and ensure political stability.

**Conclusion:** Emphasize the importance of continued engagement and strategic cooperation for regional stability.

4. Introduction: Start with a brief about what is meant by FDI.

**Main Body:** Explain its significance economic, technological, social, work culture. Discuss the challenges for FDI in India. Also discuss steps taken by the government.

**Conclusion:** Briefly highlight the way forward.

5. Introduction: Start with a brief about Tourism sector and its potential.

**Main Body:** Discuss significance, after that discuss the challenges faced by tourism sector and initiatives taken to promote tourism.

**Conclusion:** Briefly highlight the way forward.

6. Introduction: Start with the recent judicial announcement regarding the NIA.

Body: Critically analyze the powers and functions of the NIA, and explain how the judicial interpretations would help expand the investigative scope of NIA. Conclusion: Conclude with the way forward.

- Introduction: Define Digital Content Creators (DCCs) and their role in the Creator Economy. Body:
  - Role in the Creator Economy: Contribution to global revenue, with specific reference to India.
  - Risks and Challenges:
    - Social, ethical, and economic risks.
    - Regulatory challenges, including jurisdictional issues.
  - Mitigation Measures: Media literacy, data protection, fair revenue models, and advertising transparency.

**Conclusion:** Emphasize the need for balanced regulation and ethical content creation.

8. Introduction: Define rare diseases and their significance, focusing on India's challenges in managing them.

Body:

- Challenges: Delayed diagnosis, limited treatment options, high costs, and underfunded initiatives.
- Initiatives: Government actions like the National Policy for Rare Diseases (2021), judicial support, and financial assistance for patients.

**Conclusion:** Emphasize the need for continued efforts from the government, judiciary, and research sectors to address rare disease challenges effectively.

9. Introduction: Give a brief overview of CPI and its ideology.

**Main body:** Elaborate on CPI's role during Indian freedom struggle and its impact on broader nationalist movement.

**Conclusion:** Highlight CPI's contribution in empowering various sections of Indian society like workers, peasants, women, etc.

**10. Introduction:** Give a brief overview of the SAMARTH scheme.

**Main Body:** Mention the various features of the scheme which can help bridge the skill gap in India's textile sector.



**Conclusion:** Conclude with emphasis on the need for the skill development in India, especially in the textile sector.

- Introduction: Define trade weaponization and its relevance in the current global trade landscape.
   Body:
  - Key Tools for Trade Weaponization: Discuss selective import/export restrictions, economic dependencies, non-tariff barriers, currency manipulation, and fulfilling national agendas.
  - Consequences: Economic disruptions, geopolitical tensions, and undermining multilateral institutions.
  - India's Response: India's historical experiences (e.g., food security and nuclear energy), and current measures like SCRI, IPEF, Make in India, Atmanirbhar Bharat, and strengthening international cooperation.

**Conclusion:** Emphasize the importance of resilience in supply chains, reducing dependency, and fostering international cooperation to mitigate the impact of trade weaponization.

**12.** Introduction: Briefly highlight railway importance and need for reforms.

**Main Body:** Discuss issues with Indian Railways. Discuss solution containing recent law and recommendations of the report of Parliamentary Standing Committee on Railways.

**Conclusion:** End with highlighting the urgent need for railway modernization to keep pace with the requirements of modern times

**13. Introduction:** Start with some relevant facts from the DRI report.

**Body:** Explain how India is vulnerable to smuggling related challenges, then explain what is the multifaceted impact on India's security and economy.

**Conclusion:** Mention the preventive measures that are in place today, and evaluate its effectiveness along with some way forward.

14. Introduction: Start with the definition and some facts about the Urban air pollution.

**Body:** Discuss the various policy initiatives to curb the air pollution, and the reasons behind the air pollution. **Conclusion:** conclude with the way forward.

**15. Introduction:** start with the context of draft solid waste management rules.

**Body:** Critically analyze the features of these rules and how it marks the shift from earlier rules. **Conclusion:** Explain the challenges and way forward.

 Introduction: Start with the supreme court directives about the sacred groves, specific to the judgement.
 Body: define the sacred groves and explain how it represents the unique intersection of cultural heritage, biodiversity conservation and community initiatives. **Conclusion:** Along with the challenges suggest some measures as way forward.

17. Introduction: Define social media addiction in children and its growing concern.

#### Body:

- Implications of Social Media Addiction: Peer influence, instant gratification, and impact on mental and physical health.
- **Global and National Measures:** Government regulations (e.g., Australia's Online Safety Amendment Bill 2024, COPPA in the U.S., GDPR in the EU, IT Act in India).
- Arguments For the Ban: Cyberbullying, health issues, academic impact, and impaired social skills.
- Arguments Against the Ban: Socialization benefits, enforcement challenges, and resilience building.

**Conclusion:** Weigh the pros and cons, emphasizing the need for balanced solutions like safer platform designs, education, and parental involvement.

18. Introduction: Define Female Labor Force Participation (LFPR) and present the current scenario in India, based on the findings from the Economic Advisory Council's report.

Body:

- Factors Influencing Female LFPR: Age, marriage, parenthood, safety concerns, education, and the digital divide.
- Government Measures to Enhance Female LFPR: Programs like Beti Bachao Beti Padhao, National Education Policy (NEP) 2020, Women's Safety initiatives, etc.
- **Challenges:** Persistent issues like the digital divide, unpaid care work, and societal norms.
- Provide Recommendations for Improvement such as promoting girls' education, particularly in STEM fields.

Conclusion: Summarize the steps taken and highlight the need for comprehensive policies to address the remaining gaps and boost female workforce participation.

**19. Introduction:** Briefly define India-Bhutan relations, emphasizing the Treaty of Friendship and recent developments.

Body:

- Key Areas of Cooperation: Hydropower, security, trade, cultural exchanges, and infrastructure.
- **Challenges:** Bhutan's growing ties with China, the Doklam dispute, and halted projects.
- **Significance for India and Bhutan:** Strategic location, security, and economic benefits.

**Conclusion:** Highlight the need for continued cooperation while addressing emerging challenges and ensuring mutual growth.





**20. Introduction:** Briefly define quantum chips and their role in advancing quantum computing, with emphasis on their significance in solving complex computational problems.

#### Body:

- Significance of Quantum Chips: Discuss the importance of qubits over classical bits, explaining superposition and entanglement, and how quantum chips excel in computation.
- Impact on Emerging Technologies: Highlight the potential applications in AI, encryption, and cryptocurrency, including how quantum computing accelerates AI training and threatens current encryption methods.
- Challenges: Address the challenges in quantum computing like fragile quantum states, noise in qubits, temperature control requirements, high costs, and supply chain issues in chip production.

**Conclusion:** Emphasize the importance of continued research, global collaboration, and strategic investments to overcome challenges and unlock quantum computing's full potential.

## 13.4. Approach to Case Studies

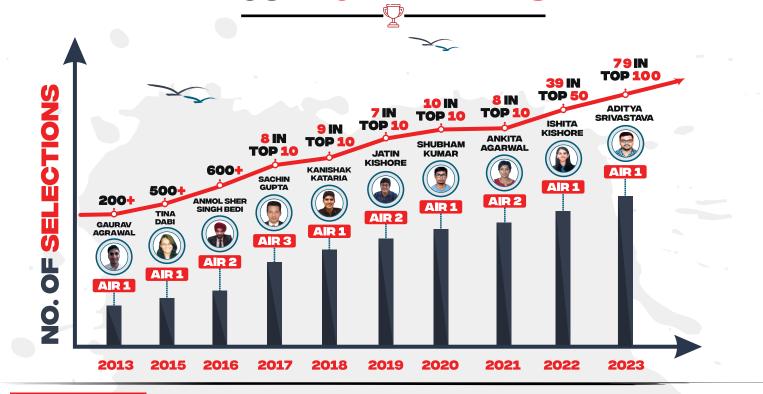
- Introduction: Give a brief overview of the above case, e.g., remote area with traditional beliefs, poor governance, corruption, etc.
- Body: Identifying key foundational notions of Indic idea of Good Governance, present these ideas as solution to various governance related issues.
- **Conclusion:** Emphasize upon utility of these ideas for upholding the principles of Good Governance.

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# 14. Self-Evaluation

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Progress Tracking Table								
Activity Type	Total Questions	Correct Answers	Attempted	Score/Percentage				
MCQ's								
True/False Statements								
Monthly Le	arning Summar Top 3	y Learnings/Insights						
1.								
2.								
3.								
Progress C	omparison							
Previous Month's Score								
Current Month's Score								
Areas of Improvement								
Reflection	Section							
Strengths								
Areas for Improvement								
Goals for Next Month								
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