

# CivilsTap

Quality & Affordable Education



# Current Affairs

## Monthly Magazine

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By CivilsTap Himachal

For HPAS & Other Competitive  
Exam in Himachal Pradesh

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# GENERAL STUDIES 2.

## POLITY, CONSTITUTION

### NEED FOR ELECTORAL REFORMS IN INDIA

**Context:** In India, the need for electoral reforms has become increasingly evident to address challenges such as voter fraud, criminalization of politics, and the influence of money power.

#### Key Challenges in the Current Electoral System

- ❖ **Criminalization of Politics:** A significant number of elected representatives face criminal charges, raising concerns about the integrity of the political system.
  - ✓ According to reports from the Association for Democratic Reforms (ADR), a substantial percentage of MPs and MLAs have pending criminal cases against them.
- ❖ **Influence of Money Power:** Excessive election spending and the lack of transparency in political funding undermine the democratic process.
  - ✓ Reforms are needed to cap expenditures and promote accountability in campaign financing.
- ❖ **Voter Fraud and Electoral Roll Issues:** Allegations of duplicate voter IDs and manipulation of electoral rolls highlight the need for robust mechanisms to maintain the integrity of voter lists.
- ❖ **Misuse of Technology:** While Electronic Voting Machines (EVMs) and Voter Verifiable Paper Audit Trails (VVPATs) have enhanced efficiency, concerns about their security and transparency persist.
  - ✓ Reforms can address these issues by improving verification processes.
- ❖ **Inappropriate Campaign Practices:** The use of divisive rhetoric, false claims, and appeals to caste or communal identities during campaigns undermines the spirit of democracy.
  - ✓ Stricter regulations are required to ensure ethical campaigning.
- ❖ **First-Past-The-Post System (FPTP) and Representation Issues:** India follows the FPTP system, where the candidate with the most votes wins, even if they do not secure an absolute majority.
  - ✓ It leads to situations where a candidate winning with just 30-40% of votes represents the entire constituency, raising concerns about true democratic representation.
- ❖ **Delimitation and Representation:** It raised concerns about potential shifts in political power between regions, especially among southern states.

#### Key Recent Electoral Reforms in India

- ❖ **52nd Amendment Act (1985):** Anti-Defection Law & introduction of Tenth Schedule to the Constitution, aiming to curb political defections by disqualifying defectors from holding public office.
  - ✓ **91st Constitutional Amendment Act (2003):** Aimed to curb political defections by limiting the size of ministerial councils and enforcing anti-defection laws.
- ❖ **61st Constitutional Amendment Act (1988):** Lowering of Voting Age from 21 to 18, expanding democratic participation.
- ❖ **73rd Constitutional Amendment Act (1992):** Strengthened local governance by institutionalizing Panchayats, ensuring direct elections and reserved seats for marginalized communities and women.
- ❖ **Introduction of EVMs:** To improve the voting process's efficiency and reduce electoral fraud, EVMs were introduced in Indian elections.

- ❖ **Ceiling on Election Expenditure:** Limits have been set on election expenditures to promote fair competition among candidates.
- ❖ **Provision of NOTA (None of the Above):** Introduced in 2013, the NOTA option allows voters to reject all candidates if they find none suitable.
- ❖ **Systematic Voters' Education and Electoral Participation (SVEEP):** It is a flagship programme of the ECI to promote voter education and participation in elections.
- ❖ **One Nation, One Election:** It advocates simultaneous elections for the Lok Sabha and state assemblies to reduce costs and governance disruptions.
- ❖ **Delimitation Exercise:** Plans to redraw parliamentary constituencies based on new population data aim to ensure equal representation.

### Proposed Electoral Reforms

- ❖ **Decriminalization of Politics:** The Supreme Court has repeatedly emphasized the need for decriminalizing politics.
  - ✓ Disqualifying candidates with serious criminal charges and fast-tracking cases against politicians can enhance the credibility of the electoral process.
- ❖ **Transparency in Political Funding:** Introducing measures such as state funding of elections and mandatory disclosure of donations can reduce the influence of money power.
- ❖ **Proportional Representation System:** Replacing or modifying the FPTP system with a proportional representation model can ensure fairer representation of diverse political ideologies.
  - ✓ It can help in reducing the monopoly of dominant parties and make elections more inclusive.
- ❖ **Strengthening the Election Commission of India (ECI):** EC should be given more autonomy and legal authority to act against electoral malpractices.
  - ✓ The process of appointing ECs should be transparent and independent of political influence.
- ❖ **Strengthening Voter Verification:** Linking Aadhaar with voter IDs, while addressing privacy concerns, can help eliminate duplicate entries and ensure accurate electoral rolls.
- ❖ **Mandatory Internal Democracy in Political Parties:** The Representation of the People Act should be amended to ensure democratic functioning within political parties.
  - ✓ Regular elections within parties and term limits for leadership positions should be mandated to promote fresh and dynamic leadership.
- ❖ **Improving EVM and VVPAT Systems:** Conducting random audits and increasing the sample size for VVPAT verification can enhance public confidence in the voting process.
- ❖ **Regulating Campaign Practices:** Enforcing stricter penalties for hate speech, misinformation, and unethical practices can promote fair and issue-based campaigning.
- ❖ **One Nation, One Election:** Concerns about its impact on federalism and regional representation persist.

### Recommendations: Committees & Commissions

- ❖ **Dinesh Goswami Committee (1990):** On election expenses, voter IDs, and transparent political funding.
- ❖ **Indrajit Gupta Committee (1998):** Advocated for state funding of elections.
- ❖ **Vohra Committee (1993):** Criminalization of politics and the nexus among criminals, politicians, and bureaucrats in India.
  - ✓ Agencies, including the CBI, IB, RAW, had unanimously expressed their opinion that the criminal network was virtually running a parallel government.
- ❖ **244th Report of Law Commission of India:** It said that in the 10 years since 2004, 18% of the candidates contesting either national or State elections had criminal cases against them (extensive criminal backgrounds).

- ❖ **Ram Nath Kovind Panel:** It suggested 15 amendments including insertion of a new Article 82A and Amendment of Article 327.
  - ✓ It was supported by the Election Commission in 1983 itself.
- ❖ **TS Krishnamoorthy:** It has suggested a 'National Election Fund' as an alternative for election funding.

### Conclusion

- ❖ Electoral reforms are not just necessary but urgent to safeguard the democratic fabric of India.
- ❖ By addressing systemic challenges and ensuring transparency, accountability, and inclusivity, these reforms can strengthen public trust in the electoral process.
- ❖ A collaborative effort involving the Election Commission, political parties, and civil society is essential to realize the vision of a truly representative democracy.

## JUDICIARY'S IN-HOUSE INQUIRY AGAINST DELHI HIGH COURT JUDGE

**Context:** Recently, the Chief Justice of India (CJI) initiated an unprecedented three-member in-house inquiry into the conduct of Delhi High Court judge Justice Yashwant Varma.

### About the In-House Inquiry

- ❖ **Origins and Evolution:**
  - ✓ The need for an in-house inquiry mechanism arose in 1995 following allegations of financial impropriety against Bombay High Court Chief Justice A.M. Bhattacharjee.
  - ✓ In-House Procedure was formulated by the Supreme Court in 1997 following a case involving allegations against Justice V. Ramaswami, a former SC judge.
  - ✓ The process was refined in 2014 after a sexual harassment complaint led to the establishment of a seven-step inquiry framework

### Key Features of the In-House Inquiry

- ❖ **Distinct from Impeachment:** Unlike impeachment, which requires Parliamentary approval under Article 124(4) of the Constitution, the in-house inquiry is an internal mechanism aimed at addressing conduct inconsistent with judicial values.
- ❖ **Formation of Inquiry Committees:** Committees typically consist of senior judges from different High Courts to ensure impartiality.
  - ✓ For the current case, a three-member committee includes the Chief Justice of Punjab & Haryana High Court, Chief Justice of Himachal Pradesh High Court, and a Justice of Karnataka High Court.
- ❖ **Transparency:** Recent inquiries have demonstrated a commitment to transparency, with reports and evidence made publicly accessible.

### Process of In-House Inquiry

- ❖ **Preliminary Scrutiny:** Complaints against judges are first examined by the Chief Justice of India (CJI) in the case of SC judges, or by the Chief Justice of the respective High Court for HC judges.
- ❖ **Formation of a Committee:** If a prima facie case is established, a three-judge committee is formed to investigate the allegations.
- ❖ **Inquiry Proceedings:** The committee examines the evidence, questions the accused judge, and determines whether the allegations hold merit.
- ❖ **Report Submission:** The committee submits its findings to the CJI, who then decides on further action.

## Possible Outcomes

- ❖ If the judge is found guilty of misconduct, the report is sent to the President of India for consideration of removal via Parliamentary impeachment.
- ❖ If the misconduct is minor, the judge may be advised to resign voluntarily.
- ❖ If the allegations are baseless, the matter is dropped.

## Challenges in the In-House Inquiry Process

- ❖ **Lack of Transparency:** The inquiry is conducted behind closed doors, and reports are not made public. It raises concerns about accountability.
- ❖ **No Binding Authority:** Even if misconduct is established, the judiciary cannot directly remove a judge; impeachment by Parliament is required.
- ❖ **Rare Impeachment:** The complex impeachment process makes it nearly impossible to remove judges, as seen in the cases of Justice Ramaswami (1991) and Justice S. N. Shukla (2022).
- ❖ **Political Influence:** The impeachment process can be influenced by political considerations, reducing its effectiveness.
- ❖ **Delayed Justice:** Investigations often take years, diminishing public faith in judicial accountability.

## Notable Cases of Judicial Inquiry in India

- ❖ **Justice V. Ramaswami Case (1991):** The first judge to face impeachment proceedings, but Parliament failed to remove him due to political maneuvering.
- ❖ **Justice Soumitra Sen Case (2011):** Found guilty of financial misconduct by an in-house inquiry; the Rajya Sabha passed an impeachment motion, but he resigned before the Lok Sabha could vote.
- ❖ **Justice S. N. Shukla Case (2022):** Accused of favoring private medical colleges; he was found guilty by an in-house inquiry, but impeachment did not follow.

## Recommendations for Reform

- ❖ **Make Inquiry Reports Public:** Increasing transparency will enhance public trust.
- ❖ **Strengthen Judicial Oversight Bodies:** The establishment of Judicial Standards and Accountability Commission will be a significant step towards ensuring transparency and accountability in the judiciary.
- ❖ **Introduce Alternative Disciplinary Mechanisms:** Instead of only relying on impeachment, other disciplinary actions like suspensions or fines should be considered.
- ❖ **Ensure Time-Bound Proceedings:** Delays in inquiries should be minimized to prevent judicial misconduct from going unpunished.

## JUSTICE VARMA CASE: REVISITING NJAC

**Context:** The Justice Yashwant Varma controversy has reignited debates about judicial accountability, the process of appointing judges in India and brought the National Judicial Appointments Commission (NJAC) back into the spotlight.

## Evolution of the Judiciary Appointments in India

- ❖ **Pre-Collegium Era (1950–1973):** Initially, Article 124(2) and Article 217 of the Constitution of India granted the President the power to appoint judges to the Supreme Court and High Courts, respectively, in consultation with the Chief Justice of India (CJI) and other judges.
- ❖ The executive had the upper hand in judicial appointments, with the President (on the advice of the Council of Ministers) making final decisions.
- ❖ **First Judges Case (1981) – S.P. Gupta v. Union of India:** The Supreme Court ruled that ‘consultation’ with the CJI did not mean ‘concurrence’ meaning the executive had more power in judicial appointments.



- ❖ It allowed greater government interference in appointments.
- ❖ **Second Judges Case (1993)** – Supreme Court Advocates-on-Record Association v. Union of India: It overturned the First Judges Case, and established the Collegium System, giving primacy to the judiciary in appointments.
- ❖ The ruling held that CJI's recommendation, in consultation with senior judges, would be binding on the President.
- ❖ **Third Judges Case (1998)** – Presidential Reference: The composition of the Collegium was clarified:
- ❖ SC Judges' appointments: The CJI and four senior-most judges.
- ❖ **HC Judges' appointments:** The CJI and two senior-most judges.

### National Judicial Appointments Commission (NJAC)

- ❖ It was established through the 99th Constitutional Amendment in 2014 to replace the Collegium System with a committee including the executive with judiciary.
- ❖ It aimed to make judicial appointments more transparent by involving the executive and eminent persons alongside the judiciary.
- ❖ However, the Supreme Court of India, in 2015, struck down NJAC, ruling it unconstitutional, as it diluted judicial independence.

### Key Reasons For Revisiting the NJAC

- ❖ **Concerns Over Collegium System:** Lack of transparency; No clear criteria for selection.
- ❖ The Supreme Court's opaque decision-making process in appointments raises concerns about favoritism.
- ❖ **Legislative Consensus & Judicial Overreach:** The NJAC was passed with near-unanimous support in Parliament and ratified by 16 state legislatures, reflecting a broad consensus on the need for reform.
- ❖ It was argued that the reinstatement of the Collegium system (after NJAC) was an example of judicial overreach.
- ❖ **Delays in Judicial Appointments:** The long, secretive collegium process leads to delays in filling vacancies, affecting judicial efficiency.
- ❖ **Executive-judiciary tension;** Government delays in approving names.
- ❖ **Lack of Diversity:** The current system has been criticized for not ensuring adequate representation from various sections of society, particularly marginalized communities and women.
- ❖ **Addressing Case Backlogs:** With over 4.4 crore pending cases in Indian courts, judicial vacancies need urgent attention.
- ❖ A well-functioning NJAC can help streamline appointments, ensuring a faster selection process and filling vacancies more efficiently.
- ❖ **Balancing Independence and Oversight:** A revised NJAC can ensure that executive involvement does not compromise judicial independence.
- ❖ It could be achieved by maintaining a judiciary-dominated body while allowing limited and structured participation from the executive.

### Way Forward

- ❖ **Global Practices:** Many democracies involve a mix of judicial and executive inputs in judicial appointments.
- ❖ The United Kingdom has the Judicial Appointments Commission (JAC), an independent commission ensuring merit-based appointments.
- ❖ Revisiting the NJAC could align India's system with global best practices while addressing domestic concerns.

- ❖ The International Commission of Jurists (ICJ) released a report advocating for a new law to establish a 'Judicial Council', aiming for judicial appointments and transfers based on transparent, predetermined, and objective criteria.
- ❖ **Modifying the Composition of NJAC:** Instead of granting excessive influence to the executive, the revised NJAC can include members from the judiciary, executive, and civil society to ensure balanced participation.
- ❖ **Ensuring Judicial Primacy:** While the executive may be given a role, judicial independence should remain paramount by ensuring that judges hold a majority in the commission.
- ❖ **Transparency Mechanisms:** Clear guidelines on appointments, merit-based selection, and reasons for rejections should be made public to avoid favoritism.
- ❖ **Timely Appointments:** A defined timeline for recommendations and approvals should be mandated to prevent delays.
- ❖ **Inclusion and Diversity:** Special emphasis should be given to appointing judges from diverse backgrounds to make the judiciary more representative of society.

### Conclusion

- ❖ The Justice Varma case underscores the urgent need for judicial reform in India. Revisiting the NJAC could provide a framework for a more transparent and accountable judiciary while preserving its independence.
- ❖ As the debate continues, the Supreme Court has an opportunity to lead the way in restoring public trust and ensuring the integrity of India's judicial system.



## GOVERNANCE

### CHALLENGES AHEAD OF WOMEN PANCHAYAT MEMBERS IN INDIA

**Context:** Recently, the panel on the Ministry of Panchayati Raj identified several reasons why male relatives of elected women representatives in the Panchayati Raj System are able to act as proxies on their behalf.

#### Women in Panchayats

- ❖ The introduction of women's reservation in Panchayati Raj Institutions (PRIs) through the 73rd Constitutional Amendment Act, 1992, was a landmark step toward gender equality in India's political landscape.
- ❖ It mandated that one-third of all seats in panchayats be reserved for women, enabling them to participate in grassroots governance.
- ❖ Over the years, several states have extended it to 50%, resulting in the presence of over 1.45 million elected women representatives (EWRs) in PRIs.

#### Key Challenges Faced by Women Panchayat Members

- ❖ **Patriarchal Mindset and Sarpanch Pati Syndrome:** In many cases, male family members, especially husbands (Sarpanch Pati), fathers, or brothers, act as de facto decision-makers, reducing elected women representatives to mere figureheads.
  - ✓ It is widely referred to as the 'Sarpanch Pati Syndrome' and is prevalent in states like Rajasthan, Madhya Pradesh, and Bihar.
- ❖ **Lack of Political Training and Awareness:** Many women lack awareness of governance structures, financial planning, and policy implementation.
  - ✓ It hinders their decision-making capabilities, making them reliant on male counterparts or bureaucrats for governance-related matters.
- ❖ **Resistance from Bureaucracy and Male Counterparts:** Many bureaucrats fail to take women leaders seriously, assuming that they lack competence or decision-making skills.
  - ✓ It creates delays in fund allocation and implementation of welfare schemes, reducing the impact of women-led governance.
- ❖ **Financial Dependence and Lack of Economic Empowerment:** Most rural women remain economically dependent on male family members, which restricts their ability to function independently in politics.
  - ✓ Limited access to financial resources and micro-credit schemes further diminishes their ability to make independent decisions.
- ❖ **Gender-Based Violence and Threats:** Women in politics, especially in rural areas, face intimidation, verbal abuse, and even physical violence.
  - ✓ Incidents of harassment by opposing male politicians or dominant caste groups discourage women from actively participating in governance.
  - ✓ In extreme cases, women are coerced into resigning from their positions.
- ❖ **Dual Burden of Work and Household Responsibilities:** Women leaders struggle to balance their political responsibilities with household duties.
  - ✓ Societal expectations often burden them with domestic chores, childcare, and agricultural work, leaving them with limited time to focus on governance issues.
- ❖ **Social and Caste-Based Discrimination:** Women from marginalized communities—especially Dalits, Adivasis, and Other Backward Classes (OBCs)—face intersectional discrimination.

- ✓ It is particularly evident in Indian states like Uttar Pradesh, Bihar, and Haryana.

### Benefits of Strengthening EWRs Decision-Making Capabilities

- ❖ **Improved Governance and Policy Implementation:** For example, in Kudumbashree (Kerala), empowered women leaders played a key role in implementing welfare schemes and poverty alleviation programs.
- ❖ **Increased Representation and Gender-Responsive Policies:** For example, in Nagaland, women-led panchayats have focused on reducing gender-based violence and improving maternal health services.
- ❖ **Financial Independence: Example:** For example, in Bihar, EWRs have successfully implemented micro-loan schemes for women entrepreneurs, boosting rural employment.
- ❖ **Training for Sarpanch Pati Syndrome:** For example, in Rajasthan, training programs helped reduce cases where husbands controlled panchayat decisions.

### Key Initiatives Strengthening Women Participation in Panchayats

- ❖ **National Rural Livelihood Mission (NRLM) – SHG Linkages:** It enhances leadership skills and financial independence among rural women.
- ❖ **Mahila Sabhas (Women's Gram Sabha Meetings):** Organized before regular Gram Sabha meetings to prioritize women's issues in governance. These ensure that concerns related to health, education, and safety are discussed before the general Panchayat meetings.
- ❖ **Panchayat Mahila Evam Yuva Shakti Abhiyan (PMEYSA):** Aimed at capacity-building for elected women representatives (EWRs) in Panchayats to enhance their leadership skills and decision-making abilities.
- ❖ **Mission Shakti (2022):** It includes schemes like Sambal (for safety and security) and Samarthya (for economic empowerment), which also aim to strengthen women's participation in governance structures like Panchayats.
- ❖ **Women's Leadership Development Programs (Ministry of Panchayati Raj):** Various leadership and capacity-building programs, supported by NGOs and government agencies, aim to enhance women's decision-making capabilities in Panchayats.

### Way Forward: Strengthening Women's Political Participation

- ❖ **Capacity-Building and Leadership Training:** Initiatives like the Rashtriya Gram Swaraj Abhiyan (Centrally Sponsored Scheme) should be expanded to ensure that every elected woman leader is well-equipped to perform her duties.
- ❖ **Strict Implementation of Laws Against Proxy Representation:** State governments must strictly enforce laws to prevent male relatives from unofficially controlling women panchayat members.
  - ✓ Awareness campaigns should educate women about their rights and empower them to function independently.
- ❖ **Financial Empowerment and Access to Resources:** Women leaders should be given direct access to panchayat funds and financial aid without bureaucratic interference.
  - ✓ Microfinance schemes should be promoted to enhance their economic independence and reduce financial dependence on male family members.
- ❖ **Reservation in Higher Political Offices:** While PRIs have 33-50% reservation for women, the same should be extended to legislative assemblies and parliamentary elections.
  - ✓ The Nari Shakti Vandan Adhiniyam, 2023 reserves one-third of seats for women in Lok Sabha, State Assemblies, and Delhi Assembly, but will take effect only after delimitation based on a post-enactment census.
  - ✓ It would enable more women leaders to transition from grassroots governance to state and national-level politics.

- ❖ **Strengthening Women's Support Networks:** Initiatives like the National Federation of Elected Women Representatives (NFEWR) should be expanded across all states.
- ❖ **Ensuring Safety and Protection for Women Leaders:** Strict measures should be implemented to protect women leaders from harassment, violence, and political intimidation.
  - ✓ Fast-track courts should handle cases of violence against elected women representatives.

### Conclusion

- ❖ While women panchayat members have made significant strides in political representation, systemic barriers continue to hold them back.
- ❖ Addressing these challenges requires a multi-faceted approach that includes capacity building, legal reforms, gender sensitization, and community support.
- ❖ By empowering women representatives and ensuring their full participation in local governance, India can move closer to achieving gender equality and inclusive development.

## CITIES COALITION FOR CIRCULARITY (C-3) LAUNCHED

**Context:** Recently, India has launched the Cities Coalition for Circularity (C-3), a multi-nation alliance aimed at fostering city-to-city collaboration, knowledge-sharing, and private sector partnerships during the 12th Regional 3R and Circular Economy Forum in Asia and the Pacific, held in Jaipur.

### Background

- ❖ The Regional 3R and Circular Economy Forum in Asia and the Pacific forum was launched in 2009 with the objective of regional cooperation for sustainable waste management and circular economy initiatives in the rapidly urbanizing and industrializing Asia-Pacific.
- ❖ Hanoi 3R Declaration (2013-2023) outlined 33 voluntary goals for shifting towards a more resource efficient and circular economy.
- ❖ It has been actively negotiating for a 'Global Plastic Treaty'.

### Cities Coalition for Circularity (C3)

- ❖ **About:** It is a multi-nation alliance designed to help urban centers adopt circular economy principles by integrating sustainable practices into urban planning, waste management, and resource utilization.
- ❖ **Objectives:** Focuses on reducing waste generation through segregation, composting, and upcycling, enhancing resource efficiency by promoting reuse and shared materials, and encouraging sustainable infrastructure.

### Importance of C3 for Urban Sustainability

- ❖ **Mitigating Climate Change:** By reducing waste and optimizing resource use, C3 helps cut greenhouse gas emissions.
- ❖ **Economic Benefits:** Transitioning to a circular economy can create new business opportunities in recycling, remanufacturing, and waste management sectors.
- ❖ **Resilient Cities:** A circular economy model ensures that cities become less dependent on finite resources, making them more resilient to supply chain disruptions and economic downturns.
- ❖ **Job Creation:** It generates employment in sectors like renewable energy, sustainable construction, and eco-friendly product manufacturing.
- ❖ **Improved Quality of Life:** Cleaner environments, better waste management, and greener urban spaces lead to improved public health and enhanced overall well-being for citizens.

### Global and Indian Context

- ❖ Several cities across the globe, such as Amsterdam, Copenhagen, and Tokyo, have already implemented circular economy policies under the C3 framework.

❖ **In India, circularity is gaining traction through initiatives like:**

- ✓ **Swachh Bharat Mission:** Encouraging waste segregation and recycling.
- ✓ **Smart Cities Mission:** Promoting sustainable urban development.
- ✓ **Extended Producer Responsibility (EPR):** Holding companies accountable for the lifecycle of their products.
- ✓ **GOBAR-Dhan Scheme:** Currently covers 67.8% of the total number of districts in India.

### Challenges in Implementing Circularity in Cities

- ❖ Lack of Awareness and Technical Expertise.
- ❖ High Initial Investment Costs.
- ❖ Resistance to Change from Businesses and Consumers.
- ❖ Insufficient Policy Support and Enforcement Mechanisms.

### Way Forward

- ❖ Develop and enforce policies that mandate circular economy practices.
- ❖ Invest in research and innovation for sustainable materials and processes.
- ❖ Promote awareness campaigns to educate communities on circular living.
- ❖ Strengthen public-private partnerships to scale up circular economy projects.

## DEMOCRACY TO EMOCRACY'

**Context:** Recently, the Vice-President of India called for a national debate on the shift from 'Democracy to Emocracy', emphasizing that emotion-driven policies and debates threaten the foundational principles of democracy.

### Understanding Emocracy: From Rational Debate to Emotional Influence

- ❖ Traditionally, democracy is built upon logical reasoning, debate, and informed citizenry.
- ❖ In an ideal democratic setup, policies are formulated and debated based on evidence, expert insights, and rational decision-making.
- ❖ However, in an emocracy (fusion of 'emotion' and 'democracy'), decision-making is increasingly dictated by public emotions, viral narratives, and psychological persuasion tactics.
  - ✓ It is visible worldwide—from the rise of leaders like Donald Trump in the U.S. to Brexit in the U.K. and the nationalist surge in several European nations.

### Democracy vs Emocracy: Key Differences

Feature	Democracy	Emocracy
<b>Decision-Making</b>	Rational, evidence-based	Emotion-driven, impulsive
<b>Political Leadership</b>	Accountable, policy-focused	Charismatic, populist
<b>Public Engagement</b>	Informed debate	Sentiment-driven reactions
<b>Media Influence</b>	Free press, investigative journalism	Sensationalism, misinformation
<b>Long-term Governance</b>	Stability, institutional continuity	Short-term, reactionary policies



## Drivers of the Shift from Democracy to Emocracy

- ❖ **Digital Revolution and Social Media Influence:** Social Media Platforms amplify sensationalism over substance, allowing emotionally charged narratives to go viral.
  - ✓ In contrast to traditional media, where journalistic ethics ensured some degree of fact-checking, social media allows unchecked misinformation to spread rapidly.
- ❖ **Role of Political Messaging and Propaganda:** Political parties across the spectrum have adopted emotionally charged rhetoric to mobilize voters.
  - ✓ Whether it's invoking nationalism, religious sentiments, or historical grievances, political campaigns are now designed to elicit strong emotional responses rather than engage in logical debates.
- ❖ **Identity Politics and Group-Based Mobilization:** Political leaders have realized that appealing to group identities—religion, caste, region, and ethnicity—can secure mass support.
  - ✓ It led to a governance model where policies are often framed to appease emotional constituencies rather than being based on broader economic and developmental priorities.
- ❖ **Affirmative Action vs. Appeasement:** Provisions for marginalized communities, as outlined in Articles 14, 15, and 16 of the Constitution, are justifiable and necessary for social equity.

## Threats to Good Governance from Emotionally Driven Policies

- ❖ **Populism and Fiscal Prudence:** Populist leaders appeal to mass emotions rather than policy-based governance.
  - ✓ **For example:** Farm Loan Waivers: Several Indian states, including Punjab and Maharashtra, have announced large-scale farm loan waivers in response to farmers' protests. Data from RBI (2023) shows that less than 30% of small farmers actually benefit from such waivers, while they create long-term financial burdens on state budgets.
- ❖ **Legal and Constitutional Conflicts:** Emotionally driven policies often bypass due process, leading to poorly drafted laws with constitutional or legal loopholes.
  - ✓ **Example:** Demonetization (2016): Announced as a move to curb black money, demonetization created short-term economic distress without effectively reducing illicit wealth.
    - **NSSO Data (2018):** 1.5 million jobs were lost in the informal sector due to cash shortages. The Supreme Court of India (2023) upheld demonetization's legality but acknowledged its flawed implementation.
- ❖ **Economic Disruptions and Resource Misallocation:** Policies based on emotions often ignore economic feasibility, leading to wasteful expenditure.
  - ✓ Disrupts market confidence and investment climate.
  - ✓ **Example:** Free Electricity and Water Schemes: Many governments announce free utilities as an emotional appeal to voters.
    - **CAG Report (2021):** Free electricity schemes in Delhi and Punjab have led to rising power sector debts, affecting infrastructure investments.
- ❖ **Social Polarization and Policy Paralysis:** Policies framed under emotional pressure often lead to divisive politics. Lack of consensus among stakeholders results in implementation failures.
  - ✓ **Example:** Citizenship Amendment Act (CAA) (2019): Passed amidst heated political debates, the CAA led to nationwide protests due to concerns over religious discrimination which further delayed the NRC process.
- ❖ **Reactionary vs. Long-Term Policy Making:** Crisis-driven policies often lack long-term vision. Immediate measures overshadow structural reforms.
  - ✓ **Example:** COVID-19 Lockdown (2020): The nationwide lockdown was implemented abruptly, leaving millions of migrant workers stranded.
    - **CMIE Data (2021):** 75 million people lost jobs due to lack of planning for economic disruptions.

- Countries like Germany and South Korea adopted phased lockdowns with social security support, minimizing economic shocks.

### Why Emotionally Driven Policies Are Still Important?

- ❖ **Social Justice and Correcting Historical Wrongs:** Some policies need to be emotionally driven to address past injustices and ensure equity.
  - ✓ Policies aimed at marginalized groups are often motivated by ethical and emotional considerations.
  - ✓ Example: Reservation for SCs, STs, and OBCs.
  - ✓ Despite criticism, affirmative action policies have played a key role in social mobility.
  - ✓ NITI Aayog Report (2023): The literacy rate among SCs and STs has improved significantly due to reservation policies in education.
- ❖ **Quick Decision-Making During Crises:** Emotional responses are often necessary in times of disaster or war to ensure rapid government intervention.
  - ✓ Bureaucratic delays can worsen humanitarian crises if policies are overly rationalized without urgency.
    - **For example:** 80 million people benefited from Pradhan Mantri Garib Kalyan Yojana (PMGKY) in the pandemic period.
- ❖ **Strengthening National Unity & Identity:** Some emotionally driven policies are designed to foster national unity and reinforce common identity.
  - ✓ Policies promoting patriotism, culture, and heritage may not always be economically or legally necessary but serve long-term social cohesion.
  - ✓ **Example:** Swachh Bharat Abhiyan: While critics argued it focused more on symbolism than structural sanitation reforms, it significantly improved rural sanitation awareness.
    - UNICEF Study (2021): Open defecation reduced by 60% in rural India due to behavioral changes.

### Way Forward

- ❖ **Strengthening Data-Driven Governance:** Policies should be framed by economic, scientific, and social research rather than sentiment.
  - ✓ **Example:** Kerala's Nava Keralam Mission focuses on health and education reforms based on real-time data analysis.
- ❖ **Regulating Social Media Narratives:** While free speech must be protected, platforms must adopt stricter regulations to prevent misinformation and hate speech.
- ❖ **Reviving Rational Public Debates:** Institutions like universities, think tanks, and civil society groups should take the lead in restoring logic-based discussions in public forums.
- ❖ **Institutional Reforms:** Fiscal policies should undergo rigorous scrutiny by parliamentary committees to assess long-term impact.
  - ✓ **Example:** The Fiscal Responsibility and Budget Management (FRBM) Act helps prevent reckless public spending.
  - ✓ **2nd ARC Recommendation: Institutionalize** Impact Assessment Committees before rolling out major policies to avoid reactionary decision-making.

## SPACE-TECH FOR GOOD GOVERNANCE

Context: The Minister of Science and Technology has said that India's Space technology is playing a major role in revolutionising governance at the "Good Governance" Conclave.

### What is Space Technology?

- ❖ Space technologies designate technologies used to enable activities conducted in outer space:
  - ✓ Such as Earth observation, satellite communication, satellite navigation or even robotic and human space exploration beyond Earth's orbits.
- ❖ Governments use space technology, geospatial data, and field information for planning, monitoring, and evaluating developmental activities.

### Use of Space Technology in Governance

- ❖ **Disaster Management and Response:** National Remote Sensing Centre (NRSC) provides satellite data that helps in identifying flood-affected areas, mapping damage, and planning rehabilitation.
  - ✓ The Indian National Disaster Management Authority (NDMA) uses it for disaster relief operations.
- ❖ **Agriculture and Rural Development:** FASAL (Forecasting Agricultural output using Space, Agrometeorology, and Land-based observations) uses satellite data to predict crop yields, helping farmers make informed decisions.
  - ✓ Soil Health Management and irrigation management are optimized using remote sensing technologies.
- ❖ **Efficient Land Management:** Initiatives like "Swamitva Yojana" use satellite mapping for land record management.
  - ✓ This initiative simplifies land verification and promotes transparency in land ownership.
- ❖ **Environmental Monitoring:** Bhuvan an Indian web-based application developed by ISRO provides satellite data for various environmental and land-use applications.
  - ✓ Satellites like the Oceansat series provide data on sea surface temperatures, sea level rise, and coastal erosion.
- ❖ **Security and Defense:** Satellites help in remote sensing for border surveillance.
- ❖ **Administrative Efficiency:** Satellite data helps in the implementation of the Digital India initiative by enabling access to e-governance services.

### Challenges

- ❖ **High Costs:** The development, maintenance, and launch of satellites are expensive.
- ❖ **Technical and Infrastructure Gaps:** Lack of adequate ground infrastructure, technical expertise, and trained personnel in remote areas.
- ❖ **Data Interpretation and Accuracy:** Space-based data requires accurate interpretation and analysis, and errors in data processing can lead to wrong decisions in governance.
- ❖ **Privacy Concerns:** Increased surveillance and monitoring through space technology raise privacy and security concerns among citizens.
- ❖ **Environmental Impact:** Increased space missions and satellite launches can contribute to space debris and environmental pollution.

### Way Ahead

- ❖ Develop and upgrade ground infrastructure, data centers, and communication systems to support space-based services effectively.
- ❖ Encourage collaboration between the government and private sector to reduce costs, foster innovation, and improve the application of space technology.
- ❖ Increase the number and diversity of satellites for better coverage, particularly in remote and underserved regions of the country.

- ❖ Encourage research in space technology and its applications to address emerging governance challenges, including climate change and urban planning.
- ❖ Adopt sustainable practices for satellite launches and space missions to minimize environmental impacts and manage space debris effectively.

## DIGITAL TECHNOLOGIES: WOMEN & FARM WORK IN INDIA

**Context:** Recent advancements in technology are empowering women farmers and giving them a stronger voice on farms.

### Key Contributions of Women in Agriculture

- ❖ Agriculture is the backbone of India's economy, employing nearly 54.6% of the total workforce (Census2011), with women making up about 75% of the full-time farm labor force.
  - ✓ The workforce participation rate for rural females is significantly higher at 41.8% against urban women participation rate of 35.31% (MoSPI, 2017).
- ❖ Women comprise a substantial portion of the agricultural workforce, especially in rural areas, where 80% of women rely on agriculture for livelihood (ICAR Data).
  - ✓ The work of rural women in India is responsible for 60-80% of the country's food production.

### Role of Digital Technologies in Women's Agricultural Work

- ❖ **Enhanced Decision-Making Through Digital Tools:** Mobile-based agricultural advisory services (such as Digital Green, Precision Agriculture for Development) provide real-time weather updates, market prices, and farming techniques.
- ❖ **Increased Productivity and Reduced Labor Burden:** Irrigation technologies (drip irrigation, solar-powered pumps) provide women with greater autonomy over water management, especially in drought-prone areas.
  - ✓ Climate-resilient farming techniques, including drought-resistant seeds and vertical farming, allow women to maintain productivity despite changing climate conditions.
- ❖ **Mobile-Based Solutions for Market Access:**
  - ✓ eNAM (National Agriculture Market): It allows women to connect with buyers directly.
  - ✓ Kisan Suvidha and AgriMarket App help in price discovery and weather forecasts.
  - ✓ Pusa Krishi offers expert agricultural advice to improve yields.
- ❖ **Digital Financial Services for Women Farmers:** These enable women to receive payments securely, avail of loans, and participate in decision-making.
  - ✓ Aadhaar-enabled Payment Systems (AePS)
  - ✓ Direct Benefit Transfer (DBT) for subsidies
  - ✓ Access to Finance and Credit: Initiatives like the Pradhan Mantri Jan Dhan Yojana and the Self Help Group (SHG) – Bank Linkage platforms like the Mahila Kisan Sashaktikaran Pariyojana (MKSP) have played a crucial role in improving women's access to finance.
- ❖ **AI, IoT, and Smart Farming Technologies:**
  - ✓ AI-powered crop disease detection apps that provide real-time alerts.
  - ✓ IoT-based smart irrigation systems that optimize water use and reduce labor burden.
  - ✓ Precision Agriculture technologies, such as GPS-guided equipment and drones, have significantly enhanced the efficiency and productivity of farming operations.
- ❖ **Online Training & Capacity Building:** Government programs such as the Digital India Initiative and National Rural Livelihoods Mission (NRLM) have introduced digital literacy programs targeted at rural women. Online platforms like:
  - ✓ **Digital Green:** Uses participatory videos to train women farmers.
  - ✓ **YouTube Agricultural Channels:** Provide free farming lessons.



- ✓ Organizations like the M S Swaminathan Research Foundation and various government agencies provide training on the use of modern agricultural tools and techniques.
- ❖ **Gender-Inclusive Agri-Tech Startups:** Startups like Kalgudi, CropIn, and DeHaat provide AI-driven farm advisory, weather alerts, and soil analysis, empowering women farmers.

### Challenges in Adoption of Digital Technologies

- ❖ **Limited land ownership:** Only about 12.8% of the operational holdings were owned by women, which reflects the gender disparity in ownership of landholdings in agriculture.
  - ✓ Moreover, there is a concentration of operational holdings (25.7%) by women in the marginal and small holdings categories.
- ❖ **Gender wage gap:** Women agricultural workers earn 20-30% less than their male counterparts.
- ❖ **Limited Digital Literacy:** Many rural women lack the skills to operate digital platforms.
- ❖ **Gendered Socio-Cultural Barriers:** Societal norms restrict women's mobility and independent decision-making.
- ❖ **Financial Constraints:** Smartphones and internet access remain costly for some women.
- ❖ **Lack of Localized Content:** Many digital tools are in English or Hindi, limiting regional language accessibility.

### Initiatives Supporting Digital Agriculture for Women in India

- ❖ **Digital Agriculture Mission (2021-2025):** It promotes digital technologies like AI, IoT, blockchain, and remote sensing in farming.
  - ✓ Women farmers can access precision agriculture tools, digital advisories, and financial services through this initiative.
- ❖ **National e-Governance Plan in Agriculture (NeGPA):** It focuses on the digital transformation of agriculture by integrating ICT-based solutions.
  - ✓ Special provisions are made for women farmers, including mobile-based advisories and digital market access.
- ❖ **Mahila Kisan Sashaktikaran Pariyojana (MKSP):** A sub-component of the National Rural Livelihood Mission (NRLM), MKSP aims to empower women in agriculture.
  - ✓ Digital tools are used to train women in climate-resilient practices and sustainable farming.
- ❖ **Kisan Suvidha App:** A mobile app providing weather updates, market prices, and expert guidance.
  - ✓ It enables women farmers to make informed decisions in agriculture.
- ❖ **PM KISAN & Direct Benefit Transfers:** Ensures financial support directly to farmers' bank accounts, including women farmers.
  - ✓ Encourages financial independence and access to credit for women in agriculture.
- ❖ **AGRI STACK:** A digital database that helps create farmer-centric digital services.
  - ✓ Women farmers can access customized support for inputs, finance, and markets.

### Conclusion

- ❖ The integration of technology in agriculture is transforming the landscape for women farmers, giving them greater control over their farming operations and enhancing their decision-making power.
- ❖ By providing access to digital tools, precision agriculture, financial services, mechanization, and training, these technologies are paving the way for a more inclusive and equitable agricultural sector.
- ❖ As women continue to embrace these innovations, they are poised to play an even more significant role in shaping the future of farming.

## WOMEN'S POLITICAL PARTICIPATION IN INDIA

**Context:** Rajeshwari Deshpande's study, 'Shaping of the Woman Constituency in Indian Elections: Evidence from the NES Data' analyses political participation of women in India.

### Major Highlights of the Study

- ❖ **Voting Behavior & Agency:** Women's voting patterns and choices are often overlooked, with political parties treating them as a homogeneous group and not considering factors like caste, class, and religion.
- ❖ **Welfare Programs:** Political parties often frame women as passive beneficiaries of welfare programs like Ujjwala and Pradhan Mantri Awas Yojana, reinforcing a dependent image.
- ❖ **Voting vs Political Power:** Despite increased turnout, women's political participation remains limited beyond voting.
  - ✓ Women lag behind men in other forms of political participation like rallies, campaigns, and policy advocacy, facing social and structural barriers.
- ❖ **Male Migration Impact:** In states with large-scale male migration, women's voter turnout has increased, especially in socially and economically 'backward' areas.
- ❖ **State-Specific Voting Patterns:** In states with strong regional parties (e.g., Tamil Nadu, Kerala), women's preferences align more with regional movements rather than national gender-based trends.

### Women's Political Participation in India

- ❖ Unlike many countries where the gender gap in political participation began narrowing in the 1990s, India saw this shift only in the 2010s.
- ❖ In the 2019 general elections, female voter turnout slightly exceeded male voter turnout, with women making up 49.5% of the electorate.
- ❖ In the 2024 Lok Sabha elections, women had a slightly higher voting percentage (65.8%) compared to men (65.6%).
- ❖ Women, especially in rural areas, are becoming more politically conscious, active, and involved in village-level decision-making.

### Global Goals

- ❖ Women's equal participation and leadership in politics are crucial for achieving the Sustainable Development Goals (SDGs) by 2030.
  - ✓ SDG 5 focuses on gender equality and women's empowerment.
- ❖ Balanced political participation and power-sharing between women and men in decision-making is a key target set in the Beijing Declaration and Platform for Action.

### Factor's Influencing Women's Political Participation

- ❖ **Socio-Cultural Norms:** Traditional gender roles and cultural expectations often limit women's public and political involvement.
- ❖ **Education and Literacy:** Higher literacy rates and education levels empower women to participate more actively in politics.
- ❖ **Economic Independence:** Women's workforce participation and economic independence can boost their political agency.
- ❖ **Caste, Class, and Religion:** Women's political choices are shaped by their caste, class, and religious identities, influencing their voting behavior and party affiliations.
- ❖ **Political Party Strategies:** The outreach and engagement of political parties with women through targeted policies or welfare schemes impact their participation.
- ❖ **Social Movements:** Women's involvement in social movements and activism can strengthen their engagement in formal politics.

- ❖ **Regional and State-Specific Factors:** Regional political contexts, including the strength of local parties and issues specific to states, can shape women's political behavior.

## Conclusion

- ❖ The decentralization of governance which is taking place for the last two decades has increased the importance of measuring participation of women in decision making.
- ❖ Proper gender budgeting has already been worked out for inclusive growth of women.
- ❖ With more responsive data on women participation, better gender budget initiatives aim to move the country towards a gender equal society.

## CHALLENGES OF PUBLIC HEALTH EDUCATION IN INDIA

**Context:** The demand for skilled public health professionals faces numerous challenges, ranging from a lack of standardization in training to limited job opportunities for graduates.

### About the Public Health Education in India

- ❖ **Evolution:** Dates back to the colonial era when the focus was primarily on epidemic control.
  - ✓ **1932:** Establishment of institutions like the All India Institute of Hygiene and Public Health (AIIHPH), shift toward systematic public health training.
  - ✓ **Post-independence Era:** Institutions such as the National Institute of Health and Family Welfare (NIHFW) and various medical universities expanded their curriculum to include public health as a specialized field.
- ❖ **Current Framework:**
  - ✓ **Undergraduate Programs:**
    - Bachelor of Public Health (BPH): A foundational course that provides knowledge on epidemiology, health policies, and community health.
    - MBBS with Community Medicine Specialization: A component of the medical curriculum that introduces students to public health concepts.
  - ✓ **Postgraduate and Doctoral Programs:**
    - Master of Public Health (MPH): A specialized program available at institutions like AIIMS, TISS, and IIPH, covering epidemiology, health systems, and policy-making.
    - MD in Community Medicine: Focuses on research, preventive medicine, and health administration.
    - Ph.D. in Public Health: Offered by universities to promote in-depth research on healthcare challenges in India.
  - ✓ **Short-Term and Online Courses:** To cater to working professionals, various organizations, including the Indian Institutes of Public Health (IIPH) and IGNOU, offer diploma and certificate courses in health management, epidemiology, and nutrition.
- ❖ India has seen a 60% increase in institutions offering public health education over the past decade.

### Key Institutions Providing Public Health Education

- ❖ All India Institute of Hygiene and Public Health (AIIHPH), Kolkata
- ❖ Public Health Foundation of India (PHFI) and Indian Institutes of Public Health (IIPH)
- ❖ Tata Institute of Social Sciences (TISS), Mumbai
- ❖ AIIMS (All India Institute of Medical Sciences), New Delhi
- ❖ National Institute of Epidemiology (NIE), Chennai

### Key Challenges With Public Health Education in India

- ❖ **Lack of Awareness and Recognition:** Public health is often overshadowed by clinical medicine, leading to fewer enrollments in MPH programs.

- ✓ Limited awareness about career opportunities in public health discourages students from pursuing this field.
- ❖ **Shortage of Faculty and Infrastructure:** Many institutions struggle with inadequate faculty trained in public health.
  - ✓ Infrastructure in public health training centers, especially in rural areas, remains underdeveloped.
- ❖ **Gaps in Curriculum and Practical Training:** The curriculum often lacks integration with real-world challenges, resulting in graduates with theoretical knowledge but limited practical exposure.
  - ✓ Limited fieldwork and internship opportunities affect hands-on learning.
- ❖ **Regional Disparities:** Most renowned public health institutions are concentrated in urban areas, leaving rural and remote regions underserved.
  - ✓ Accessibility and affordability of quality education remain a concern for students from marginalized communities.
- ❖ **Lack of Standardization:** Public health education in India lacks a standardized curriculum, leading to inconsistencies in the quality of training across institutions. It affects the preparedness of graduates to address real-world health challenges.
- ❖ **Lack of Health Professionals:** According to a report by the National Health Systems Resource Centre (NHSRC), India needs over 1.5 million trained public health professionals to address the growing healthcare needs, especially post-pandemic.
  - ✓ WHO estimates that India has only one public health professional for every 10,000 people, highlighting the need for more trained professionals.

### Efforts Related To Public Health Education in India

- ❖ **Allocations (Union Budget 2024-25):**
  - ✓ **Increased Allocation for Health:** ₹1.23 lakh crore for the Ministry of Health and Family Welfare (MoH&FW).
  - ✓ Focus on Public Health Education that includes the establishment of new medical colleges and the upgradation of existing institutions to address the shortage of healthcare professionals.
  - ✓ Digital Health Initiatives including telemedicine and digital health records, to improve accessibility and efficiency.
  - ✓ Continued Support For National Health Mission (NHM)
- ❖ **Literacy and Digital Health Education:**
  - ✓ National Digital Health Mission (NDHM) aims to digitize health records and improve public awareness about diseases and treatments.
  - ✓ Mobile-based apps like Arogya Setu, eSanjeevani, and MyGov Health have helped disseminate health information.
  - ✓ Internet penetration in rural India has increased to 38%, improving digital health education access.
- ❖ Public Awareness Programs and Campaigns like Mission Indradhanush, National Tobacco Control Program (NTCP).
- ❖ Mental Health Awareness under the National Mental Health Program (NMHP).

### Opportunities and Future Prospects

- ❖ **Government Initiatives and Policy Support:** The National Health Policy (2017) emphasizes the need for public health training and research.
  - ✓ Ayushman Bharat and the National Health Mission (NHM) have created demand for trained public health professionals.
- ❖ **Growth of Online and Distance Learning:** Platforms like SWAYAM and initiatives by IGNOU provide affordable online public health courses, making education more accessible.



- ❖ **Expansion of Research and International Collaborations:** Collaborations with global public health institutions such as WHO, Johns Hopkins Bloomberg School of Public Health, and Harvard TH Chan School of Public Health are improving research quality in India.
- ❖ **Emerging Career Opportunities:** Public health graduates are increasingly being recruited by government health departments, NGOs, international organizations (WHO, UNICEF), and private healthcare firms.

### Way Forward

- ❖ **Standardization of Curriculum:** Establishing a central regulatory body, such as a Public Health Education Council, can ensure uniform training standards and faculty qualifications across institutions.
- ❖ **Expansion of Institutions:** Setting up public health schools in underserved regions can improve access to education and address regional disparities.
- ❖ **Integration of Practical Training:** Incorporating mandatory internships and fieldwork in government health programs can enhance the practical skills of students.
- ❖ **Creation of Public Health Jobs:** Introducing State Public Health Cadres and increasing recruitment in government health systems can provide dedicated employment opportunities for graduates.
- ❖ **Encouraging Private Sector Participation:** Incentivizing private hospitals and industries to hire public health professionals can expand job opportunities and foster collaboration between sectors.
- ❖ **Increased Funding:** Allocating more resources to public health education and research can strengthen the sector and support the development of a skilled workforce.

### Conclusion

- ❖ The challenges facing public health education in India are significant but not insurmountable.
- ❖ By addressing issues such as standardization, funding, and job creation, the country can build a strong public health workforce capable of meeting its healthcare needs.
- ❖ A collaborative approach involving the government, academia, and the private sector is essential to achieve this goal and ensure a healthier future for all.

### PAC FLAG SHORTCOMINGS OF SWADESH DARSHAN SCHEME

Context: Public Accounts Committee (PAC), led by K.C. Venugopal, criticized the Tourism Ministry for poor execution of the Swadesh Darshan scheme.

#### About

- ❖ The panel was reviewing a report of the Comptroller and Auditor General on the scheme.
- ❖ Despite the Ministry of Tourism's claims of completion for most of the sanctioned projects, the panel found substantial discrepancies.

#### Swadesh Darshan

- ❖ The Ministry of Tourism launched its flagship scheme of 'Swadesh Darshan' in 2014-15.
- ❖ The Ministry has now revamped it as Swadesh Darshan 2.0 with the objective to develop sustainable and responsible destinations following a tourist & destination centric approach.
- ❖ **Theme-Based Tourist Circuits: It identifies various thematic circuits based on specific themes such as:**
  - ✓ Spiritual circuits (e.g., Char Dham Yatra, Buddhist circuit)
  - ✓ Cultural circuits (e.g., North East Circuit, Tribal Circuit)
  - ✓ Heritage circuits
  - ✓ Wildlife circuits

✓ Coastal circuits

- ❖ **Funding:** The Ministry of Tourism allocates funds to various states and Union Territories for the development of these circuits.

### Key issues raised

- ❖ **Lapses in Planning:** No feasibility studies conducted before project launch.
- ❖ **Financial Mismanagement:** Budget overruns due to poor planning; approvals granted without Detailed Project Reports (DPRs).
- ❖ **Weak Monitoring:** No formal mechanism for project evaluation or approval; several projects delayed or incomplete.
- ❖ **Tourism Ministry's Claim vs. Reality:** The Ministry of Tourism claimed that 75 out of 76 projects were completed, but the committee found that several projects, including the Kanwar route in Bihar, Tribal circuit in Telangana, and Sree Narayana Guru Ashram in Kerala, remained incomplete or non-functional.

### Way Ahead

- ❖ The committee has instructed the Ministry of Tourism to conduct physical inspections of all the projects and provide a comprehensive report within three weeks.
- ❖ The committee also asked for details on how the scheme impacted employment generation and how it affected tourist footfall, as these were key indicators of the scheme's success.

## CONCERNS RAISED OVER THE AMENDMENT INTO THE RTI ACT, 2005

**Context:** Over 30 civil society organisations are urging the Union government to preserve the Right to Information Act, 2005.

### About

- ❖ **Concern Raised:** Organizations urge the government to avoid fully implementing changes to the RTI Act through the Digital Personal Data Protection Act (DPDP) of 2023.
- ❖ Section 8(1)(j) of the RTI Act now includes a blanket prohibition on disclosing personal information, even if it serves the public interest.
- ❖ **Government's Position:** The government defends the change, citing the Supreme Court's judgment on the Right to Privacy (Justice K.S. Puttaswamy case, 2017) as a fundamental right.

### Concerns Raised by Activists:

- ❖ The change makes it harder to access information vital for social audits and uncovering misuse of public funds or corruption.
- ❖ RTI requests have been critical in verifying government programs and ensuring accountability, e.g., checking food ration distribution.
- ❖ The original RTI Act balanced privacy and transparency; they reject the argument that the changes align with the Supreme Court's privacy ruling.

### Right to Information Act (RTI), 2005

- ❖ **Aim:** It was designed to promote transparency in the functioning of the government by giving citizens the right to access information from public authorities.
- ❖ **Scope:** The Act applies to public authorities, which include government departments, ministries, and organizations that are substantially funded by the government.
- ❖ **Information Accessible to the Public:** Citizens have the right to request information from public authorities. This includes the right to access records, documents, and other information.
- ❖ **Exclusions:** Information that may compromise national security, breach confidentiality, or harm the integrity of ongoing investigations.

- ❖ **Timeframe for Response:** Public authorities are required to respond to information requests within 30 days. In certain cases, this period can be extended to 45 days.
- ❖ **Penalties:** The Act provides for penalties against officials who withhold information without reasonable cause or provide false information.

### Significance of the Act

- ❖ **Empowers Citizens:** By accessing information from public authorities, promoting transparency and accountability in government.
- ❖ **Holds Government Accountable:** Helps in holding public authorities accountable for their actions, preventing corruption.
- ❖ RTI helped uncover misuse of funds in the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS).
- ❖ **Promotes Good Governance:** It strengthens democratic processes by ensuring that the government operates transparently, fostering public trust.
- ❖ **Enables Social Audits:** Activists and NGOs use RTI to perform social audits of government schemes and services.
- ❖ RTI was used to check if food rations were correctly distributed under the Public Distribution System (PDS).
- ❖ **Access to Public Records:** RTI requests have been used to obtain details of government contracts, exposing corruption or inefficiencies.
- ❖ **Strengthens Democracy:** Provides a tool for citizens to actively participate in the decision-making process, enhancing democracy.

### Criticism of the Act

- ❖ **Overburdening Public Authorities:** It has led to an overload of information requests, putting a strain on public authorities and diverting attention from their primary duties.
- ❖ **Misuse of the Act:** Some individuals or groups use RTI requests as a tool for harassment or to settle personal or political scores, leading to unnecessary administrative burdens.
- ❖ **Delay in Processing Requests:** Despite the stipulated time frames for response, some public authorities struggle to adhere to these deadlines, causing frustration among information seekers.
- ❖ **Capacity and Training Issues:** Some public authorities lack the necessary infrastructure, manpower, and training to effectively implement the RTI Act.
- ❖ **Exemptions and Ambiguities:** The Act's provisions regarding exemptions are sometimes vaguely defined, this ambiguity can be exploited to withhold information that should ideally be in the public domain.

### Way Ahead

- ❖ The RTI Act has played a significant role in promoting transparency, reducing corruption, and empowering citizens to actively participate in the democratic process by holding government institutions accountable.
- ❖ It is a powerful tool for promoting good governance and ensuring that citizens have access to information that affects their lives.
- ❖ Parliament must codify clear definitions of what constitutes “personal information” and “public interest”.
- ❖ Disclosure of personal information should be allowed if it serves a larger public good, such as exposing corruption, ensuring delivery of entitlements, or verifying misuse of public funds.
- ❖ Draft rules and amendments should be done with multi-stakeholder consultation, including RTI activists, data protection experts, and legal scholars.

## TB CHAMPIONS

**Context:** The Meghalaya government is pushing for a TB-free State by re-skilling TB survivors and bringing them back into control programmes as ‘TB champions’.

### TB Champions

- ❖ A TB Champion is a person who has been affected by TB and successfully completed the treatment.
  - ✓ As survivors, they can provide valuable support to those with TB and their families.
- ❖ NTEP has designed a standard sensitization and training curriculum for empowering TB survivors as TB Champions.
  - ✓ TB survivors themselves can access the self-learning modules available online.
  - ✓ Districts can coordinate with NTEP partners or local NGOs to conduct the training.

### What is Tuberculosis?

- ❖ Tuberculosis (TB) is an infectious disease that most often affects the lungs and is caused by the bacteria *Mycobacterium tuberculosis*.
- ❖ It spreads through the air when infected people cough, sneeze or spit.
- ❖ Symptoms: prolonged cough (sometimes with blood), chest pain, weakness, fatigue, weight loss, fever, night sweats.
  - ✓ While TB usually affects the lungs, it also affects the kidneys, brain, spine and skin.
- ❖ **Treatment:** It is preventable and curable with antibiotics.
  - ✓ **TB Vaccine:** The Bacillus Calmette-Guérin (BCG) vaccine remains the only licensed vaccine against TB; it provides moderate protection against severe forms of TB (TB meningitis) in infants and young children.

### TB in India

- ❖ **TB as a global health challenge:** India has the highest TB burden in the world, contributing to 26% of the global burden and 29% of global TB-related deaths.
  - ✓ India is followed by Indonesia (10%), China (6.8%), the Philippines (6.8%), and Pakistan (6.3%).
- ❖ **Multidrug-Resistant TB:** India represents 27% of the world’s multi-drug-resistant TB cases, underscoring the need for specialized treatment approaches.
- ❖ The World Health Organization (WHO) has recognised India’s progress, with a 17.7% decline in TB incidence from 2015 to 2023, a rate more than double the global decline of 8.3%.
- ❖ India’s goal is to eliminate tuberculosis (TB) by 2025, five years ahead of the global target of 2030.

### Challenges Faced by India in Eliminating TB

- ❖ **Drug-resistant TB cases:** India has a significant burden of drug-resistant TB, including multidrug-resistant TB (MDR-TB).
  - ✓ This type of TB is much harder to treat and requires more expensive, specialised drugs and a longer duration of treatment.
- ❖ **Diagnostics and Case Detection:** The accurate and timely diagnosis of TB remains a challenge.
  - ✓ Some areas lack access to modern diagnostic tools, leading to reliance on older methods with limitations.
- ❖ **Poor primary health-care and infrastructure:** In many parts of India, especially in rural and remote areas, there is limited access to healthcare facilities.
  - ✓ This can result in delayed diagnosis and treatment, allowing TB to spread within communities.
- ❖ **Stigma and Awareness:** Stigma associated with TB lead to delays in seeking healthcare, and lack of awareness about the disease contribute to its persistence.
- ❖ **Private Sector Engagement:** A significant portion of healthcare services in India is provided by the private sector.



- ✓ Coordinating efforts between the public and private sectors and ensuring standardized treatment protocols are crucial for effective TB control.
- ❖ **Treatment Adherence:** TB treatment requires a prolonged course of antibiotics, and ensuring patient adherence to the full course is challenging.
- ❖ **Vulnerable Populations:** Certain populations, such as migrant workers, urban slum dwellers, and those living in crowded conditions, are at higher risk of TB.

### Steps Taken by Government of India to Eliminate TB

- ❖ **Revised National Tuberculosis Control Program (RNTCP):** The RNTCP, launched in 1997, was the flagship program to control TB in India.
  - ✓ The program has been continuously revised and strengthened over the years.
- ❖ **National Tuberculosis Elimination Program (NTEP):** The Government of India has developed a National Strategic Plan (2017-25) for Ending TB in the country by 2025.
- ❖ **Pradhan Mantri TB Mukh Bharat Abhiyan (PMTBMBA):** Launched in 2022 for community support to TB patients with the objective to provide nutritional, diagnostic and vocational support.
- ❖ **Universal Drug Susceptibility Testing (DST):** The government has scaled up efforts to provide universal access to drug susceptibility testing, helping to identify drug-resistant strains of TB early and tailor treatment accordingly.
  - ✓ Earlier, the patients were started on first line treatment and were tested for drug resistance only if the therapy did not work.
- ❖ **Ni-kshay portal:** An online Ni-kshay portal has been set up to track the notified TB cases.
- ❖ **New Drugs:** Newer drugs such as Bedaquiline and Delamanid for the treatment of drug-resistant TB have been included in the government's basket of drugs provided free TB patients.
- ❖ **R&D for Treatment:** Researchers have been studying shorter three- and four-month courses of anti-tubercular drugs, instead of the existing six-month therapy.
- ❖ **Vaccine Development:** Trials are underway to test the effectiveness of a vaccine called Immuvac, which was initially developed to prevent leprosy, in preventing TB.
  - ✓ Researchers are also testing VPM1002, which is a recombinant form of the BCG vaccine modified to express the TB antigens better.

## THE MEDICAL TERMINATION OF PREGNANCY (MTP) IN INDIA

**Context:** Some doctors express ethical discomfort about performing abortions, especially as the pregnancy progresses.

- ❖ Concerns intensify in cases of advanced gestation, where Foetal viability debates emerge.

### About

- ❖ **Foetal Viability Debate:** Viability refers to the point at which a fetus can survive outside the womb, but no definitive moment exists.
  - ✓ As pregnancy advances, the fetus's right to life grows stronger, making viability a contentious issue in legal and ethical discussions.

### India's Legal Stance on Abortion

- ❖ The Medical Termination of Pregnancy (MTP) Act permits abortions in specific predetermined situations.
- ❖ Before the enactment of the MTP Act in 1971, the medical termination of pregnancy was governed by the Indian Penal Code (IPC).
  - ✓ Most of these provisions aimed at criminalising abortions, except where the procedure was done in good faith in order to save the woman's life.

- ✓ The provisions failed to make a distinction between wanted and unwanted pregnancies, making it extremely onerous for women to access safe abortions.
- ❖ In 1971, the MTP Act was enacted by Parliament as a “health” measure, to decriminalise abortion in certain defined circumstances and under due supervision of registered medical practitioners.
  - ✓ A pregnancy could only be terminated under Section 3(2) if it did not exceed 20 weeks.
  - ✓ It laid down that the pregnancy can be terminated on the opinion of one doctor if it is done within 12 weeks of conception and two doctors if it is done between 12 and 20 weeks.
- ❖ **The 2021 amendment to the MTP Act:** Rule 3B permitted abortion up to 24 weeks for women due to change of marital status during the ongoing pregnancy, besides in cases of survivors of rape, victims of incest, and other vulnerable women.
  - ✓ It also replaced the word “by any married woman or her husband” with the words “any woman or her partner”, bringing within the fold of the law pregnancies outside marriage institutions.
- ❖ After 24 weeks, the MTP Act requires medical boards of expert doctors to be set up by the state government in each district, which opine on whether to allow termination of pregnancy in case of substantial foetal abnormality.

### Arguments in favour of MTP

- ❖ **Bodily Autonomy and Reproductive Rights:** Women should have the autonomy to make decisions about their own bodies, the Supreme Court has emphasized the importance of reproductive rights as part of personal liberty.
- ❖ **Physical Health:** If carrying a pregnancy threatens a woman’s health, including conditions like gestational diabetes or eclampsia, abortion may be justified to protect her life.
- ❖ **Mental Health:** In cases where pregnancy exacerbates mental health conditions (e.g., postpartum depression or psychosis), abortion may be necessary to safeguard the mental health of the mother.
- ❖ **Non-Viable Fetuses:** If the fetus has congenital abnormalities or conditions incompatible with life, abortion may be ethically acceptable to avoid prolonged suffering for the child.
- ❖ **Unplanned Pregnancies:** For women facing economic or social hardships, the ability to access abortion services can allow them to avoid further challenges.
- ❖ **Reduction in Unsafe Abortions:** Legal access to abortion reduces the number of unsafe, illegal abortions that often lead to serious health risks or even death for women.

### Arguments Against MTP

- ❖ **Right to Life of the Fetus:** Ethical objections argue that the fetus has a right to life, especially as pregnancy progresses and fetal viability increases, making abortion less acceptable.
- ❖ **Emotional and Psychological Effects:** Terminating a pregnancy can have long-term psychological consequences for the woman, including guilt, regret, and emotional trauma.
- ❖ **Non-Medical Abortions:** There is a concern that allowing abortion may lead to its normalization as a method of birth control, rather than a rare and necessary medical intervention.
- ❖ **Risk of Misuse:** There is a concern that abortion laws may be misused, such as for sex-selective abortions or for non-medical reasons, like convenience.
- ❖ **Negative Impact on Society:** Widespread abortion could contribute to a decline in societal values regarding family and the value of life.
- ❖ **Cultural Beliefs:** Cultural norms often view abortion as morally unacceptable, especially when it’s perceived as a violation of the natural order or traditional family structures.

### Way Ahead

- ❖ **Access to Abortion Care:** Making MTP pills more accessible and reducing administrative barriers could improve abortion access.
- ❖ Improved sex education and viewing abortion as a health service rather than a legal exception might help reduce stigma.

- ❖ **Empathy in Medical Decision-Making:** Doctors are encouraged to treat women with empathy, especially in emotionally and physically challenging situations involving late-term abortions.



## INTERNATIONAL

### INDIA-EUROPEAN COMMISSION PARTNERSHIP

**Context: Recently**, a delegation led by European Commission (EC) President Ursula von der Leyen is in India for a two-day visit exploring a 'security and defence partnership'.

#### About India-European Commission (EC) Partnership

##### Historical Context:

- ❖ **1962:** Diplomatic relations between India and the European Economic Community (EEC), the precursor to the European Union;
- ❖ **1994:** Signing of the India-EU Cooperation Agreement;
- ❖ **2004:** Strategic Partnership, a shift towards deeper collaboration in trade, security, and global governance.
- ❖ **2020:** 'India-EU Strategic Partnership: A Roadmap to 2025', outlining ambitious goals for cooperation in various sectors, including digital innovation, climate action, multilateralism, and global peace.

##### Economic Cooperation:

- ❖ **Trade:** The EU is one of India's largest trading partners, accounting for nearly 11% of India's total trade, and the USA (10.8%) and China (10.5%).
  - ✓ As of 2023, bilateral trade between India and the EU reached approximately €120 billion.
  - ✓ The EU is the second-largest destination for Indian exports (17.5% of the total) after the USA (17.6%), while China only ranks fourth (3.7%).
- ❖ **Investment and Business Ties:** The EU is one of the largest foreign investors in India, with cumulative FDI inflows of over \$100 billion in sectors such as automobiles, renewable energy, and information technology.
- ❖ **Supply Chain Resilience:** Both are focusing on diversifying supply chains, particularly in semiconductors, pharmaceuticals, and critical minerals.
- ❖ **Free Trade Agreement (FTA) Negotiations:** The India-EU Free Trade Agreement (FTA), officially known as the India-EU Broad-Based Trade and Investment Agreement (BTIA), has been under negotiation since 2007.
  - ✓ It aims to enhance market access, reduce tariffs, and streamline trade regulations.

##### Strategic and Security Cooperation:

- ❖ **Maritime Security:** EU's Global Gateway Strategy and India's Indo-Pacific Strategy are working together to ensure free and open sea lanes in the Indian Ocean and the Indo-Pacific region.
- ❖ **Counter-Terrorism:** The India-EU Counter-Terrorism Dialogue facilitates intelligence-sharing and counter-radicalization measures to combat terrorism and cyber threats.
- ❖ **Defense Cooperation:** The EU and India are exploring deeper defense collaboration, including joint military exercises, cybersecurity cooperation, and technology-sharing agreements.

##### Climate Change and Sustainable Development:

- ❖ **India-EU Clean Energy and Climate Partnership:** Focuses on renewable energy, energy efficiency, and green financing.
- ❖ **International Solar Alliance (ISA):** The EU actively supports India's ISA initiative, which aims to promote solar energy deployment worldwide.
- ❖ **EU-India Green Hydrogen Partnership:** Aims to accelerate the use of green hydrogen in industrial sectors to reduce carbon emissions.



### Technology and Digital Transformation:

- ❖ **India-EU Digital Partnership:** Focuses on 5G, artificial intelligence (AI), and cybersecurity to enhance digital connectivity.
- ❖ **Data Protection and Privacy:** India and the EU are discussing frameworks to align data protection laws, ensuring a secure digital ecosystem.
- ❖ **Research and Innovation:** India's participation in Horizon Europe, the EU's flagship research program, fosters collaboration in space, biotechnology, and health sciences.

### Geopolitical and Multilateral Engagement:

- ❖ G20 (India hosted the G20 Summit in 2023 with strong EU participation);
- ❖ United Nations (India supports EU's role in global governance);
- ❖ World Trade Organization (WTO) (Both advocate for fair trade practices);

### Challenges in the India-EU Partnership

- ❖ **Trade Barriers:** Tariff and non-tariff barriers, particularly in the agriculture, automotive, and pharmaceutical sectors, have slowed FTA negotiations.
- ❖ **Human Rights and Labor Standards:** The EU has raised concerns over labor rights, environmental standards, and digital governance in India.
- ❖ **Geopolitical Divergences:** India's neutral stance on the Russia-Ukraine war has led to some diplomatic tensions with EU nations.
- ❖ **Regulatory Hurdles:** Differences in data privacy laws, intellectual property rights (IPR), and digital taxation require further negotiation.

### Future Prospects

- ❖ Expansion of India's role in EU-led global initiatives, including the Global Gateway and climate financing projects.
- ❖ Conclusion of the India-EU Free Trade Agreement in the coming years.
- ❖ Enhanced defense cooperation, including joint defense production.
- ❖ Stronger collaboration in space technology and AI-driven innovation.
- ❖ With both sides committed to deepening their strategic alliance, the India-EU partnership aims to play a crucial role in shaping the global economic and security landscape in the decades ahead.

## AUSTRALIA: A NATURAL PARTNER FOR INDIA'S GROWTH TRAJECTORY

**Context:** Australia and India share a robust and dynamic relationship that has evolved significantly over the years.

- ❖ As India continues its rapid economic ascent, Australia emerges as a natural partner, offering complementary strengths and strategic alignment.

### About India-Australia Relations

- ❖ **Historical Ties:** India and Australia have shared historical ties dating back to the colonial era under British rule.
  - ✓ Both nations were part of the Commonwealth, which laid the foundation for their diplomatic relations after India's independence in 1947.
  - ✓ Post-independence, India's policy of non-alignment and Australia's alignment with Western alliances created a diplomatic gap.
  - ✓ While interactions remained limited during the Cold War due to differing strategic alignments, relations significantly improved in the post-liberalization era of the 1990s.

- ❖ **Political and Diplomatic Engagement:** It has progressed from a Strategic Partnership (2009) to a Comprehensive Strategic Partnership (2020). Key milestones include:
  - ✓ **Quadrilateral Security Dialogue (QUAD):** Both countries, along with the US and Japan, collaborate in QUAD to promote a free, open, and inclusive Indo-Pacific region.
  - ✓ **2+2 Ministerial Dialogue:** A high-level engagement between the foreign and defense ministers of both nations to strengthen security cooperation.
- ❖ **Economic and Trade Relations:**
  - ✓ India is Australia's 5th largest trading partner. It is expected to boost bilateral trade from the current \$31 billion to \$50 billion by 2030.
    - Major exports from Australia to India: Coal, education services, natural gas, and agricultural products.
    - Major exports from India to Australia: Pharmaceuticals, textiles, engineering goods, and IT services.
  - ✓ **Comprehensive Economic Cooperation Agreement (CECA):** Negotiations are ongoing to further enhance trade and investment flows.
  - ✓ **Australia-India Economic Cooperation and Trade Agreement (ECTA):** It aims to boost bilateral trade by reducing tariffs and opening new avenues for economic partnerships.
    - Australia is a key supplier of critical minerals, coal, and education services to India.
- ❖ **Complementary Economies:** Australia is rich in natural resources, including critical minerals such as lithium, nickel, and cobalt, which are essential for India's manufacturing and clean energy sectors.
  - ✓ As India aims to become a global manufacturing hub and transition to renewable energy, Australia's resources can play a pivotal role in supporting these ambitions.
- ❖ **Defense and Security Cooperation:**
  - ✓ **Mutual Logistics Support Agreement (MLSA):** It allows both nations to access each other's military bases for logistics and maintenance.
  - ✓ **Cyber and Critical Technology Cooperation:** Strengthening collaboration on cybersecurity, artificial intelligence, and digital governance.
  - ✓ **Quadrilateral Security Dialogue (QUAD):** Both nations with the US and Japan, for countering Chinese influence in the Indo-Pacific.
  - ✓ **Defense Exercises like Malabar, AUSINDEX, and AUSTRALIAHIND:** For strengthening military interoperability and defense ties.
- ❖ **Cultural Ties:** Australia is a top destination for Indian students, with over 100,000 Indians studying in Australian universities. Recent initiatives include:
  - ✓ **India-Australia Education and Research Collaboration:** MoUs between universities for research in science, technology, and humanities.
  - ✓ **Maitri Scholarship Program:** Scholarships for Indian students to study in Australia.
  - ✓ **Diaspora Engagement:** A large Indian-origin community in Australia serves as a cultural and economic bridge between the two nations.

### Future Roadmap: Four 'Superhighways of Growth':

- ❖ **Clean Energy:** Australia is a leader in clean energy technologies and has the resources to support India's renewable energy goals.
  - ✓ It can help India achieve its target of increasing the number of electric vehicles and expanding its renewable energy capacity.
- ❖ **Agribusiness:** The agribusiness sector presents significant opportunities for collaboration.
  - ✓ Australia's expertise in sustainable agriculture and advanced farming techniques can contribute to India's efforts to enhance food security and agricultural productivity.
- ❖ **Education and Skills:** With India's growing demand for quality education and skill development, Australian institutions are set to play a pivotal role in meeting these needs.

- ❖ **Tourism:** Both countries have vibrant tourism industries, and promoting tourism exchanges can strengthen cultural ties and boost economic growth.

### Challenges in the Relationship

- ❖ **Visa and immigration policies:** Issues related to work permits and student visas occasionally cause friction.
- ❖ **China's influence:** Both countries have different trade dependencies on China, which affects their strategic calculations.
- ❖ **Climate change and environmental policies:** Differences in climate commitments and coal exports remain points of discussion.

### Conclusion

- ❖ Australia's complementary strengths, strategic alignment, and robust economic cooperation make it a natural partner for India's growth trajectory.
- ❖ By leveraging their respective capabilities and deepening their collaboration in key sectors, Australia and India can achieve mutual prosperity and contribute to regional stability.
- ❖ As both nations continue to strengthen their partnership, the future holds immense potential for shared growth and development.

## IRAN DECLINED TO RESUME NUCLEAR DEAL NEGOTIATIONS WITH USA

**Context:** Iran declined to resume negotiations on its nuclear programme with the United States.

### About

- ❖ Trump's administration has levied sanctions against Iran – including on the country's oil network – as part of his “maximum pressure” strategy.
  - ✓ Trump wrote to Iran, urging negotiations on the nuclear deal or risk military action.
- ❖ Iran's Foreign Minister stated they would only negotiate with other JCPOA members (Europe, Russia, China), not the U.S.

### Joint Comprehensive Plan of Action (JCPOA) 2015

- ❖ **Participants:**
  - ✓ Iran
  - ✓ P5+1: Five permanent members of the UN Security Council (China, France, Russia, UK, U.S.) plus Germany.
  - ✓ EU: Participated in negotiations.

### Iran's Commitments:

- ❖ **Nuclear Restrictions:** Iran agreed not to produce highly enriched uranium or plutonium for nuclear weapons and to ensure its nuclear facilities (Fordow, Natanz, Arak) focus on civilian purposes.
- ❖ **Centrifuge Limits:** Iran limited the number, type, and level of its centrifuges, and reduced its stockpile of enriched uranium.
  - ✓ Uranium enriched to 5% is for nuclear power; 20% for research or medical use; 90% for weapons.
- ❖ **Monitoring and Verification:** Iran agreed to allow the International Atomic Energy Agency (IAEA) unfettered access to nuclear facilities, including undeclared sites.
  - ✓ A Joint Commission monitors the deal's implementation and resolves disputes, including granting IAEA access to suspicious sites.

### What Other Signatories Agreed To:

- ❖ **Sanctions Relief:** The EU, UN, and U.S. agreed to lift nuclear-related sanctions on Iran, but U.S. sanctions on ballistic missiles, terrorism support, and human rights remained.
  - ✓ The U.S. lifted sanctions on oil exports but kept restrictions on financial transactions.
  - ✓ UN arms and missile bans on Iran were lifted after five years, provided the IAEA confirmed Iran's nuclear activities remained civilian.
- ❖ **Violation of the Deal:** If any signatory suspects Iran is violating the deal, the UN Security Council can vote on whether to continue sanctions relief.
  - ✓ This “snapback” mechanism remains in effect for ten years, after which the UN sanctions are set to be permanently removed.
- ❖ **Trump's Withdrawal:** In 2018, President Trump withdrew the U.S. from the deal, leading Iran to resume nuclear activities.
- ❖ **Iran's Nuclear Activity:** In 2023, Iran enriched uranium to near weapons-grade levels, raising international concerns.
  - ✓ Key provisions of the JCPOA began to expire by late 2023.

### Goals of the JCPOA:

- ❖ **Delay Iran's Nuclear Weapon Development:** The goal was to delay Iran's ability to make a nuclear weapon by at least one year, compared to a few months without the agreement.
- ❖ **Prevent Regional Crisis:** Fears that Iran's nuclear program could lead to preemptive military action by Israel or a nuclear arms race within the region.

### Challenges in Negotiation

- ❖ **Mistrust between the U.S. and Iran:** Past betrayals hinder diplomatic progress.
- ❖ **Diverging Interests:** U.S. wants a broader deal; Iran seeks JCPOA restoration.
- ❖ **Domestic Political Constraints:** Hardliners in both nations resist compromise.

## PM'S VISIT TO MAURITIUS

**Context:** The Prime Minister paid a state visit to Mauritius, his second since 2015.

- ❖ He was the Chief Guest at Mauritius' National Day Celebrations on March 12.

### Key Highlights of the Visit

- ❖ **MOUs Signed:** Includes training civil servants, small and medium enterprises, blue economy development, combating financial crimes, and local currency settlement for trade.
- ❖ **Indian Rupee Credit Line:** A 487.6 crore INR line of credit for replacing water pipelines in Mauritius, a first-ever INR-based credit line.
- ❖ **White-Shipping Agreement:** Technical agreement for maritime security and information exchange.
- ❖ **Award Conferred:** PM Modi received the Grand Commander of the Order of the Star and Key of the Indian Ocean, marking him as the first Indian recipient.
- ❖ **Vision for the Global South:** PM introduced Vision MAHASAGAR (Mutual And Holistic Advancement for Security And Growth Across Regions), building on the previous Vision SAGAR.

### About Mauritius

- ❖ **Location:** Mauritius is a strategically located island nation in the western Indian Ocean, close to India.
- ❖ **Population:** Nearly 70% of the population (1.2 million) is of Indian origin, strengthening ties with India.
- ❖ **Colonial History:** Mauritius was initially a French colony before becoming a British possession.



- ❖ **National Day:** Mauritius celebrates National Day on March 12, in honor of the date of Mahatma Gandhi's Dandi March.

### India- Mauritius Bilateral Relations

- ❖ **Diplomatic Relations:** India and Mauritius established diplomatic relations in 1948 and have become key trading partners in the Asian continent.
- ❖ **Commercial Relations:** For the FY 2022-2023, Indian exports to Mauritius was USD 462.69 mn, Mauritian exports to India was USD 91.50 mn and Total trade was USD 554.19 mn.
  - ✓ Double Taxation Avoidance Agreement: Signed in 1982 to help non-resident investors avoid double taxes.
  - ✓ CECTA Agreement: India and Mauritius signed the Comprehensive Economic Cooperation and Partnership Agreement (CECTA) in 2021, India's first trade agreement with an African country.
  - ✓ FDI Source: Mauritius is the second-largest source of Foreign Direct Investment (FDI) into India for FY 2023-24, after Singapore.
- ❖ **Defence Relations:** India is Mauritius' preferred defence partner for acquiring platforms, capacity building, joint patrolling, hydrological services, etc.
  - ✓ **First Agreement:** Transfer of a Dornier aircraft and an Advanced Light Helicopter (Dhruv) to Mauritius on lease.
  - ✓ **Second Agreement:** A \$100 million Line of Credit (LoC) for Mauritius to procure defence equipment.
- ❖ **Space Cooperation:** India and Mauritius are exploring space research opportunities and signed an MoU in November 2023 for developing a joint satellite.
- ❖ **Indian Migration:** French Rule (1700s): Indians from Puducherry were brought to Mauritius as artisans and masons.
  - ✓ British Rule (1834 – early 1900s): About half a million Indian indentured workers arrived in Mauritius.
    - The majority of these workers settled in Mauritius, influencing its culture and demographics.
- ❖ **Development Partnership:** India has been contributing to projects like the Metro Express, new hospitals, and infrastructure in Agaléga Island.
- ❖ **Humanitarian Assistance:** India assisted Mauritius during Cyclone Chido in 2023, showcasing India's role as a "First Responder."
- ❖ **SAGAR:** The term SAGAR – 'Security and Growth for All in the Region' was coined by the PM in 2015 during his visit with a focus on the blue economy.

### Significance of Mauritius for India

- ❖ **Strategic Location:** Mauritius is strategically located in the Indian Ocean, crucial for India's maritime security and trade routes.
- ❖ **Agaléga island:** It is located 1,100 km north of Mauritius, has strategic importance due to its proximity to the Indian southern coast.
  - ✓ In 2024, India and Mauritius jointly inaugurated the air strip and jetty projects on the island, strengthening their bilateral cooperation.
- ❖ **Countering China's Influence:** Strengthening ties with Mauritius is crucial for India to counter China's growing presence in the Indian Ocean region.
- ❖ **Geopolitical Competition:** The Indian Ocean region is a hotspot for geopolitical rivalry, with countries like Europe, the Gulf, Russia, Iran, and Turkey expanding their influence.
- ❖ **Cultural and Historical Ties:** With nearly 70% of its population of Indian origin, Mauritius shares deep cultural, historical, and familial ties with India.
- ❖ **Blue Economy:** Mauritius is key to India's interests in the Indian Ocean's blue economy, especially for maritime resources, fisheries, and offshore energy exploration.

- ❖ **Indian Ocean Cooperation:** Mauritius plays a key role in regional organizations like the Indian Ocean Rim Association (IORA), contributing to regional stability and economic cooperation.

### Areas of Concern

- ❖ **Tax Treaty Misuse:** The Double Taxation Avoidance Agreement (DTAA) between India and Mauritius had been a point of concern due to its potential misuse for illicit activities like money laundering and round-tripping of funds.
- ❖ **Security Concerns:** Mauritius is a key maritime entity in the Indo-Pacific, making security issues critical.
  - ✓ India and Mauritius have a strong defence partnership, but evolving regional dynamics pose challenges to maintaining and enhancing this relationship.
- ❖ **Economic Challenges:** Despite being major economic partners, there are concerns regarding trade imbalances and the need to diversify the trade basket.
  - ✓ Both countries may need to explore new avenues for trade cooperation and address any barriers that hinder the flow of goods and services.
- ❖ **Presence of China:** In recent years, several external powers, including China, have made increasing inroads in Africa and through the Indian Ocean.
  - ✓ In 2021, China's Free Trade Agreement (FTA) with Mauritius came into effect.
  - ✓ This agreement will help China expand the Belt and Road strategy in Africa.
  - ✓ China's increasing presence in the region will pose concerns for India.

### Way Ahead

- ❖ The relationship between India and Mauritius is multifaceted and has grown stronger over the years.
- ❖ Both nations can work towards expanding defense and security collaboration, including joint training, counterterrorism efforts, and maritime security.
- ❖ This multi-faceted approach can further solidify the longstanding relationship between India and Mauritius, contributing to mutual growth and regional stability.

## US-CHINA TRADE WAR 2.0

**Context:** The ongoing trade war between the United States and China has caused significant global economic turbulence, influencing everything from tariffs on goods to the financial markets and international relations.

### What is a Trade War?

- ❖ A trade war occurs when nations impose tariffs or trade barriers against each other in retaliation for perceived economic harm or unfair trade practices.
- ❖ It disrupts global supply chains, increases production costs, and impacts economic growth worldwide.

### Background

- ❖ The US-China trade war began in 2018 when the US, under President Donald Trump, accused China of unfair trade practices.
- ❖ The US imposed tariffs on Chinese goods, leading to countermeasures from China. This escalation affected trade worth over \$450 billion.
  - ✓ India also got caught in the US-China trade war, facing tariffs on steel and aluminum exports and losing its Generalized System of Preferences (GSP) status in 2019.
- ❖ In February 2025, President Trump reintroduced a 10% tariff on all Chinese imports, prompting China to retaliate with its own set of tariffs.
  - ✓ Trump's reciprocal tariff policy is set to take effect from April 2.

- ✓ Trump's policy aims to balance trade by imposing tariffs on countries that impose high tariffs on US goods.
- ✓ The policy is designed to reduce the US trade deficit and generate tariff revenue.

### Global impact of Trade War

- ❖ **Stock Market Volatility:** Trade wars create uncertainty, leading to fluctuating stock prices. Investors react sharply to tariff announcements, impacting market stability worldwide.
- ❖ **Supply Chain Disruptions:** Tariffs increase production costs, forcing companies to rethink supply chains. Businesses look for alternative suppliers, leading to relocation of manufacturing hubs.
- ❖ **Currency Fluctuations:** As investors seek safer assets, emerging market currencies often depreciate, increasing import costs and inflationary pressures in developing economies.
- ❖ **Commodity Price Swings:** Trade wars can disrupt global demand for raw materials like oil, metals, and agricultural products, leading to price instability.
- ❖ **Shifts in Trade Alliances:** Countries seek new trading partners to mitigate tariff impacts. Regional trade agreements and economic blocs often gain prominence during such periods.

### Negative Impact on India

- ❖ **Electronics and Gadgets:** Indian manufacturers depend on Chinese components for smartphones, laptops, and appliances. Disruptions in supply chains may lead to higher prices and shortages.
- ❖ **Pharmaceuticals:** Around 70% of India's raw materials (APIs) for medicines come from China. Any delay or price hike in these imports will raise the cost of essential medicines.
- ❖ **Automobile Industry:** India's auto sector relies on Chinese spare parts. Trade disruptions could slow production, increase costs, and extend delivery timelines.
- ❖ **Stock Market and Currency:** During the last trade war, foreign investors withdrew ₹33,000 crore from Indian markets, and the rupee depreciated by 9.5%, making imports costlier.

### Positive Impact on India

- ❖ **Rise in Exports:** Indian exporters gained from the trade diversion as US buyers looked for alternatives to Chinese goods. Sectors like textiles, chemicals, and electronics saw increased demand.
- ❖ **Boost to Indian IT Sector:** US companies, reducing reliance on Chinese tech, outsourced more work to Indian firms, benefiting the IT industry.
- ❖ **Agricultural Exports:** India took advantage of China reducing US agricultural imports in 2018 by increasing soybean and other crop exports.

### Way Ahead

- ❖ **Geopolitical Strategy:** India must navigate the US-China trade tensions carefully while securing its own economic interests through diplomacy and trade partnerships.
- ❖ **Diversifying Supply Chains:** Reducing reliance on China by strengthening domestic manufacturing under initiatives like 'Make in India' and boosting alternative supplier networks.
- ❖ **Strengthening Trade Agreements:** India should negotiate favorable trade deals with the US, ASEAN, and EU to capitalize on shifting trade dynamics.

### Concluding Remarks

- ❖ Trade wars might seem like distant problems involving big governments, but their effects trickle down to everyday life.
- ❖ The global economy is more connected than ever. When two giants like the U.S. and China clash, the rest of the world, especially countries like India, feels the impact.
- ❖ While some sectors might find opportunities, overall uncertainty tends to slow down growth and affect livelihoods.

- ❖ The US is India's largest trading partner, so India must accommodate US interests to maintain a good relationship.

## REVISION OF INDIA'S MODEL BILATERAL INVESTMENT TREATY (BIT)

**Context:** The revision of India's model Bilateral Investment Treaty (BIT) text, as announced in the Union Budget 2025, aims to make the treaty more investor-friendly while aligning it with current global economic realities.

### About the Bilateral Investment Treaty (BIT)

- ❖ BIT, also known as International Investment Agreements (IIAs), is a legal framework, under the United Nations Conference on Trade and Development (UNCTAD), designed to protect foreign investments.
- ❖ It is a reciprocal agreement between two countries to promote and protect foreign private investments in each other's territories.
- ❖ It establishes minimum guarantees between the two countries regarding the treatment of foreign investments, such as:
  - ✓ **National Treatment:** Treating foreign investors at par with domestic companies;
  - ✓ **Fair & Equitable Treatment:** In accordance with international law; and,
  - ✓ **Protection From Expropriation:** Limiting each country's ability to take over foreign investments in its territory.
- ❖ BIT typically includes mechanisms like investor-state dispute settlement (ISDS) and state-to-state dispute settlement (SSDS) to address conflicts.

### BIT & India

- ❖ India introduced its first Model Bilateral Investment Treaty (BIT) in 1993, but after facing multiple investor-state disputes, it revised its Model BIT text in 2015.
  - ✓ India signed its first BIT in 1994 with the UK and recently signed BITs with UAE and Uzbekistan in 2024.
  - ✓ India is currently negotiating BITs with the UK, Saudi Arabia, Qatar, and the European Union.
- ❖ **Provisions of Model BIT, 2015:** The Standing Committee on External Affairs noted that there is still scope for fine-tuning some of its provisions, like investor-state dispute settlement mechanism.

### Why is a New Revision Needed?

- ❖ **Narrow Definition of Investment:** Model BIT (2015) limited the definition of investment to enterprises with substantial business operations in India, excluding indirect investments and portfolio investments.
- ❖ **Overly Protectionist & Discouraging FDI:** Several foreign investors view India's BIT framework as unfavorable, prompting a rethink to balance investor protection with national interests.
- ❖ **Geopolitical Shifts & Trade Agreements:** With India negotiating trade agreements with the EU, UK, and Canada, a more balanced BIT is essential for fostering economic cooperation.
- ❖ **Investor-State Dispute Settlement (ISDS) Concerns:** Model BIT (2015) made it difficult for investors to seek international arbitration, which is a major deterrent for foreign businesses.

### India's Approach in Current Scenario

- ❖ Chief Economic Adviser V. Anantha Nageswaran announced that India's new model Bilateral Investment Treaty (BIT) will be updated to align with the evolving global investment environment, while safeguarding India's sovereign rights and regulatory space.
- ❖ Finance Minister Nirmala Sitharaman also highlighted that the BIT model will be revamped to encourage sustained foreign investment and make it more investor-friendly.



## Expected Changes in the Revised Model BIT

- ❖ **More Balanced Investor Protections:** India may introduce a limited MFN clause and expand the scope of investment protections while maintaining regulatory autonomy.
  - ✓ It aims to attract more investors while preventing treaty shopping.
- ❖ **Redefining Exhaustion of Local Remedies Clause:** The rigid five-year requirement to exhaust local remedies may be relaxed to make international arbitration more accessible.
  - ✓ A 'fork-in-the-road' mechanism could be introduced, allowing investors to choose either domestic courts or arbitration.
  - ✓ Stronger Dispute Resolution Mechanisms: India is likely to reconsider its approach to ISDS.
  - ✓ A reformed arbitration mechanism — possibly with a standing appellate body or mediation framework — may be introduced to make dispute resolution more predictable.
- ❖ **Incentives for Sustainable & Digital Investments:** The revised BIT may introduce clauses favoring sustainable investments, digital trade, and green energy projects, in line with India's climate goals.
- ❖ **Sector-Specific Provisions:** India may introduce sector-specific regulations, particularly for industries like pharmaceuticals, technology, and infrastructure, ensuring national security while attracting high-value investments.

## Challenges Associated with the BITs

- ❖ **Unequal Distribution of Rights and Obligations:** BITs often create an unequal distribution of rights and obligations between developed countries, which are the source of most foreign direct investment, and developing countries, which are mainly recipients.
- ❖ **Risk of Litigation:** BITs lead to an increased risk of litigation. Some developing countries have been sentenced by international arbitral tribunals to pay millions of dollars as a result of alleged violations to these treaties.
- ❖ **Ambiguous Legal Standards:** Most of these awards are based on expansive interpretations of ambiguous legal standards and concepts such as 'fair and equitable treatment' and 'indirect expropriation'.
- ❖ **Limitations in Addressing Issues:** BITs can't address every problem that companies face abroad.
  - ✓ For example, American companies in China face challenges in protecting and enforcing their intellectual property rights (IPR).
- ❖ **Loss of Policy Space:** BITs can lead to a loss of policy space for the host country, limiting its ability to regulate in the public interest.
- ❖ **Treaty Shopping:** Investors might take advantage of the most favourable nation clause in BITs to sue a host country under a treaty to which it is not a party.

## Conclusion and Way Forward

- ❖ A well-crafted Bilateral Investment Treaty (BIT) can play a transformative role in India's economic growth by boosting investor confidence, attracting foreign investments, and aligning with global standards.
- ❖ By providing a stable and predictable business environment, a revised BIT can reassure foreign investors, encouraging them to invest in India.
- ❖ Increased foreign investments, in turn, drive economic development, create jobs, and enhance India's global trade standing.
- ❖ Moreover, updating the BIT ensures that India's investment policies remain competitive and in line with international best practices.
- ❖ BITs should capture India's national interest, particularly regarding regulatory powers, and that BITs should be negotiated independently rather than as part of Free Trade Agreements (FTAs).

## US-CHINA TRADE WAR 2.0

**Context:** The ongoing trade war between the United States and China has caused significant global economic turbulence, influencing everything from tariffs on goods to the financial markets and international relations.

### What is a Trade War?

- ❖ A trade war occurs when nations impose tariffs or trade barriers against each other in retaliation for perceived economic harm or unfair trade practices.
- ❖ It disrupts global supply chains, increases production costs, and impacts economic growth worldwide.

### Background

- ❖ The US-China trade war began in 2018 when the US, under President Donald Trump, accused China of unfair trade practices.
- ❖ The US imposed tariffs on Chinese goods, leading to countermeasures from China. This escalation affected trade worth over \$450 billion.
  - ✓ India also got caught in the US-China trade war, facing tariffs on steel and aluminum exports and losing its Generalized System of Preferences (GSP) status in 2019.
- ❖ In February 2025, President Trump reintroduced a 10% tariff on all Chinese imports, prompting China to retaliate with its own set of tariffs.
  - ✓ Trump's reciprocal tariff policy is set to take effect from April 2.
  - ✓ Trump's policy aims to balance trade by imposing tariffs on countries that impose high tariffs on US goods.
  - ✓ The policy is designed to reduce the US trade deficit and generate tariff revenue.

### Global impact of Trade War

- ❖ **Stock Market Volatility:** Trade wars create uncertainty, leading to fluctuating stock prices. Investors react sharply to tariff announcements, impacting market stability worldwide.
- ❖ **Supply Chain Disruptions:** Tariffs increase production costs, forcing companies to rethink supply chains. Businesses look for alternative suppliers, leading to relocation of manufacturing hubs.
- ❖ **Currency Fluctuations:** As investors seek safer assets, emerging market currencies often depreciate, increasing import costs and inflationary pressures in developing economies.
- ❖ **Commodity Price Swings:** Trade wars can disrupt global demand for raw materials like oil, metals, and agricultural products, leading to price instability.
- ❖ **Shifts in Trade Alliances:** Countries seek new trading partners to mitigate tariff impacts. Regional trade agreements and economic blocs often gain prominence during such periods.

### Negative Impact on India

- ❖ **Electronics and Gadgets:** Indian manufacturers depend on Chinese components for smartphones, laptops, and appliances. Disruptions in supply chains may lead to higher prices and shortages.
- ❖ **Pharmaceuticals:** Around 70% of India's raw materials (APIs) for medicines come from China. Any delay or price hike in these imports will raise the cost of essential medicines.
- ❖ **Automobile Industry:** India's auto sector relies on Chinese spare parts. Trade disruptions could slow production, increase costs, and extend delivery timelines.
- ❖ **Stock Market and Currency:** During the last trade war, foreign investors withdrew ₹33,000 crore from Indian markets, and the rupee depreciated by 9.5%, making imports costlier.

### Positive Impact on India

- ❖ **Rise in Exports:** Indian exporters gained from the trade diversion as US buyers looked for alternatives to Chinese goods. Sectors like textiles, chemicals, and electronics saw increased demand.
- ❖ **Boost to Indian IT Sector:** US companies, reducing reliance on Chinese tech, outsourced more work to Indian firms, benefiting the IT industry.
- ❖ **Agricultural Exports:** India took advantage of China reducing US agricultural imports in 2018 by increasing soybean and other crop exports.

### Way Ahead

- ❖ **Geopolitical Strategy:** India must navigate the US-China trade tensions carefully while securing its own economic interests through diplomacy and trade partnerships.
- ❖ **Diversifying Supply Chains:** Reducing reliance on China by strengthening domestic manufacturing under initiatives like 'Make in India' and boosting alternative supplier networks.
- ❖ **Strengthening Trade Agreements:** India should negotiate favorable trade deals with the US, ASEAN, and EU to capitalize on shifting trade dynamics.

### Concluding Remarks

- ❖ Trade wars might seem like distant problems involving big governments, but their effects trickle down to everyday life.
- ❖ The global economy is more connected than ever. When two giants like the U.S. and China clash, the rest of the world, especially countries like India, feels the impact.
- ❖ While some sectors might find opportunities, overall uncertainty tends to slow down growth and affect livelihoods.
- ❖ The US is India's largest trading partner, so India must accommodate US interests to maintain a good relationship.

## INDIA-CHINA LOOK FORWARD TO STABILIZE TIES

**Context:** The Indian delegation discussed cross-border cooperation with Chinese officials during the Working Mechanism for Consultation and Coordination (WMCC) on border affairs.

### Key Highlights

- ❖ The meeting was part of efforts by the two sides to normalise bilateral relations.
- ❖ It also came in the wake of Prime Minister Narendra Modi's recent remarks about India-China cooperation being essential for global stability and prosperity.
- ❖ India and China explored ways to rebuild ties, focusing on people-to-people exchanges, including resumption of direct flights and Kailash Manasarovar Yatra.
- ❖ The two sides discussed resuming dialogue in a "step-by-step" manner to stabilize relations.

### India-China Relations (2025 marks the 75 Years of Ties)

- ❖ **Panchsheel Agreement:**
- ❖ Signed in 1954 which emphasized the principles of peaceful coexistence, mutual respect for sovereignty, and non-interference in each other's internal affairs, forming the foundation of India-China diplomatic relations.

### Historical Tensions:

- ❖ Strained since the 1962 Sino-Indian war, deepened by recent clashes and mistrust.
- ❖ India restricted Chinese investments, banned Chinese apps (e.g., TikTok), and halted flights to China.
- ❖ **Trade Relations:** China overtook the U.S. in 2024 as India's largest trading partner, with over \$100 billion in imports. Despite tensions, economic ties continue to grow.

- ❖ **Ongoing Mechanisms:** Despite tensions, mechanisms like the Special Representatives (SR) and Working Mechanism for Consultation and Coordination (WMCC) have been in place to address the boundary issue.

### Recent Developments:

- ❖ **2024 Disengagement:** India and China announced successful disengagement in eastern Ladakh.

### Key areas of concern in India-China Relations

- ❖ **Ongoing Border Tensions:**
  - ❖ The unresolved border dispute spans over 2,000 miles, marked by frequent clashes.
  - ❖ Incidents in Doklam (2017), Galwan Valley (2020), and northeastern states (Sikkim, Arunachal Pradesh).
- ❖ **Military Infrastructure:** Both countries have heavily fortified the border with roads, railways, and airstrips for rapid troop mobilization.
- ❖ **Belt and Road Initiative (BRI):** India has expressed reservations about China's Belt and Road Initiative, especially regarding the China-Pakistan Economic Corridor (CPEC), which passes through territory of India.
- ❖ **Trade imbalance:** While politically desirable, reducing trade dependence is complicated by China's economic influence and India's need for foreign investment.

### China's growing presence in the Indian Ocean Region:

- ❖ **Sri Lanka:** China's presence at Hambantota Port and investments in an oil refinery raise concerns in India.
- ❖ **Nepal:** China's investments in infrastructure (e.g., Pokhara airport) challenge India's strategic position.
- ❖ **Bangladesh:** China's growing influence, including loan agreements, threatens India's regional influence.
- ❖ **Myanmar:** China's deepening ties with Myanmar's junta, including the China-Myanmar Economic Corridor, strengthen its presence in India's backyard.

### India's Efforts to Address these concerns

- ❖ **India's Defense Partnerships:** Strengthened ties with France, Germany, Spain, and expanded naval alliances in Southeast Asia.
- ❖ **Quadrilateral Security Dialogue (Quad):** India's shift towards the U.S. and its allies to counter China's growing influence.
- ❖ **Maritime Security:** India has prioritized maritime security, expanding its naval capabilities and strengthening defense ties with the U.S. and Japan.
- ❖ **Countering the Belt and Road Initiative (BRI):** India joined alternative infrastructure projects such as the Global Infrastructure Facility and India-Middle East-Europe Economic Corridor to counter China's BRI.
- ❖ **Trade Relations:** India seeks to reduce reliance on Chinese goods, especially in electronics and renewable energy.

### Way Ahead

- ❖ **Addressing the Border Issue:** Resolving boundary disputes remains critical. Continued efforts through military and diplomatic negotiations—such as recent developments regarding Depsang and Demchok along the Line of Actual Control (LAC)—are essential to ensure stability and prevent future escalations.
- ❖ **Diplomatic Engagements:** Sustaining open and constructive dialogue is key. India should strengthen bilateral communication mechanisms and actively engage through regional and



multilateral platforms such as BRICS, Shanghai Cooperation Organisation (SCO), and others to foster mutual understanding and strategic stability.

- ❖ **Streamlining Unbanked Section:** Awareness should be provided related to the importance of bank accounts in rural and tribal areas, financial literacy, mobile banking etc.
- ❖ **Women:** Pre- and post-pregnancy care, healthcare, education, childcare, skill-development, opportunities for financial improvement etc.

### Need for Inclusive Development in India

- ❖ **Addressing Inequality:** India has significant disparities in income, education, healthcare, and living standards, particularly between urban and rural areas, and among different social groups.
- ❖ **Empowering Marginalized Communities:** Large sections of society, including tribal communities, women, and the differently-abled, remain excluded from mainstream development and opportunities.
- ❖ **Promoting Social Justice:** Inclusive development ensures that every citizen, regardless of their background, has access to the benefits of growth, promoting fairness and reducing social tensions.
- ❖ **Economic Growth:** India can unlock the full potential of its population, leading to more sustainable and equitable economic growth.
- ❖ **Global Competitiveness:** A more inclusive society leads to a more productive, skilled, and innovative workforce, enhancing India's global competitiveness.
- ❖ **Sustainable Development:** It aligns with the goal of long-term, sustainable growth, considering the needs of all sections of society, including future generations.

### Constitutional Framework for Inclusive Development

#### Fundamental Rights (Part III):

- ❖ **Equality Before Law (Article 14):** Guarantees equality for all citizens.
- ❖ **Prohibition of Discrimination (Article 15):** Ensures no discrimination on grounds of religion, race, caste, sex, or place of birth.
- ❖ **Equality of Opportunity (Article 16):** Ensures equal opportunities in public employment.
- ❖ **Right to Education (Article 21A):** Guarantees free education for children aged 6 to 14.
- ❖ **Protection of Minorities (Articles 29 & 30):** Safeguards the cultural and educational rights of minorities.

#### Directive Principles of State Policy (Part IV):

- ❖ **Social Justice (Article 38):** Promotes the welfare of the people, focusing on justice and reducing inequalities.
- ❖ **Promotion of Weaker Sections (Article 46):** Aims to protect and promote the interests of SCs, STs, and OBCs.
- ❖ **Reservation and Affirmative Action:** Articles 15(4) and 16(4) allow for affirmative action, such as reservations in education and employment for SCs, STs, and OBCs.
- ❖ **Panchayats and Local Governance (Part IX):** Article 243N strengthens local self-governance, ensuring the participation of marginalized communities.
- ❖ **Legal Protection for Vulnerable Groups:** Laws like the Protection of Civil Rights Act, 1955 and the SC/ST (Prevention of Atrocities) Act, 1989 protect disadvantaged communities from discrimination and violence.
- ❖ **Judicial Oversight:** The Supreme Court and High Courts ensure that policies align with the constitutional values of equality and justice.

### Conclusion

- ❖ There are many Government initiatives focused on providing opportunities, resources, and social security for marginalized communities, ensuring broad-based growth and well-being.

## US DEFENSE TIES — INDIA NEEDS TO KEEP ITS EYES OPEN

**Context:** The evolving defence partnership between India and the United States has brought significant advancements in technology sharing, joint exercises, and defence procurement, it raises critical questions about India's strategic autonomy.

### India-US Defense Ties

#### Cold War Period (1947-1991):

- ❖ **Early Engagement (1947-1962):** Initially, India and the US maintained diplomatic ties with limited military cooperation.
- ❖ **Sino-Indian War (1962):** The first major defense cooperation, though short-lived, occurred when the US and the UK provided military aid to India during its border conflict with China.
- ❖ **US-Pakistan Alliance (1954-1971):** Mutual Defense Assistance Agreement (1954) and SEATO (1954) and CENTO (1955), which provided Pakistan with advanced American weaponry.
- ❖ **Bangladesh Liberation War and Indo-Soviet Treaty (1971):** India, in response to US's support to Pakistan, signed the Indo-Soviet Treaty of Peace, Friendship, and Cooperation (1971), further distancing itself from the US.
- ❖ **Post-1974 Relations and Nuclear Sanctions:** – India's nuclear test in 1974 (Smiling Buddha) led to US sanctions and a reduction in defense cooperation.
- ❖ The US, under its non-proliferation policy, imposed restrictions on India's access to advanced military technology.
- ❖ India's Non-alignment Policy and Strategic Partnership with the Soviet Union limited defense engagement with the US.

#### Post-Cold War Period (1991-2000):

- ❖ **Economic Reforms and Strategic Shift (1991):** India's economic liberalization in 1991 brought both countries closer.
- ❖ The US recognized India's growing strategic importance in Asia.
- ❖ **Defense Cooperation Initiated (1995):** – The signing of the Agreed Minute on Defense Relations in 1995 marked the beginning of formal military ties.
- ❖ It enabled military-to-military contacts and high-level defense dialogues.
- ❖ **Nuclear Tests and Sanctions (1998):** India's nuclear tests in 1998 (Pokhran-II) resulted in renewed US sanctions under the Nuclear Proliferation Prevention Act.
- ❖ However, diplomatic efforts led to a gradual lifting of these restrictions by 2001.

#### Post-9/11 Era (2001-2010):

- ❖ **Defense Policy Group (DPG) Revived (2001):** Both nations resumed high-level defense talks and intelligence-sharing post-9/11.
- ❖ **New Framework for US-India Defense Relationship (2005):** It laid the foundation for deeper military cooperation, joint exercises, and technology transfers.
- ❖ **US-India Civil Nuclear Deal (2008):** The landmark 123 Agreement removed nuclear-related sanctions and enhanced strategic trust between both nations.
- ❖ **Modern Era (2010-Present):** Comprehensive Defense Partnership
- ❖ **Defense Trade and Military Procurement:** India is one of the largest importers of US defense equipment, purchasing advanced military hardware such as:
  - ❖ C-17 Globemaster III and C-130J Super Hercules transport aircraft;
  - ❖ Apache AH-64E and Chinook CH-47 helicopters;
  - ❖ MH-60R Seahawk helicopters for the Indian Navy;

- ❖ P-8I Poseidon maritime surveillance aircraft;
- ❖ Predator MQ-9B drones for surveillance and reconnaissance;
- ❖ US designated India as a Major Defense Partner (MDP) in 2016, a status that facilitates defense trade and technology transfers at levels comparable to America's closest allies.
- ❖ **Strategic Agreements and Logistics Cooperation:** India and the US have signed several foundational agreements, that have significantly boosted operational coordination, especially in the Indo-Pacific, like:
  - ❖ **Logistics Exchange Memorandum of Agreement (LEMOA)** – 2016: Allows the armed forces of both countries to use each other's bases for refueling and resupply.
  - ❖ **Communications Compatibility and Security Agreement (COMCASA)** – 2018: Enables secure communications between their military platforms.
  - ❖ **Basic Exchange and Cooperation Agreement (BECA)** – 2020: Facilitates sharing of geospatial intelligence and satellite data for military use.
- ❖ **Joint Military Exercises:** India and the US regularly conduct joint military exercises to enhance interoperability and readiness. Some notable exercises include:
  - ❖ **Malabar (Naval Exercise):** Conducted with Japan and Australia as part of the Quad alliance.
  - ❖ **Yudh Abhyas (Army Exercise):** Enhances land warfare coordination.
  - ❖ **Vajra Prahar (Special Forces Exercise):** Strengthens counterterrorism capabilities.
  - ❖ **Cope India (Air Force Exercise):** Focuses on aerial combat and air superiority.
- ❖ **Indo-Pacific Strategy and QUAD Cooperation:** With China's growing assertiveness in the South China Sea and Indian Ocean, India & US have aligned their strategic interests to ensure a free, open, and rules-based Indo-Pacific.
- ❖ They are active members of the Quadrilateral Security Dialogue (QUAD), along with Japan and Australia, aiming to promote maritime security, infrastructure development, and economic resilience in the region.
- ❖ **Technology Transfer and Defense Innovation:** The India-US Defense Technology and Trade Initiative (DTTI) facilitates co-development and co-production of advanced defense technologies. Some of the key areas of collaboration include:
  - ❖ **Critical and Emerging Technology (iCET)**
    - ❖ Jet Engine Technology
    - ❖ Unmanned Aerial Vehicles (UAVs)
    - ❖ AI in Defense
    - ❖ Cybersecurity and Space-based Systems

### Challenges in India-US Defense Relations

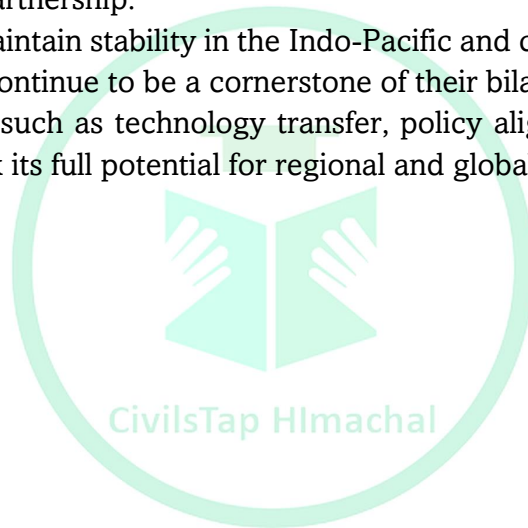
- ❖ **India's Strategic Autonomy:** India seeks to maintain its non-aligned stance, balancing relations with the US while continuing defense ties with Russia and France.
- ❖ **Unpredictability in US Policy:** The transactional nature of US foreign policy, influenced by changing administrations, adds an element of unpredictability.
- ❖ India must ensure that its defence strategy is not overly reliant on a single partner.
- ❖ **Technology Transfer Restrictions:** The US remains cautious in sharing sensitive defense technology.
- ❖ **Indigenous Defence Capabilities:** While the partnership has brought advanced technologies, it has not significantly boosted India's indigenous defence manufacturing.
- ❖ **CAATSA and Sanctions Concerns:** India's purchase of Russian S-400 missile defense systems risks US sanctions under the CAATSA law.
- ❖ **Bureaucratic Hurdles:** Complex procurement processes and policy mismatches slow down defense cooperation.

## Way Forward

- ❖ **Diversification of Partnerships:** India should continue to engage with multiple defence partners to avoid over-dependence on any single country.
- ❖ **Focus on Self-Reliance:** Initiatives like 'Aatmanirbhar Bharat' must be prioritized to build a robust domestic defence industry.
- ❖ **Balanced Diplomacy:** While deepening ties with the U.S., India must also maintain strong relationships with other global powers to ensure a balanced and independent foreign policy.

## Conclusion

- ❖ India-US defense ties have grown stronger over the past two decades, evolving into a comprehensive security partnership.
- ❖ As both nations seek to maintain stability in the Indo-Pacific and counter emerging security threats, defense cooperation will continue to be a cornerstone of their bilateral relationship.
- ❖ By addressing challenges such as technology transfer, policy alignment, and strategic autonomy, the partnership can unlock its full potential for regional and global security





## GENERAL STUDIES 3.

### ECONOMY

#### INDIA NEEDS TARIFF CUTS, REFORMS TO BOOST INVESTMENTS: WB

**Context:** As per the World Bank's report (India Country Economic Memorandum), India will need to accelerate reforms to achieve an average annual growth rate of 7.8% for becoming a high-income economy by 2047.

##### About

- ❖ From 2000 in real terms, the economy has grown nearly four-fold, and GDP per capita has almost tripled.
- ❖ India grew faster than the rest of the world, its share in the global economy has doubled from 1.6% in 2000 to 3.4% in 2023.
- ❖ India has become the world's fifth largest economy.

##### Key Points from the India Country Economic Memorandum:

- ❖ **Target of High-Income Status by 2047:** Achievable with ambitious reforms, building on India's past growth (6.3% from 2000-2024).
- ❖ **Global Examples:** Countries like Chile, Korea, and Poland succeeded in transitioning to high-income by integrating deeper into the global economy.

##### Key Growth Scenarios for 2047:

- ❖ Achieve faster, inclusive growth across states.
- ❖ Increase total investment from 33.5% to 40% of GDP by 2035.
- ❖ Raise labor force participation from 56.4% to above 65%.
  - ✓ Overall labour force participation rates have remained low in India compared to countries like Vietnam (73%) and Philippines (60%).
- ❖ Accelerate productivity growth.
- ❖ India's GNI (gross national income) per capita must increase nearly 8 times, requiring accelerated growth.
- ❖ Demographic Dividend: Invest in human capital, create better jobs, and raise female labor force participation from 35.6% to 50% by 2047.

##### Critical Areas for Policy Action:

- ❖ **Increase Investment:** Strengthen financial sector regulations, ease MSME credit access, and simplify FDI policies.
- ❖ **Create More Jobs:** Target job-rich sectors (e.g., agro-processing, hospitality), invest in skills, and foster an innovation-driven economy.
- ❖ **Promote Structural Transformation:** Shift labor and resources to higher productivity sectors like manufacturing and services, improve infrastructure, and streamline labor market regulations.
- ❖ **Enable Faster State Growth:** Tailor policies for less developed states (focus on fundamentals) and more developed states (focus on advanced reforms and GVC participation).
- ❖ **Federal Support:** Incentivize low-income states with federal programs like the Urban Challenge Fund to improve public expenditure, efficiency and accelerate growth.

## PROGRESS OF DIRECT BENEFIT TRANSFERS

**Context:** Finance Minister Nirmala Sitharaman announced that 1,100 out of 1,200 government schemes are now under Direct Benefit Transfer (DBT), ensuring direct transfers to beneficiaries' bank accounts.

### Need and Background of Direct Benefit Transfers

- ❖ After independence, India sought to overcome the constraints inherited from colonial rule and emerge as a global power, emphasizing centralized planning and public welfare.
- ❖ Despite the emphasis on public provisioning, there were widespread issues in accessing welfare benefits due to financial leakages, delays, and inefficiencies.

### Direct Benefit Transfer (DBT): Timeline

- ❖ Direct Benefit Transfer deals with transfer of benefits to the marginalized and vulnerable sections of society.
- ❖ In 2014, under Prime Minister Modi's leadership, the Direct Benefit Transfer (DBT) mission was launched, leveraging digital technologies to improve public service delivery.
- ❖ In 2014, Pradhan Mantri Jan Dhan Yojna (PMJDY) was launched to address financial inclusion.
- ❖ JAM Trinity : The success of PMJDY paved the way for the creation of the world's biggest targeted payments framework.

### Major Central schemes seeded with DBT

- ❖ **PM Kisan Samman Nidhi (PM-KISAN):** It is a Central Sector Direct Benefit Transfer (DBT) Scheme, under which, financial assistance of Rs.6000/- per annum is provided to all landholding farmer families across the country, subject to certain exclusion criteria.
- ❖ **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS):** It aims to enhance livelihood security for rural households.
  - ✓ Its wages are credited directly to the bank/post office accounts of Mahatma Gandhi NREGS beneficiaries by the Central Government through DBT.
- ❖ **Pradhan Mantri Matru Vandana Yojna (PMMVY):** It aims to encourage improved health-seeking behavior among Pregnant Women and Lactating Mothers (PW&LM).
  - ✓ It provides benefits to beneficiaries through Direct Benefit Transfer (DBT).
- ❖ **Pradhan Mantri Awaas Yojana- Gramin (PMAY-G):** The PMAY-G aims at providing 2.95 crore houses to the eligible rural population in the country so as to achieve the objective of "Housing for All".

### DBT's Impact

- ❖ DBT schemes expanded from 28 in 2013-14 to 323 in 2024-25, with funds transferred growing nearly 1000 times, from 7,400 crores to 7 lakh crores.
- ❖ DBT has saved around 3.5 lakh crores by reducing leakages and inefficiencies.
- ❖ DBT eliminated fake or duplicate beneficiaries, using Aadhar data, with schemes like PAHAL, MGNREGS, and PDS removing over 9.2 crore ineligible beneficiaries.
- ❖ DBT ensured timely transfer of benefits, improving the delivery of scholarships, pensions, and social assistance, while eliminating delays and reducing dependency on government offices.
- ❖ DBT Increased transparency and accountability and it allowed the redesign of welfare programs such as Swachh Bharat Mission (SBM), PM-JAY (health insurance), and PM-KISAN (farmers' cash transfers).

## International Recognition

- ❖ DBT has been praised by international organizations like the World Bank and IMF for its efficiency, reducing corruption, and broadening the reach of welfare schemes.

## Future Potential

- ❖ The success of DBT can be leveraged to introduce more welfare schemes, and its efficiency can support innovative policies addressing broader well-being, helping India move towards becoming a developed nation by 2047.

## IMPACT OF GeM ON INDIA'S ECONOMY

**Context:** The Government e-Marketplace (GeM) has revolutionized public procurement in India benefiting government buyers and small businesses alike.

### What is GeM?

- ❖ Government e-Marketplace (GeM) is an online platform for public procurement in India. It was launched in 2016 by the Ministry of Commerce and Industry to enhance transparency, efficiency, and speed in government procurement.
- ❖ Objective: To create an open and transparent procurement platform for government buyers.

### Core Principles of GeM



### Key Features of GeM

- ❖ SWAYATT is the portal's commitment to enhance ease of doing business and establish direct market linkages to annual public procurement for startups, women entrepreneurs, Micro & Small Enterprises (MSEs), Self Help Groups (SHGs) and youth.
- ❖ Startup Runway 2.0 is an opportunity for Startups to showcase their innovative products and services to Government buyers and engage in public procurement.
  - ✓ GeM has created a dedicated marketplace category for all Startups to list their products and services, irrespective of their DPIIT-certification.
- ❖ Womaniya initiative seeks to showcase products made by women entrepreneurs and women self-help groups [WSHGs].
- ❖ GeM is collaborating with various stakeholders from the Micro, Small and Medium Enterprises [MSME] ecosystem with special focus on entrepreneurs from the Scheduled Caste/ Schedule Tribes [SC/ ST].
- ❖ The SARAS Collection is a pristine handcrafted collection of handicrafts, handloom textiles, office décor, furnishings, accessories, event souvenirs, personal hygiene and care products from top of the line SHGs in India.

## Impact of GeM

- ❖ **Cost Savings:** Competitive pricing has resulted in lower procurement costs for the government.
- ❖ **Wider Market Access:** Vendors from across the country, including rural areas, can register and sell their products.
- ❖ **Boost to MSMEs & Startups:** Nearly 50% of the orders on GeM are from MSMEs, promoting small businesses.

## Concluding remarks

- ❖ The platform's strategic initiatives have significantly contributed to the ease of doing business and enhanced participation in government procurement.
- ❖ As GeM continues to evolve, it remains committed to its vision of creating a sustainable, open, and competitive marketplace, driving India's progress towards inclusive and transparent public procurement practices.

## CENTRING CARE IN INDIA'S ECONOMIC POLICY

**Context:** In recent years, the importance of care work has gained recognition globally, yet it remains underappreciated and undervalued in many economic policies.

In India, the need to center care in economic policy is crucial for achieving gender equality, improving social welfare, and fostering sustainable development.

### About the Care Economy (Purple Economy)

- ❖ It encompasses all the activities related to caregiving, both paid and unpaid.
  - ✓ Paid Care Work: Includes nurses, domestic workers, teachers.
  - ✓ Unpaid Care Work: Cooking, cleaning, caregiving, often undervalued.
- ❖ The World Economic Forum's report on the 'Future of Care Economy' highlights three perspectives:
  - ✓ As an engine for increasing economic productivity.
  - ✓ As investors and employers (business perspective).
  - ✓ Focusing on gender equality and disability inclusion (human rights perspective).
- ❖ **Care Diamond Model:** Involves State, markets, households, and communities in care provision.

### Invisible Contribution of Care Work

- ❖ Globally, unpaid care work is disproportionately carried out by women.
- ❖ In India, women spend nearly 312 minutes per day on unpaid domestic and care work, compared to 52 minutes by men (Time Use Survey, 2019).
- ❖ It restricts women's economic participation and contributes to India's declining female labor force participation rate, which was only 24% in 2022 (World Bank).

### Need for a Care Economy in India

- ❖ **Changing Demographics:** A recent study from the United Nations Population Fund finds that as of 2022, about 25% of India's population is between the ages of 0-14 years, and 10.5% is above 60 years, i.e. about 360 million children and 147 million elderly persons require care.
  - ✓ Over the next few decades, not only will the population grow, but there will also be a demographic transition.
  - ✓ By 2050, the proportion of elderly persons is expected to increase to 20.8% of the population, i.e. about 347 million persons.
  - ✓ Moreover, even as the proportion of children reduces marginally to 18%, the number of children will still be close to 300 million.



- ❖ **Ageing Population:** As life expectancy increases and birth rates decline, the proportion of elderly individuals in our society is rising. This demographic shift necessitates more attention to elderly care.
- ❖ **Gender Inequality:** Women's active participation in the economy is crucial for reducing gender inequality. However, India faces a low female labour force participation rate (FLFPR).
  - ✓ According to the Economic Survey 2023-24, India's FLFPR was 37% (2022-23), significantly below the world average of 47.8%. One key reason behind this disparity is the disproportionate burden of care that women bear within families.
- ❖ **Multiple Care Burden:** Women in India shoulder multiple care responsibilities, ranging from childcare to looking after other household members—such as the elderly, sick, and disabled.
  - ✓ Additionally, they perform substantial unpaid domestic work. In fact, women aged 15-64 years spend about three times more time daily on unpaid domestic work than men.
  - ✓ It often prevents women from participating fully in the workforce.
- ❖ **Childcare as a Focus:** To increase women's participation in the labour force, attention is now turning toward childcare.
  - ✓ Some State governments have been working on building support services through the existing Anganwadi network.
  - ✓ In the 2024-25 Budget, there was a 3% increase in the Ministry of Women and Child Development's budget for the integrated child care and nutrition program (Saksham Anganwadi and Poshan 2.0 scheme).
- ❖ **Beyond Childcare:** While childcare is crucial, we must recognize that women are primary caregivers across the entire life course of household members. Therefore, their care responsibilities need to shift elsewhere.

### Economic Benefits of a Care-Centered Policy

- ❖ **Higher Female Workforce Participation:** Expanding care services, such as affordable daycare centers and elderly care facilities, would allow more women to enter the workforce, thereby increasing overall economic productivity.
- ❖ **Job Creation:** Investing in the care economy can generate millions of jobs, particularly for women.
  - ✓ The ILO estimates that investment in care services could create 11 million new jobs in India by 2030.
- ❖ **Improved Health and Well-being:** A strong care infrastructure ensures better early childhood development, elderly care, and mental well-being, leading to a healthier and more productive population.
- ❖ **Reduction in Gender Inequality:** Recognizing and redistributing care work can help bridge the gender gap in wages and economic opportunities.

### Challenges in Integrating Care into Economic Policy

- ❖ **Financial and Budgetary Constraints:** Public spending on care services, including child care and elderly care, remains low compared to other social sectors.
- ❖ **Lack of Data and Policy Recognition:** Economic indicators like GDP do not account for unpaid care work, making it difficult to push for policy changes.
- ❖ **Deep-seated Gender Norms:** The cultural expectation that women should be the primary caregivers limits policy efforts to redistribute care responsibilities.
- ❖ **Fragmented Healthcare and Social Services:** Lack of coordination among different sectors (e.g., health, welfare, labor) leads to inefficiencies.
  - ✓ Different funding sources and priorities create policy misalignment.
  - ✓ Healthcare and social care often fall under different ministries, leading to jurisdictional conflicts.

- ❖ **Technological and Data Sharing Barriers:** Interoperability between healthcare IT systems is a challenge.
  - ✓ Privacy concerns and lack of standardized data policies slow down integration.

### Policy Recommendations for a Care-Centric Economy

- ❖ **Increase Public Investment in Care Services:** The government should expand public child care, elderly care, and health services to reduce the burden on families, particularly women.
- ❖ **Recognize and Measure Unpaid Care Work:** Incorporating the economic value of unpaid care work into national accounts and economic indicators.
  - ✓ It can be achieved through time-use surveys and satellite accounts that measure the contribution of care work to the economy.
- ❖ **Strengthen Legal Protections for Domestic and Care Workers:** Ensuring fair wages, social security, and labor rights for care workers will improve working conditions in the sector.
- ❖ **Promote Shared Responsibilities:** Encouraging equal participation of men in household and care work through public awareness campaigns can help shift gender norms.
- ❖ **Integrate Care Economy into Economic Planning:** Future budgets and economic policies must allocate funds specifically for care-related infrastructure and services.
- ❖ **Encouraging Shared Responsibility:** Promoting policies and cultural shifts that encourage men to take on a more equitable share of care responsibilities.
  - ✓ It includes implementing paternity leave policies, conducting awareness campaigns, and challenging traditional gender norms.
- ❖ **Promoting Gender-Responsive Budgeting:** Allocating resources to address gender disparities in care work through targeted programs and initiatives.
  - ✓ It includes increasing funding for social protection schemes, such as maternity benefits, paid family leave, and pensions for caregivers.

### Conclusion

- ❖ Centering care in India's economic policy is essential for achieving gender equality, improving social welfare, and fostering sustainable development.
- ❖ By recognizing the value of care work and implementing supportive policies, India can create a more inclusive and equitable society.
- ❖ As the country continues to grow and develop, it is crucial to ensure that care work is no longer invisible but is acknowledged and valued as a fundamental pillar of the economy.

## POVERTY ESTIMATION IN INDIA

**Context:** According to a study by economists Surjit S Bhalla and Karan Bhasin, India has witnessed a sharp reduction in poverty and inequality over the past decade.

### Major Highlights

- ❖ The study is based on government household expenditure data from 2022-23 and 2023-24.
- ❖ **Poverty Reduction:** India's poverty rate at the \$3.65 PPP line dropped from 52% in 2011-12 to 15.1% in 2023-24. Extreme poverty at the \$1.90 PPP line is now below 1%.
- ❖ **Consumption Growth:** Largest improvements in consumption seen in the bottom three deciles of the population, showing record increases.
- ❖ **Declining Inequality:** Consumption inequality has decreased, with the Gini coefficient dropping from 37.5 in 2011-12 to 29.1 in 2023-24.
- ❖ **Global Context:** India's reduction in inequality is exceptional for a large, fast-growing economy, with only Bhutan and the Dominican Republic having better records (with smaller populations).

- ❖ **New Poverty Line Needed:** Current poverty lines are outdated, suggesting a new benchmark based on the bottom 33rd percentile or relative poverty measures like Europe's.
- ✓ NITI Aayog has yet to revise official poverty estimates, last set by the Tendulkar and Rangarajan committees.

### Poverty Line Estimation in India

- ❖ **Tendulkar committee (2009):** Poverty line in the Suresh Tendulkar methodology was expenditure of ₹33 a day in urban areas and ₹27 a day in rural areas.
- ✓ The national poverty line for 2011-12 was estimated at Rs. 816 per capita per month for rural areas and Rs. 1,000 per capita per month for urban areas.
- ❖ **Rangarajan committee(2014):** In the Rangarajan methodology, it was ₹47 a day in urban areas and ₹30 a day in rural areas.
- ✓ The government did not take a call on the report of the Rangarajan Committee, therefore, poverty is measured using the Tendulkar poverty line.
- ❖ **International Poverty Line:** The World Bank defines a person as extremely poor if a person is living on less than \$2.15 per day, which is adjusted for inflation as well as price differences between countries.

### Concerns with India's Calculation of Poverty Line

- ❖ **Inadequate Thresholds:** The updated poverty line of Rs 965 (urban) and Rs 781 (rural) per month is seen as too low to reflect basic living standards, leading to criticism for not accurately capturing poverty.
- ❖ **Outdated Methodology:** It focuses on calorie intake and fails to reflect modern consumption patterns and needs.
- ❖ **Limited Consideration of Non-Food Needs:** The poverty line doesn't fully account for rising private expenditures in health, education, and other essential services.
- ❖ **State-Level Variations:** The same poverty line is applied uniformly across states despite significant regional cost-of-living differences, which distorts the accuracy of poverty assessments.
- ❖ **Lack of Regular Updates:** The official poverty line hasn't been updated in alignment with newer economic realities, such as inflation or changes in consumption patterns, making it less relevant.

### Way Ahead

- ❖ Periodically revise the poverty line to reflect current economic conditions, inflation, and changing consumption patterns.
- ❖ Broaden Criteria: Incorporate non-food factors like health, education, and housing into the poverty line calculation to better reflect the true cost of living.
- ❖ Regional Adjustments: Implement region-specific poverty lines to account for variations in cost of living across states and regions.
- ❖ Adopt Modern Methodologies: Move away from outdated calorie-based measures and adopt more holistic indicators, such as nutritional needs and overall well-being.

## INDIA EMERGES AS WORLD'S 3RD LARGEST BIOFUEL PRODUCER

**Context:** According to the Minister of Petroleum and Natural Gas, India has emerged as the world's third-largest biofuel producer.

India has achieved 19.6% ethanol blending in petrol as of January and is on track to reach 20%, five years ahead of its original 2030 target.

### What are Biofuels?

- ❖ Biofuels are alternative fuels made from plant and plant-derived resources.

- ✓ **Example:** Bioethanol, Biodiesel, Green diesel, Biogas etc.
- ❖ **Generations of Biofuels:** Biofuels can be categorized into different generations based on the feedstocks used and the processes involved in their production.
  - ✓ **First Generation:** They are made from food crops like corn, sugarcane, wheat, and vegetable oils.
  - ✓ **Second Generation:** They are made from biomass extracted from agricultural waste or waste plant material like non-food feedstocks corn stover.
  - ✓ **Third Generation:** These are often derived from algae and other microorganisms.
  - ✓ **Fourth Generation:** They are made from genetically modified species crops. These include synthetic biology and microorganisms engineered to produce specific biofuels.

### National Policy on Biofuels, 2018

- ❖ The National Policy on Biofuels 2018 (amended in 2022) provides a framework for increasing the use of biofuels in India to enhance energy security.
  - ✓ It will allow more feedstocks for production of biofuels.
  - ✓ The Policy allows use of surplus food grains for production of ethanol for blending with petrol with the approval of National Biofuel Coordination Committee.
  - ✓ The policy will advance the ethanol blending target of 20% blending of ethanol in petrol to Ethanol Supply Year (ESY) 2025-26 from 2030.
  - ✓ It will promote the production of biofuels in the country, under the Make in India program, by units located in Special Economic Zones (SEZ)/ Export Oriented Units (EoUs).

### Significance of Biofuel Expansion

- ❖ **Economic Growth:** The initiative has also saved India approximately Rs. 85,000 crore in foreign exchange by reducing crude oil imports.
- ❖ **Environmental Benefits:** The shift towards ethanol-based fuels has led to a significant reduction in CO<sub>2</sub> emissions, which is equivalent to planting 175 million trees.
  - ✓ It promotes a circular economy by converting waste into energy.
- ❖ **Benefits for Farmers:** Ethanol production provides an alternative market for sugarcane, maize, and surplus food grains, boosting rural incomes.
  - ✓ It strengthens the sugar industry, making it less dependent on government subsidies.
  - ✓ During the Ethanol Supply Year 2023-24, Ethanol Blended Petrol (EBP) programme helped in payment of approximately Rs 23,100 crore to the farmers.

### Challenges in Biofuel Expansion

- ❖ **Feedstock Constraints:** Sugarcane-based ethanol is water-intensive, putting pressure on water resources.
  - ✓ Slow adoption of second-generation (2G) biofuels, as technology is still evolving and expensive.
- ❖ **Infrastructure Issues:** Limited ethanol blending infrastructure, such as dedicated pipelines and storage facilities.
  - ✓ Inadequate refineries and blending stations, leading to supply chain inefficiencies.
  - ✓ There are challenges in transporting ethanol, as it is highly flammable and requires separate logistics.

### Government Efforts for Biofuel Expansion

- ❖ Pradhan Mantri JI-VAN Yojana (Jaiv Indhan – Vatavaran Anukool fasal awashesh Nivaran Yojana): It promotes 2G ethanol production from agricultural waste and residues.
- ❖ GOBAR-Dhan Scheme (Galvanizing Organic Bio-Agro Resources Dhan): It promotes biogas and bio-CNG production from cattle dung and organic waste.



- ❖ **SATAT Scheme (Sustainable Alternative Towards Affordable Transportation):** It promotes Compressed Bio-Gas (CBG) production as a fuel alternative, targets the establishment of 5,000 CBG plants by 2025.

### Way Ahead

- ❖ There is a need to strengthen financial incentives for advanced biofuels like 2G, 3G.
- ❖ Expand biogas and bio-CNG adoption in rural and urban transport.
- ❖ Invest in biofuel R&D for cost reduction and efficiency improvement.

## FARM LENDING: RISE OF KISAN CREDIT CARD BAD LOANS

**Context:** Recent data reveals that bad loans under the Kisan Credit Card (KCC) scheme have surged by 42% over the past four years, highlighting the financial stress in the agricultural sector.

### Understanding Kisan Credit Card (KCC) Scheme (1998)

- ❖ **About:** It is designed to provide short-term credit to farmers for agricultural and allied activities, based on the recommendations of the R.V. Gupta Committee.
- ❖ **Features:**
  - ✓ Issued by commercial banks, cooperative banks, and regional rural banks.
  - ✓ Covers crop production needs (seeds, fertilizers, pesticides, etc.).
  - ✓ Includes working capital for allied activities like dairy, poultry, and fisheries.
  - ✓ Can be used for farm machinery, irrigation, and post-harvest expenses.
    - A KCC loan is classified as NPA if unpaid within three years of disbursal.
- ❖ **Working of KCC Scheme:**

### Current Trends in Agricultural NPAs

- ❖ According to data from the RBI, the outstanding NPAs in KCC accounts of scheduled commercial banks (excluding regional rural banks) increased from ₹68,547 crore at the end of March 2021 to ₹97,543 crore by December 2024.
- ❖ It underscores the growing challenges faced by farmers in repaying their loans.

### Major Causes of Rising NPAs in Agriculture

- ❖ **Unpredictable Weather and Climate Change:** Erratic rainfall, frequent droughts, floods, and changing weather patterns directly impact crop yields, making it difficult for farmers to repay loans.
  - ✓ With limited insurance coverage, crop failures lead to defaults on agricultural credit.
- ❖ **Low Farm Income and Market Volatility:** Despite government support, farmers often struggle with low productivity and unremunerative prices.
  - ✓ Market price fluctuations, lack of assured MSP for all crops, and inadequate procurement mechanisms contribute to financial distress.
- ❖ **Loan Waiver Schemes and Moral Hazard:** State and central governments frequently announce loan waivers as a relief measure, encouraging willful defaults.
  - ✓ Farmers often anticipate future waivers, leading to poor repayment discipline.
- ❖ **Inadequate Risk Management by Banks:** Banks are sanctioning loans without sound risk assessment.
- ❖ **Structural Weakness in Agricultural Finance:** Small and marginal farmers, who form 86% of India's farming community, have limited access to institutional credit.
  - ✓ Dependence on informal moneylenders results in debt traps and an inability to repay formal loans.
- ❖ **Delay in Crop Insurance Settlements:** Pradhan Mantri Fasal Bima Yojana (PMFBY) has faced delays in claim settlements, leaving farmers unable to repay loans.

## Implications of Rising Agricultural NPAs

- ❖ **Stress on Banking System:** High NPAs reduce the ability of banks to extend fresh loans, impacting overall agricultural credit growth.
  - ✓ RRBs and Cooperative Banks, which primarily cater to farmers, suffer from financial instability.
- ❖ **Increased Fiscal Burden:** The government often compensates banks for loan waivers, straining fiscal resources and diverting funds from productive rural investments.
- ❖ **Economic and Social Distress:** Indebtedness is a key reason behind farmer suicides, particularly in states like Maharashtra, Karnataka, and Punjab.
  - ✓ Rising NPAs lead to rural distress, impacting employment and food security.
- ❖ **Credit Crunch for Genuine Farmers:** Due to higher default rates, banks tighten credit norms, making it difficult for genuine, creditworthy farmers to access loans.

## Measures to Address Rising Agricultural NPAs

- ❖ **Strengthening Crop Insurance and Risk Mitigation:** Faster claim settlements under PMFBY and expansion of insurance coverage can reduce financial distress.
  - ✓ Promoting climate-resilient farming and crop diversification can mitigate weather-related risks.
- ❖ **Improving Credit Discipline:** Restricting loan waivers to genuinely distressed farmers and ensuring targeted relief can prevent willful defaults.
  - ✓ Encouraging timely repayment incentives, such as interest rate discounts, can improve repayment behavior.
- ❖ **Enhancing Institutional Credit Access:** Expanding Kisan Credit Card (KCC) coverage to all small and marginal farmers.
  - ✓ Strengthening Farmer Producer Organizations (FPOs) to ensure collective bargaining for better credit access.
  - ✓ Online application through banks' websites & Common Service Centers (CSCs).
  - ✓ Integration with PM-KISAN and Aadhar for easier verification.
- ❖ **Strengthening Bank Supervision and Credit Monitoring:** Implementing technology-driven loan tracking to identify early signs of distress.
  - ✓ Increasing financial literacy programs to educate farmers on loan management and risk mitigation.
- ❖ **Encouraging Diversification and Value-Addition:** Promoting agribusiness, food processing, and non-farm activities.
  - ✓ Strengthening supply chains and storage infrastructure to minimize post-harvest losses.

## INDIA NEEDS TO KEEP ITS DEFICIT TARGET FLEXIBLE

**Context:** As India aims to become a developed nation by 2047, it is crucial to adopt a more flexible approach to fiscal deficit targets to ensure long-term investments without compromising fiscal prudence.

### Understanding the Fiscal Deficit Target

- ❖ A fiscal deficit occurs when a government's total expenditure exceeds its total revenue, excluding borrowings.
- ❖ In India, the Fiscal Responsibility and Budget Management (FRBM) Act, 2003 initially set a fixed target for the fiscal deficit to ensure fiscal discipline.
- ❖ However, evolving macroeconomic conditions and economic shocks have led policymakers to consider a more flexible approach—termed the Flexible Deficit Target.
- ❖ It allows for adjusting fiscal deficit goals based on economic cycles, external shocks, and investment priorities.

## Key Components of Flexibility

- ❖ **Counter-Cyclical:** Allowing higher deficits during economic downturns and consolidation during high-growth periods.
- ❖ **Expenditure Prioritization:** Focusing on essential spending such as infrastructure and welfare while cutting non-urgent outlays.
- ❖ **Revenue Considerations:** Adapting targets based on tax collection efficiency, disinvestment proceeds, and other fiscal inflows.
- ❖ **Escape Clauses:** Built-in mechanisms to deviate from deficit targets during crises (e.g., pandemic, global shocks).

## Evolution of Flexible Deficit Targeting in India

- ❖ **FRBM Act and Amendments:**
  - ✓ **FRBM Act, 2003:** Mandated reducing the fiscal deficit to 3% of GDP.
  - ✓ **FRBM Review Committee (2017, N.K. Singh Panel):** Recommended a more flexible approach, with a 2.5% – 3% target and an escape clause allowing deviation of 0.5% in exceptional circumstances.
  - ✓ **COVID-19 Impact (2020-21):** The government increased the fiscal deficit target to 9.5% of GDP, demonstrating the necessity of flexibility in fiscal management.
- ❖ **Union Budget 2021-22 & Beyond:** The government set a medium-term goal of reducing the deficit to 4.5% of GDP by FY2025-26, instead of enforcing an immediate return to pre-pandemic levels.
  - ✓ Allowed for higher spending on infrastructure and social welfare to boost economic recovery.
  - ✓ The government emphasized pragmatic fiscal management over strict adherence to targets.
    - Capex boost to sustain economic growth.
    - Gradual deficit reduction instead of aggressive fiscal tightening.
    - A willingness to recalibrate targets based on economic needs.
    - It signals a de facto shift towards flexible deficit targeting.

## Why India Needs a Flexible Deficit Target?

- ❖ **Economic Shocks & Global Uncertainty:** Events like COVID-19, geopolitical tensions, and oil price volatility demand fiscal space for counter-cyclical measures.
  - ✓ A rigid deficit target could limit government intervention during crises.
- ❖ **Investment-Driven Growth Strategy:** The government's capital expenditure (CapEx) push requires sustained spending on infrastructure, which may exceed fixed deficit limits.
  - ✓ Flexible targets allow the government to borrow strategically rather than enforcing arbitrary spending cuts.
- ❖ **Counter-Cyclical Fiscal Policy:** During economic slowdowns, the government should increase spending to boost demand.
  - ✓ In periods of high growth, deficit targets can be tightened to maintain fiscal discipline.
- ❖ **Infrastructure and Social Sector Needs:** Developing economies like India require continuous investment in infrastructure, health, and education.
  - ✓ A rigid deficit target could force spending cuts in these critical areas.
- ❖ **Private Sector Confidence:** A balanced approach — where fiscal discipline is maintained without excessive rigidity — can boost investor confidence.
  - ✓ The key is ensuring that fiscal expansion is targeted and productive.

## Challenges of Flexible Deficit Targeting

- ❖ **Risk of Fiscal Indiscipline:** A lack of strict targets may lead to uncontrolled borrowing, increasing debt-to-GDP ratios and risking credit rating downgrades.

- ✓ Markets and credit rating agencies prefer clear deficit targets for policy predictability.
- ❖ **Market Perception & Investor Confidence:** International investors prefer fiscal predictability. Frequent adjustments to deficit targets could create policy uncertainty, affecting bond markets and FDI flows.
- ❖ **Inflationary Pressure:** Increased government borrowing may fuel inflation, especially when supply-side constraints exist.
- ❖ **Higher Interest Costs:** Persistent high deficits lead to increased government debt and interest payments, limiting funds for development projects.
- ❖ **Welfare Programme Constraints:** States with extensive welfare models, like Kerala and Tamil Nadu, struggle to expand services like healthcare and education.

### International Best Practices

- ❖ **USA:** Adopts countercyclical fiscal policies, allowing higher deficits during recessions and aiming for gradual consolidation during growth phases.
- ❖ **Germany:** Traditionally follows strict fiscal discipline but relaxed its 'debt brake' during COVID-19.
- ❖ **Japan:** Prioritizes economic growth and employment stability, despite a 200% debt-to-GDP ratio.
- ❖ **Australia:** It uses public-private partnerships (PPP) to finance infrastructure, reducing its reliance on public debt.

### Way Forward: Balancing Flexibility with Responsibility

- ❖ **Strengthening Fiscal Rules:** Introducing a clear range-based deficit target (e.g., 2.5% – 4% of GDP) rather than a strict fixed number.
- ❖ **Institutional Oversight:** Setting up an independent Fiscal Council to ensure responsible deficit deviations.
- ❖ **Gradual Deficit Reduction:** Committing to a credible glide path toward fiscal consolidation without abrupt spending cuts.

### Conclusion

- ❖ India's shift towards a Flexible Deficit Target reflects the need for adaptive economic policies in an unpredictable world.
- ❖ While flexibility helps manage crises and promote growth, it must be implemented prudently to maintain long-term fiscal sustainability.
- ❖ A balanced approach—allowing temporary deviations while maintaining a clear medium-term fiscal roadmap—is key to ensuring both economic stability and development.

## PRODUCTION LINKED INCENTIVE SCHEME

**Context:** The Government has decided not to extend the PLI Scheme beyond the existing 14 sectors.

- ❖ Despite initial success in some areas, the scheme underperformed in others and saw delays in incentive payouts.
- ❖ Out of the \$23 billion allocated, only \$1.73 billion (8%) has been disbursed as of October 2024.
- ❖ \$151.93 billion worth of goods have been produced under the scheme—just 37% of the original target. Firms like Foxconn, Reliance, and Adani faced delays, unmet targets, or non-compliance.
- ❖ Hence, the government has declined requests to extend production deadlines or add new sectors to the scheme.

### About the PLI Scheme

- ❖ **Launch:** In 2020 under the Ministry of Commerce & Industry with an outlay of ₹1.97 lakh crore.



- ❖ **Sectors Included:** It covers 14 sectors (Mobile, Pharma, Auto, ACC Battery, Telecom, White Goods, Solar, etc.)
- ❖ **Objectives:** It offers incentives to eligible firms on incremental sales for five years as part of the Make in India initiative.
- ❖ It aims to reduce India's dependence on foreign countries like China and increase employment in labor-intensive sectors.
- ❖ **Raise manufacturing's share in GDP to 25% by 2025**
- ❖ **Incentive Mechanism:** 4–6% on incremental sales over a base year.
- ❖ Applicable to both domestic and foreign companies registered in India.

### Benefits of PLI Scheme

- ❖ **Electronics Success:** India produced \$49 billion worth of mobiles in FY 2023–24; Apple now manufactures high-end models in India.
- ❖ **Pharmaceutical Growth:** Exports nearly doubled to \$27.85 billion from a decade ago.
- ❖ Boosted FDI inflow, helped develop core industries, and supported India's 'China Plus One' strategy.
- ❖ Encouraged production in strategic sectors (e.g., semiconductors, solar modules).

### Issues and Concerns

- ❖ **Low Disbursement:** Only 8% of incentives disbursed despite meeting targets.
- ❖ **Delays in Subsidies:** They are not released on time, eventually affecting cash flow.
- ❖ **Unmet Targets:** Many firms failed to initiate or scale up production.
- ❖ **Red Tapism:** Bureaucratic hurdles and rigid compliance conditions.
- ❖ **No GDP Boost:** Manufacturing share fell from 15.4% to 14.3% (2020–2024).

## INCLUSIVE DEVELOPMENT

**Context:** President Droupadi Murmu emphasized the importance of inclusive development for all regions, including those affected by Maoist extremism in Chhattisgarh.

### About

- ❖ She stressed the need to balance modern development with environmental protection and the inclusion of all sections of society in the development process.
- ❖ Naxalism or Left Wing Extremism (LWE) is one of the major challenges to India's internal security.
  - ✓ Naxalites seek to overthrow the State through violent means.
  - ✓ Naxal affected areas in India are known as the 'Red Corridor'.
- ❖ The States of Chhattisgarh, Jharkhand, Orissa and Bihar are considered severely affected.
- ❖ She emphasized the "saturation approach" to ensure that no citizen is left behind in India's development journey.

### What is Inclusive Development?

- ❖ Inclusive Development refers to a development approach that ensures all segments of society have equal access to opportunities, resources, and benefits of economic, social, and political progress.
  - ✓ It focuses on reducing inequality and addressing the needs of diverse populations.
- ❖ The Indian model of inclusive growth, viewed from a development economics perspective, has three pillars: Market economics, Empowerment, and Pragmatism.
- ❖ India ranked 62nd out of 74 emerging economies in the World Economic Forums' Inclusive Development Index (IDI), last released in 2018.
- ❖ **The three key approaches for inclusive development include:**

- ✓ Good governance (progressive politics, effective management and successful engagement in the global economy);
- ✓ Structural transformation, (economic, social and demographic), and;
- ✓ Multi-pronged policy and programme mix (macroeconomic policies, sound institutions, public-private sector development, effective economic policy management).

### Identified Segments for Inclusive Development

- ❖ **Tribal and Rural Communities:** Assimilation of communities in society; educating at grassroots level; electricity, network connectivity; connectivity through roads; pucca houses; introduction to new basic technologies etc.
- ❖ **Physically Disabled:** Providing facilities such as wheelchairs and audio-visual aids; installation of ramps and tactical paths for easy accessibility; training of individuals on interacting with differently abled; skilling specially-abled, etc.
- ❖ **Streamlining Unbanked Section:** Awareness should be provided related to the importance of bank accounts in rural and tribal areas, financial literacy, mobile banking etc.
- ❖ **Women:** Pre- and post-pregnancy care, healthcare, education, childcare, skill-development, opportunities for financial improvement etc.

### Need for Inclusive Development in India

- ❖ **Addressing Inequality:** India has significant disparities in income, education, healthcare, and living standards, particularly between urban and rural areas, and among different social groups.
- ❖ **Empowering Marginalized Communities:** Large sections of society, including tribal communities, women, and the differently-abled, remain excluded from mainstream development and opportunities.
- ❖ **Promoting Social Justice:** Inclusive development ensures that every citizen, regardless of their background, has access to the benefits of growth, promoting fairness and reducing social tensions.
- ❖ **Economic Growth: India** can unlock the full potential of its population, leading to more sustainable and equitable economic growth.
- ❖ **Global Competitiveness:** A more inclusive society leads to a more productive, skilled, and innovative workforce, enhancing India's global competitiveness.
- ❖ **Sustainable Development:** It aligns with the goal of long-term, sustainable growth, considering the needs of all sections of society, including future generations.

### Constitutional Framework for Inclusive Development

- ❖ **Fundamental Rights (Part III):**
  - ✓ **Equality Before Law (Article 14):** Guarantees equality for all citizens.
  - ✓ **Prohibition of Discrimination (Article 15):** Ensures no discrimination on grounds of religion, race, caste, sex, or place of birth.
  - ✓ **Equality of Opportunity (Article 16):** Ensures equal opportunities in public employment.
  - ✓ **Right to Education (Article 21A):** Guarantees free education for children aged 6 to 14.
  - ✓ **Protection of Minorities (Articles 29 & 30):** Safeguards the cultural and educational rights of minorities.
- ❖ **Directive Principles of State Policy (Part IV):**
  - ✓ **Social Justice (Article 38):** Promotes the welfare of the people, focusing on justice and reducing inequalities.
  - ✓ **Promotion of Weaker Sections (Article 46):** Aims to protect and promote the interests of SCs, STs, and OBCs.
- ❖ **Reservation and Affirmative Action:** Articles 15(4) and 16(4) allow for affirmative action, such as reservations in education and employment for SCs, STs, and OBCs.

- ❖ **Panchayats and Local Governance (Part IX):** Article 243N strengthens local self-governance, ensuring the participation of marginalized communities.
- ❖ **Legal Protection for Vulnerable Groups:** Laws like the Protection of Civil Rights Act, 1955 and the SC/ST (Prevention of Atrocities) Act, 1989 protect disadvantaged communities from discrimination and violence.
- ❖ **Judicial Oversight:** The Supreme Court and High Courts ensure that policies align with the constitutional values of equality and justice.

## Conclusion

- ❖ There are many Government initiatives focused on providing opportunities, resources, and social security for marginalized communities, ensuring broad-based growth and well-being.

## Economy

### PUBLIC ACCOUNTS COMMITTEE RECOMMENDATIONS FOR GST REGIME

**Context:** The Public Accounts Committee (PAC) has recommended a simplified Goods and Services Tax (GST) regime in its 19th report.

### Goods and Services Tax (GST)

- ❖ The idea of Goods and Services Tax (GST) in India was first proposed during Atal Bihari Vajpayee's tenure.
  - ✓ In December 2014, the Constitution (122nd Amendment) Bill was introduced, passed in 2015, and ratified in 2016 as the 101st Constitutional Amendment, paving the way for GST.
  - ✓ GST was officially launched on 1st July 2017 by Prime Minister Narendra Modi, marking a significant step in India's tax reform.
- ❖ It is a destination-based consumption tax levied at all stages, from manufacture to final consumption, with credit for taxes paid at previous stages.
- ❖ The tax burden is ultimately borne by the final consumer, and the revenue is allocated to the authority governing the place of consumption (place of supply).

## Objectives

- ❖ GST aims to simplify India's indirect tax system by combining multiple Central and State taxes into one, reducing the cascading effect and creating a unified national market.
- ❖ It stimulates economic growth, broadens the tax base, increases trade volumes, and improves tax compliance.

## Challenges

- ❖ The implementation of GST has faced challenges, including complex compliance requirements and high costs for small businesses.
- ❖ Frequent changes in tax rates and multiple tax slabs have caused confusion.
- ❖ Issues with refund processes create liquidity problems, and cross-border trade is complicated by varying GST rates across states.

## Latest Recommendations

- ❖ The Public Accounts Committee (PAC) urged the Finance Ministry to review the current framework to eliminate unnecessary complexities and ease compliance.
- ❖ The Committee expressed concerns about issues in the biometric-based Aadhaar authentication process, potentially hindering the "One Nation One Tax" vision.
- ❖ **Other Recommendations**

- ✓ Streamlining the process by consolidating forms, reducing filing frequency, and introducing a tiered compliance approach for smaller businesses.
- ✓ Improving the portal's ease of use and providing clearer guidance for taxpayers during filing.
- ✓ Addressing the issue of harsh criminal penalties for unintentional errors in compliance, particularly for honest taxpayers.
- ✓ Using data analytics and AI tools to accurately project GST revenue, addressing the decline in indirect tax share.
- ✓ Implementing a more efficient refund system with clear timelines, regular updates, and a dedicated grievance redressal mechanism.
- ✓ Simplifying GST compliance for MSMEs by automating return filing and refund processing with reduced frequency and easier online reporting.

## INDIA'S BIOECONOMY & ROAD AHEAD

**Context:** India BioEconomy Report has pegged the value of India's bioeconomy in 2024 at more than \$165 billion, accounting for over 4.2% of the country's GDP.

- ❖ The report highlighted ample opportunity for this sector to grow to about \$300 billion by 2030, and to \$1 trillion by 2047.

### What is Bioeconomy?

- ❖ Bioeconomy refers to the industrial use of biological resources (plants, animals, and microorganisms), and the replication of natural biological processes in the production of goods and services.
- ❖ Bioresources like plants or microorganisms are renewable, relatively cheap, and locally available, while natural processes are more sustainable and eco-friendlier.
- ❖ A prime example of this is the growing use of ethanol, which is produced through fermentation of crops like sugarcane or corn by microorganisms, as a biological alternative to fuels traditionally derived from hydrocarbons.

### Why Bioeconomy Matters for India?

#### ❖ **Economic Growth & Jobs:**

- ✓ Expected to contribute \$1 trillion by 2047.
- ✓ The number of companies in the bioeconomy has increased by almost 90% in the last three years.
- ✓ Nearly half the value of the bioeconomy (roughly \$78 billion) was generated in the industrial sector, for the development and use of biofuels and bioplastics.

#### ❖ **Food & Agriculture Security:**

- ✓ GM technologies improve yields by 21%.
- ✓ Biofertilizers enhance soil health.
- ✓ Innovations like golden rice combat micronutrient deficiencies.

#### ❖ **Healthcare Access:**

- ✓ Affordable drug and vaccine production (e.g., CERVAVAC – HPV vaccine).
- ✓ Gene therapy advancements (e.g., Hemophilia A trial).
- ✓ India supplies 25% of WHO's total vaccine volume.

#### ❖ **Environmental Benefits:**

- ✓ Promotes circular economy via waste-to-energy technologies.
- ✓ Reduces reliance on fossil fuels with biogas and ethanol.
- ✓ Supports biodiversity conservation and eco-restoration (e.g., TERI's Oilzapper).

#### ❖ **Climate Action:**

- ✓ Helps achieve India's net-zero target by 2070.



- ✓ Reduces emissions through bio-based alternatives.

### BioE3 Push For India's Bioeconomy

- ❖ To catalyze this growth, the government launched the BioE3 policy in 2024—Biotechnology for Economy, Environment, and Employment.
- ❖ **The policy promotes:**
  - ✓ Establishment of Bio-AI Hubs, Bio-Foundries, and Bio-Enabler Hubs
  - ✓ Focus on advanced technologies, sustainable biomanufacturing, and pan-India implementation
  - ✓ Assam became the first state to formally adopt the BioE3 framework, setting the stage for widespread national rollout.

### Other Initiatives

- ❖ **BioSaarthi Mentorship Initiative (2025):** BioSaarthi is designed as a six-month cohort facilitating structured mentor-mentee engagements, offering personalized guidance to emerging entrepreneurs in the biotech sector.
- ❖ **Draft National Biotechnology Development Strategy (2020–25):** Targets \$150 billion bioeconomy by 2025, focusing on R&D innovation, Industry competitiveness & startup growth.
- ❖ **Biotechnology Industry Research Assistance Council (BIRAC):** Public sector interface to Fund biotech startups.
- ❖ **National Biopharma Mission:** Supports clinical trials, biosimilars, biotherapeutics, and vaccine development.
- ❖ **PM-JIVAN Yojana:** Focus on bioethanol and compressed biogas from agri-waste.
- ❖ **SATAT & GOBARdhan Schemes:** Promotes bio-CNG plants and waste-to-energy models, aligned with rural bioeconomy goals.
- ❖ **Global Biofuel Alliance (2023):** Led by India, USA, and Brazil to strengthen biofuel supply chains and reduce fossil fuel dependence.
- ❖ **IP Guidelines (2023):** Encourages commercialization of public-funded research.

### Challenges to Address

- ❖ **Despite progress, India's bioeconomy faces several hurdles:**
  - ✓ **Fragmented Regulation:** Overlaps between agencies delay biotech approvals.
  - ✓ **Limited Investment:** High risk and long return on investment deter private capital.
  - ✓ **IP & Bio-piracy Issues:** Weak enforcement hampers innovation and indigenous protection.
  - ✓ **Weak Industry-Academia Linkages:** Limits commercial translation of research.
  - ✓ **Import Dependence:** On high-end equipment and biotech inputs.
  - ✓ **Skill Shortages:** Need for trained professionals in genomics, bioinformatics, etc.
  - ✓ **Public Perception:** Skepticism around GMOs and lab-grown food remains high.
  - ✓ **Environmental Risks:** Overexploitation of biological resources could harm biodiversity and land use.

### Way Ahead

- ❖ **Strengthen Policy Implementation & Coordination:** Ensure effective rollout of the BIO-E3 Policy across all states.
  - ✓ Establish a National Bioeconomy Mission to provide centralized coordination.
  - ✓ Promote state-level policies aligned with national bioeconomy goals (as Assam has done).
- ❖ **Boost Investment & Public-Private Partnerships:** Create dedicated Bioeconomy Investment Funds.
  - ✓ Offer tax incentives and risk-sharing models to attract private capital in high-risk biotech ventures.
  - ✓ Scale PPP models in R&D, manufacturing, and skill development.

### ❖ **Accelerate Regulatory Reforms:**

- ✓ Streamline regulatory frameworks through a single-window system (expand BioRRAP).
- ✓ Harmonize biotech approvals across agencies (DBT, FSSAI, GEAC, etc.).
- ✓ Build capacity in biosafety and ethics review boards for faster innovation deployment.

### ❖ **Foster Research, IP & Innovation Ecosystem:** Fast-track IP approvals and set up specialized IP courts for biotech.

- ✓ Strengthen academia-industry linkages through co-development platforms.
- ✓ Encourage applied research in synthetic biology, gene therapy, bioinformatics, etc.

### ❖ **Expand Biotech Infrastructure & Hubs:**

- ✓ Set up Bio-AI Hubs, Biofoundries, and bio-incubation centers in Tier 2/3 cities.
- ✓ Invest in shared testing labs, pilot-scale facilities, and data repositories.
- ✓ Support precision farming zones and bio-industrial parks.

### ❖ **Empower Startups & Entrepreneurs:**

- ✓ Scale initiatives like BioSaarthi for mentorship and global exposure.
- ✓ Strengthen BIRAC schemes for funding, incubation, and early-stage scale-up.
- ✓ Encourage grassroots bio-entrepreneurship and women-led biotech ventures.

### ❖ **Invest in Skilling & Education:** Integrate bioeconomy curricula in universities and skill development missions.

- ✓ Establish Centers of Excellence in genomics, molecular biology, and bio-manufacturing.

### ❖ **Enhance Global Collaboration:** Forge R&D partnerships with biotech leaders like the EU, Japan, USA.

- ✓ Lead international forums like the Global Biofuel Alliance and One Health platforms.

## About

- ❖ She stressed the need to balance modern development with environmental protection and the inclusion of all sections of society in the development process.
- ❖ Naxalism or Left Wing Extremism (LWE) is one of the major challenges to India's internal security.
  - ✓ Naxalites seek to overthrow the State through violent means.
  - ✓ Naxal affected areas in India are known as the 'Red Corridor'.
- ❖ The States of Chhattisgarh, Jharkhand, Orissa and Bihar are considered severely affected.
- ❖ She emphasized the "saturation approach" to ensure that no citizen is left behind in India's development journey.

## What is Inclusive Development?

- ❖ Inclusive Development refers to a development approach that ensures all segments of society have equal access to opportunities, resources, and benefits of economic, social, and political progress.
  - ✓ It focuses on reducing inequality and addressing the needs of diverse populations.
- ❖ The Indian model of inclusive growth, viewed from a development economics perspective, has three pillars: Market economics, Empowerment, and Pragmatism.
- ❖ India ranked 62nd out of 74 emerging economies in the World Economic Forums' Inclusive Development Index (IDI), last released in 2018.
- ❖ The three key approaches for inclusive development include:
  - ✓ Good governance (progressive politics, effective management and successful engagement in the global economy;
  - ✓ Structural transformation, (economic, social and demographic), and;
  - ✓ Multi-pronged policy and programme mix (macroeconomic policies, sound institutions, public-private sector development, effective economic policy management).

## Identified Segments for Inclusive Development

- ❖ **Tribal and Rural Communities:** Assimilation of communities in society; educating at grassroot level; electricity, network connectivity; connectivity through roads; pucca houses; introduction to new basic technologies etc.
- ❖ **Physically Disabled:** Providing facilities such as wheelchairs and audio-visual aids; installation of ramps and tactical paths for easy accessibility; training of individuals on interacting with differently abled; skilling specially-abled, etc.
- ❖ **Streamlining Unbanked Section:** Awareness should be provided related to the importance of bank accounts in rural and tribal areas, financial literacy, mobile banking etc.
- ❖ **Women:** Pre- and post-pregnancy care, healthcare, education, childcare, skill-development, opportunities for financial improvement etc.

### Need for Inclusive Development in India

- ❖ **Addressing Inequality:** India has significant disparities in income, education, healthcare, and living standards, particularly between urban and rural areas, and among different social groups.
- ❖ **Empowering Marginalized Communities:** Large sections of society, including tribal communities, women, and the differently-abled, remain excluded from mainstream development and opportunities.
- ❖ **Promoting Social Justice:** Inclusive development ensures that every citizen, regardless of their background, has access to the benefits of growth, promoting fairness and reducing social tensions.
- ❖ **Economic Growth:** India can unlock the full potential of its population, leading to more sustainable and equitable economic growth.
- ❖ **Global Competitiveness:** A more inclusive society leads to a more productive, skilled, and innovative workforce, enhancing India's global competitiveness.
- ❖ **Sustainable Development:** It aligns with the goal of long-term, sustainable growth, considering the needs of all sections of society, including future generations.

### Constitutional Framework for Inclusive Development

- ❖ **Fundamental Rights (Part III):**
  - ✓ **Equality Before Law (Article 14):** Guarantees equality for all citizens.
  - ✓ **Prohibition of Discrimination (Article 15):** Ensures no discrimination on grounds of religion, race, caste, sex, or place of birth.
  - ✓ **Equality of Opportunity (Article 16):** Ensures equal opportunities in public employment.
  - ✓ **Right to Education (Article 21A):** Guarantees free education for children aged 6 to 14.
  - ✓ **Protection of Minorities (Articles 29 & 30):** Safeguards the cultural and educational rights of minorities.

### Directive Principles of State Policy (Part IV):

- ✓ **Social Justice (Article 38):** Promotes the welfare of the people, focusing on justice and reducing inequalities.
- ✓ **Promotion of Weaker Sections (Article 46):** Aims to protect and promote the interests of SCs, STs, and OBCs.
- ❖ **Reservation and Affirmative Action:** Articles 15(4) and 16(4) allow for affirmative action, such as reservations in education and employment for SCs, STs, and OBCs.
- ❖ **Panchayats and Local Governance (Part IX):** Article 243N strengthens local self-governance, ensuring the participation of marginalized communities.
- ❖ **Legal Protection for Vulnerable Groups:** Laws like the Protection of Civil Rights Act, 1955 and the SC/ST (Prevention of Atrocities) Act, 1989 protect disadvantaged communities from discrimination and violence.
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## Conclusion

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## 10TH ANNIVERSARY OF SAGARMALA PROGRAMME

**Context:** The Sagarmala Programme which was launched in 2015 by the Ministry of Ports has revolutionized India's maritime sector.

### About

- ❖ With a 7,500 km coastline, 14,500 km of potentially navigable waterways, and a strategic position on key global trade routes, India holds immense potential for port-led economic growth.
- ❖ The Sagarmala Programme is a key pillar of the Maritime Amrit Kaal Vision 2047 (MAKV), driving India's ambition to become a global leader in maritime affairs. Building on Maritime India Vision 2030, MAKV sets ambitious targets, including 4 million Gross Registered Tonnage (GRT) of shipbuilding capacity and 10 billion metric tons of port handling annually, aiming to position India among the top five shipbuilding nations by 2047.
- ❖ MAKV outlines over 300 strategic initiatives to develop world-class ports, expand coastal and inland waterways, and promote a sustainable Blue Economy.

### Sagarmala Programme

- ❖ **Objectives:** To streamline logistics, reduce costs, and enhance international trade competitiveness by shifting from traditional, infrastructure-heavy transport to efficient coastal and waterway networks.
- ❖ The program focuses on port modernization, industrial growth, job creation, and sustainable coastal development, ensuring minimal infrastructure investment while maximizing economic impact.

### Components:

- ❖ The program consists of several key components aimed at transforming India's maritime sector. The overall set of projects under the Sagarmala Programme are divided into 5 pillars.

### Implementation Mechanism:

- ❖ Major Ports, central ministries, State Governments, state maritime boards, and other relevant agencies execute projects.
- ❖ Projects are selected based on the Master Planning of Major Ports, meetings of the National and State Steering Committees.

### Funding Structure:

- ❖ Many projects are funded through the internal resources of MoPSW agencies, including Major Ports.
- ❖ Priority is given to private sector participation, with PPP models implemented wherever feasible.
- ❖ Sagarmala Development Company Limited (SDCL) was established to support project Special Purpose Vehicles (SPVs).

### Achievements:

- ❖ Coastal shipping grew 118% in a decade, Ro-Pax ferries moved over 40 lakh passengers, and inland waterway cargo rose 700%.
- ❖ Nine Indian ports rank in the world's top 100, with Vizag in the top 20 container ports.



## Sagarmala 2.0

### ❖ **Sagarmala Startup Innovation Initiative (S2I2)**

- ❖ Launched on March 19th 2025, it is a transformative program designed to foster innovation and entrepreneurship in India's maritime sector.
- ❖ S2I2 supports startups in green shipping, smart ports, maritime logistics, shipbuilding technology, and sustainable coastal development by providing funding, mentorship, and industry partnerships.
- ❖ Anchored in the principles of RISE—Research, Innovation, Startups, and Entrepreneurship-S2I2 will drive technological advancements, enhance industry competitiveness, and accelerate economic growth.

## Challenges

- ❖ **Investment Mobilization and Budgetary Support:** Securing timely investments and adequate budgetary allocations has been a persistent issue.
- ❖ **Land Acquisition and Environmental Concerns:** Acquiring land for infrastructure development, especially in coastal areas, involves complex legal and environmental considerations.
- ❖ **Stakeholder Coordination:** Effective implementation requires seamless coordination among central and state agencies, port authorities, and private sector participants.
- ❖ **Connectivity Issues:** Inadequate last-mile connectivity between ports and the hinterland affects the efficiency of cargo movement. Underutilization of domestic waterways and constrained rail infrastructure further exacerbate this problem.
- ❖ **Community and Social Impacts:** Port expansion and related industrial activities can lead to the displacement of local communities, particularly fishing populations.

## Way Ahead

- ❖ **Improve Inter-agency Coordination:** Foster better collaboration between central, state, and local bodies for seamless execution.
- ❖ **Focus on Sustainable Development:** Ensure environmental safeguards, promote green ports, and support community livelihoods.
- ❖ **Enhance Port-Hinterland Connectivity:** Invest in multi-modal transport networks to improve last-mile cargo movement.
- ❖ **Promote Indigenous Shipbuilding & Recycling:** Support Make in India initiatives for maritime infrastructure and services.

## GROWTH OF INDIA'S E-RETAIL MARKET

**Context:** India's e-retail market is expected to triple to \$170–\$190 billion in gross merchandise value (GMV) by 2030 driven by an expanding shopper base and innovative business models.

### India's retail industry

- ❖ It is one of the fastest-growing globally and India is a key market for international retail giants, driven by its large middle class and untapped potential.
- ❖ The urban Indian consumer's increasing purchasing power is fostering demand for branded goods across various categories.

### Drivers of Growth

- ❖ **Favorable Demographics:** India's large, young population, rising middle class, urbanization, and changing lifestyles are major contributors to retail growth, supported by favorable government policies.
  - ✓ User adoption is spreading to Tier-2 and Tier-3 cities, with 60% of new shoppers since 2020 coming from smaller cities.

- ✓ The Northeast region shows higher e-retail penetration, with 1.2 times higher shopper adoption than other parts of India.
- ❖ **Increase in Income and Purchasing Power:** India ranks amongst the top economies in GDP by Purchasing Power Parity (PPP), with rising income levels and improved purchasing power, alongside a significant reduction in extreme poverty.
- ❖ **Change in Consumer Mindset:** A shift from traditional retail to online platforms has led to increased convenience, wider product selection, price sensitivity, trust in online transactions, and greater reliance on technology and fast delivery.
- ❖ **Brand Consciousness:** Consumers in India are becoming more brand-conscious, influenced by economic, cultural, and technological factors.
- ❖ **Easy Consumer Credit and Quality Products:** The growth of unsecured retail loans alongside a rise in quality products, has further boosted consumer spending.

### Current Status

- ❖ India is currently the world's second-largest e-retail market and had over 270 million online shoppers in 2024.
  - ✓ India now trails only China, which boasts a staggering 920 million digital buyers.
- ❖ The market is valued at \$60 billion in 2024, with a growth rate of 10–12%, down from over 20% due to macroeconomic pressures.
- ❖ Categories like grocery, lifestyle, and general merchandise are expected to drive 70% of incremental growth by 2030, with penetration levels rising two to four times.
  - ✓ Quick commerce (Q-commerce), accounting for 10% of total e-retail GMV, is forecast to grow over 40% annually.

### Challenges

- ❖ India's e-retail market surged in 2024, but its annual growth rate has slowed due to broader economic challenges, including rising inflation, stagnant wages, and weakened consumer spending, particularly in urban markets.
- ❖ Many consumer brands have reported sluggish revenue growth, struggling to adapt to changing spending patterns.

### Various initiatives

- ❖ The government has introduced policies to improve the business climate and simplify the process for foreign companies to establish fully owned subsidiaries, further boosting the retail sector's growth.
- ❖ Government of India has allowed 100% FDI in online retail of goods and services through the automatic route, thereby providing clarity on the existing businesses of E-commerce companies operating in India.

### Conclusion and Way Forward

- ❖ The COVID-19 pandemic has shifted consumer preferences, blending online and offline shopping experiences.
- ❖ Retailers are using innovative strategies, integrating e-commerce with traditional methods, and experimenting with new revenue models to enhance customer value.
- ❖ E-commerce is growing rapidly, offering consumers more choices at lower prices, and is expected to continue revolutionizing the retail industry.
- ❖ Retailers should focus on digital channels to reduce real estate costs and reach more customers in Tier II and Tier III cities.

## AGRICULTURE

### UNDER-FUNDING OF NUTRIENT SUBSIDY SCHEMES

**Context:** The Parliamentary Standing Committee on Chemicals and Fertilizers highlights several key issues and recommendations regarding India's fertilizer sector.

#### Key Recommendations of the Committee:

- ❖ **Funding Concerns:** The committee is concerned about the Ministry of Finance's reduction in the Department of Fertilizers' budget allocation for 2025-26, specifically impacting the Nutrient-Based Subsidy (NBS) and Urea Subsidy Schemes.
  - ✓ It urges the Union Fertilizers Ministry to seek additional funds at the revised estimate stage to prevent negative effects on farmer subsidy schemes.
- ❖ **Nano Fertilizer Promotion:** Committee emphasizes the need to expand production capacity for nano urea and nano diammonium phosphate (DAP).
  - ✓ It calls for a strategy to popularize these nano fertilizers among farmers, citing their potential to improve crop yields and reduce conventional fertilizer usage.
- ❖ **Raw Material Security:** The committee highlights the lack of mining lease agreements for raw material extraction, exploration, refining, or production.
  - ✓ It recommends that the Centre enter into such agreements to strengthen domestic supply and achieve self-sufficiency in fertilizers.
- ❖ **Fund Utilization:** It points out underutilization of funds across various fertilizer categories during 2024-25.
  - ✓ It recommends that the Centre ensures full utilization of allocations in a planned and continuous manner.
- ❖ **Urea Subsidy Scheme:** Given urea's importance in food-grain production, the committee stresses the need for the Urea Subsidy Scheme to continue.

#### Nutrient Based Subsidy (NBS) Policy

- ❖ **Objective: Launched in 2010, the NBS Policy aims to:**
  - ✓ Provide subsidized fertilizers to farmers
  - ✓ Promote balanced use of nutrients, ensuring soil health
  - ✓ Reduce fiscal burden by making subsidy nutrient-specific
- ❖ **Validity:** The policy has been approved for implementation until the financial year 2025-26.
- ❖ **Legal Framework:** It operates under the Fertilizer (Control) Order (FCO), 1985, which is issued under the Essential Commodities Act, 1955.
  - ✓ The FCO sets standards for fertilizer use, specifications, licensing, and trading regulations.
- ❖ **Scope and Eligibility:** The NBS policy covers 25 grades of Phosphorus (P) and Potassium (K) fertilizers, including common ones like Di Ammonium Phosphate (DAP), Muriate of Potash (MOP), Mono Ammonium Phosphate (MAP), and Triple Super Phosphate (TSP).
  - ✓ The government sets a fixed subsidy rate (in Rupees per kilogram) for each primary nutrient in these fertilizers: Nitrogen (N), Phosphate (P), Potash (K), and Sulphur (S).
- ❖ **Subsidy Determination:** An Inter-Ministerial Committee (IMC) plays a critical role in recommending the per-nutrient subsidy rates for N, P, K, and S.
  - ✓ These recommendations are made before the start of each financial year and are then considered by the Department of Fertilizers for final approval.

- ❖ **Key implications:** The NBS policy allows for the price of fertilizers to fluctuate according to the cost of the raw materials used to produce the fertilizers. Thus the subsidy amount changes, but the farmer still receives a subsidized fertilizer.





## SCIENCE AND TECHNOLOGY

### NATIONAL GEOSPATIAL POLICY 2022

**Context:** The National Geospatial Policy 2022 positions India as a global leader in geospatial technology, ensuring that location-based intelligence powers the nation's progress and prosperity.

#### About National Geospatial Policy (NGP)

- ❖ It was announced by the Centre in 2022 and it replaces the National Map Policy, 2005.
- ❖ It builds on the Department of Science and Technology (DST) guidelines issued in February 2021.
  - ✓ These guidelines deregulated the geospatial sector and liberalized the acquisition, production, and access to geospatial data.
- ❖ It outlines a strategic plan to develop geospatial infrastructure, services, and platforms at both national and sub-national levels.
- ❖ It aims to strengthen the location-centric industry to support the information economy.
- ❖ A key objective of the NGP is to establish a high-resolution topographical survey and mapping system by 2030, along with creating a highly accurate Digital Elevation Model (DEM) for the entire country.
- ❖ It aims to drive India toward its vision of a self-reliant "Viksit Bharat" by 2047.

#### Features

- ❖ It acknowledges the role of geospatial technology in governance, economic growth, and societal development.
- ❖ It promotes self-reliance by empowering Indian companies and reducing dependency on foreign geospatial data.
- ❖ It focuses on enhancing institutional frameworks, coordination, and a vibrant geospatial ecosystem.
- ❖ It emphasizes data-driven decision-making to modernize infrastructure and improve governance.
- ❖ It encourages open access to geospatial data and services via geospatial platforms.
- ❖ It is aligned with PM Gati Shakti, which aims to streamline infrastructure development across 16 Ministries.

#### Related Steps

- ❖ **Operation Dronagiri:** It was launched in 2024, as a pilot project to showcase geospatial technology applications in governance, business, and citizen services.
  - ✓ Initially implemented in five states (Uttar Pradesh, Haryana, Assam, Andhra Pradesh, Maharashtra).
  - ✓ It Integrates government, industry, and startups for geospatial innovation.
  - ✓ It facilitates seamless access and sharing of geospatial data for urban planning, environmental monitoring, and disaster management.

#### Allocations and Trends from the Union Budget 2025

- ❖ The Government of India has allocated ₹100 crore for the National Geospatial Mission.
  - ✓ This mission aims to develop foundational geospatial infrastructure and data, playing a crucial role in modernizing land records, urban planning, and infrastructure design

#### Conclusion

- ❖ The National Geospatial Policy 2022 is a significant step towards strengthening India's geospatial ecosystem.

- ❖ By simplifying data access, promoting innovation, and fostering enterprise development, the policy is creating a robust and dynamic geospatial sector that supports governance, industry, and research.

## INDIA'S AI REVOLUTION

**Context:** The government is actively shaping an AI ecosystem where computing power, GPUs, and research opportunities are accessible at an affordable cost.

What is Artificial Intelligence (AI)?

- ❖ It is a wide-ranging branch of computer science concerned with building smart machines capable of performing tasks that typically require human intelligence.
- ❖ Artificial intelligence allows machines to model, or even improve upon, the capabilities of the human mind.

### India's AI Sector

- ❖ **India as AI Hub:** India ranks second in public generative AI projects on GitHub and houses 16% of the world's AI talent.
- ❖ **AI Industry Growth:** India's AI industry is projected to reach USD 28.8 billion by 2025, growing at a CAGR of 45%.
- ❖ **India Ranks 1st in Global AI Skill Penetration:** According to the Stanford AI Index 2024, India ranks first globally in AI skill penetration with a score of 2.8, ahead of the US (2.2) and Germany (1.9).
- ❖ **AI Talent Demand:** India is among the top five fastest-growing AI talent hubs, alongside Singapore, Finland, Ireland, and Canada, with a projected demand for one million AI professionals by 2026.
- ❖ **Generative AI Ecosystem:** Indian GenAI startup funding reached USD 51 million in Q2 FY2025, marking a six-fold increase.
- ❖ **AI Adoption Across Industries:** 80% of Indian companies prioritize AI, with plans to increase tech investments, including over USD 25 million towards AI initiatives in 2025.
- ❖ **Workplace AI Adoption:** 70% of Indian employees use AI at work in 2024, up from 50% the previous year.
- ❖ **AI Startup Ecosystem:** India hosts over 520 tech incubators, making it the third-largest startup ecosystem globally.

### Challenges

- ❖ **Talent Shortage:** Despite a growing demand, there is a gap in the availability of skilled AI professionals.
- ❖ **Data Privacy and Security:** Concerns over data protection and regulatory challenges related to AI data usage.
- ❖ **Infrastructure Gaps:** Inadequate infrastructure in certain regions limits the scalability and deployment of AI solutions.
- ❖ **High Costs:** The cost of AI technology adoption can be prohibitive for small and medium-sized businesses.
- ❖ **Ethical Concerns:** Lack of clear frameworks for addressing the ethical implications of AI, including biases in algorithms.
- ❖ **Limited Research and Development Funding:** Insufficient investment in AI R&D compared to global leaders like the US and China.
- ❖ **Regulatory Uncertainty:** Absence of comprehensive AI-specific policies and guidelines creates ambiguity for businesses and developers.

- ❖ **Access to Quality Data:** Limited access to high-quality, diverse datasets needed for training AI models in various sectors.

### Government Initiatives

- ❖ **IndiaAI Mission (2024):** It has a budget of ₹10,300 crore over five years.
- ❖ A key goal is the creation of a high-end common computing facility with 18,693 GPUs.
- ❖ **India's AI Models & Language Technologies:** The government is facilitating the development of India's own foundational models, including Large Language Models (LLMs) and problem-specific AI solutions tailored to Indian needs.
  - ✓ **BharatGen:** The world's first government-funded multimodal LLM initiative, BharatGen was launched in 2024.
  - ✓ **Sarvam-1 AI Model:** A large language model optimised for Indian languages, Sarvam-1 has 2 billion parameters and supports ten major Indian languages.
  - ✓ **Hanooman's Everest 1.0:** A multilingual AI system developed by SML, Everest 1.0 supports 35 Indian languages, with plans to expand to 90.
- ❖ **AI Centers of Excellence:** Establishing dedicated AI hubs and innovation centers across the country to support AI startups and research.
- ❖ **India's Digital Public Infrastructure (DPI):** Combines public funding with private sector innovation to drive digital transformation.
  - ✓ Aadhaar, UPI, and Digi Locker serve as the foundation of India's DPI.
  - ✓ Intelligent solutions are being integrated into financial and governance platforms to enhance DPI.

### Conclusion

- ❖ India's rapid AI advancements are driven by strong government initiatives, positioning it as a global AI powerhouse.
- ❖ As AI adoption accelerates across industries, India's proactive approach is not only strengthening its digital economy but also paving the way for self-reliance in critical technologies.
- ❖ With a clear vision for the future, India is set to become a leader in AI innovation, shaping the global AI landscape in the years to come.

## SPACE

### ADITYA-L1 CAPTURES UNPRECEDENTED SOLAR FLARE DETAILS

**Context:** Aditya-L1 has made a significant discovery by capturing the first-ever image of a solar flare 'kernel' in the lower solar atmosphere (photosphere and chromosphere).

#### Aditya-L1

- ❖ It was launched in September 2023, by ISRO's PSLV C-57 rocket.
- ❖ It was placed in a halo orbit around the Earth-Sun Lagrange Point (L1) in January 2024.
- ❖ It is India's first dedicated space-based solar mission.
- ❖ It stays approximately 1.5 million km away from Earth, directed towards the Sun, which is about 1% of the Earth-Sun distance.
- ❖ It would study the outer atmosphere of the Sun.
  - ✓ It will neither land on the Sun nor approach the Sun any closer.

#### Scientific payloads

- ❖ The Solar Ultraviolet Imaging Telescope (SUIT): It captures high-resolution images in 11 different NUV bands, enabling the study of multiple solar layers.
- ❖ Solar Low Energy X-ray Spectrometer (SoLEXS), and High Energy L1 Orbiting X-ray Spectrometer (HEL1OS) monitor solar X-ray emissions to detect flare activity.

#### Importance

- ❖ A significant revelation is the correlation between localized brightening in the lower atmosphere and an increase in plasma temperature in the solar corona, validating long-standing theories about solar flare physics.

#### Do you know?

- ❖ "Aditya" means the Sun in Sanskrit, and "L1" refers to Lagrange Point 1 in the Sun-Earth system.
- ❖ L1 is a location in space where the gravitational forces of the Sun and Earth are in equilibrium, allowing objects placed there to remain stable relative to both celestial bodies.
- ❖ The L1 point allows the spacecraft to continuously observe solar activities without any eclipse or occultation.

### SPACE DEBRIS

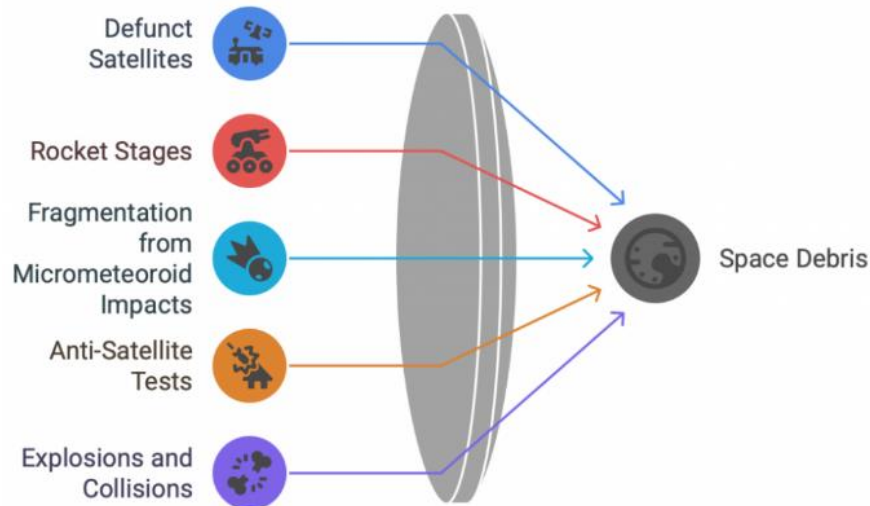
**Context:** A 500-kg metal object, believed to be space debris, crashed in Kenya, highlighting concerns about accountability and regulatory gaps in space governance.

#### About Space Debris

- ❖ It includes non-functional satellites, abandoned rocket stages, and smaller fragments from previous space missions.
- ❖ The UN Committee on the Peaceful Uses of Outer Space (UN-COPUOS) defines space debris as all man-made objects, including fragments and elements thereof, in Earth orbit or re-entering the atmosphere, that are non-functional.
- ❖ According to NASA, millions of pieces of debris orbit the Earth, ranging from tiny paint flecks to large satellite remnants.

#### Factors Causing Space Debris

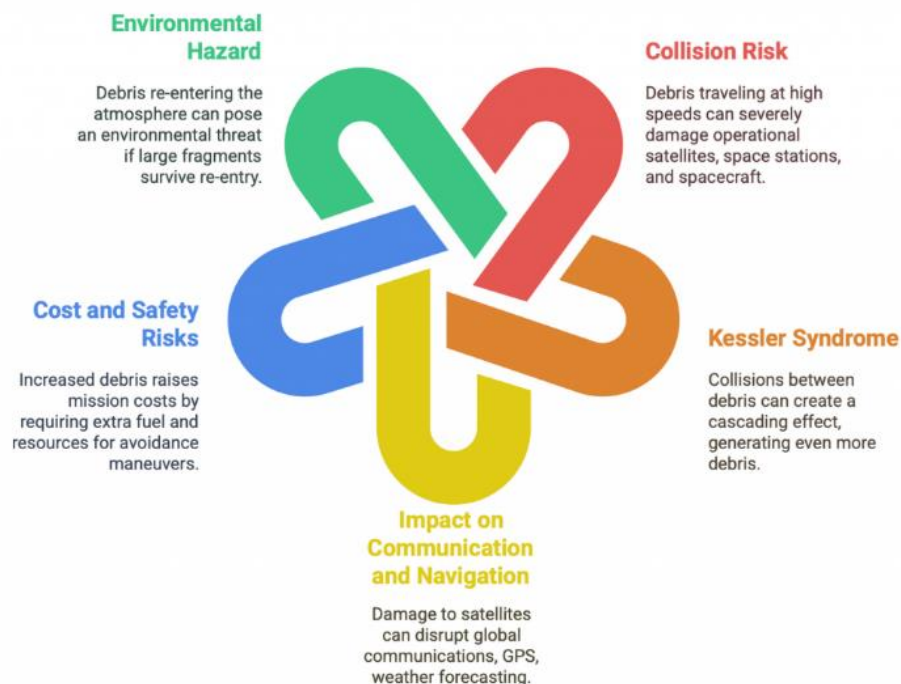




## Examples

- ❖ **2022:** Chinese Long March 5B rocket fell into the Indian Ocean, sparking concerns about uncontrolled re-entry.
- ❖ **2023:** Parts of a SpaceX Falcon 9 rocket were discovered on a sheep farm in Australia.
- ❖ **February 2024:** Debris from a Russian satellite disintegrated over the United States, alarming residents.

## Threats from Space Debris



## International Laws on Space Debris Responsibility

- ❖ United Nations Office for Outer Space Affairs (UNOOSA):
  - ✓ **Outer Space Treaty (1967):** It does not specifically address space debris, it emphasizes that nations are responsible for activities conducted in outer space, including by private entities under their jurisdiction.
    - Article VI of the treaty emphasizes that states bear responsibility for their space objects.
  - ✓ **Liability Convention (1972):** It introduces the concept of 'absolute liability' for damage caused by space objects on Earth.
    - Under this framework, launching states are automatically responsible for any harm caused by their debris, without the need to prove negligence.

## India's Initiatives in Space Debris Management

- ❖ ISRO adheres to internationally accepted space debris mitigation guidelines recommended by the UN-COPUOS and the Inter-Agency Space Debris Coordination Committee (IADC).
- ❖ **ISRO System for Safe and Sustainable Space Operations Management (IS4OM):** To focus on spaceflight safety and debris mitigation.
- ❖ **Network for Space Object Tracking and Analysis (NETRA):** For Space Situational Awareness (SSA) capacity building.
- ❖ **Debris-Free Space Missions (DFSM) Initiative (2024) by ISRO:** It aims to achieve debris-free space missions by all Indian space actors, both governmental and non-governmental, by 2030. The initiative focuses on:
  - ✓ Avoiding Debris Generation;
  - ✓ Collision Avoidance;
  - ✓ Post-Mission Disposal;

## Challenges in Holding Countries Accountable

- ❖ **Difficulty in Tracing Ownership:** Identifying the exact origin of debris is challenging, especially for small fragments.
- ❖ **Bureaucratic and Political Hurdles:** Diplomatic processes for compensation can be slow and politically sensitive.
- ❖ **No Penalties for Uncontrolled Re-entry:** While the Liability Convention requires countries to pay for damages, it does not penalize them for allowing uncontrolled re-entries to happen.

## Mitigation and Future Solutions

- ❖ **International Cooperation:** Strengthening international cooperation like the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS) and developing standardized procedures for debris removal can enhance accountability and enforcement.
- ❖ **Mandatory End-of-Life Plans:** Space missions should include clear deorbiting strategies to minimize debris risks.
- ❖ **Technological Innovations:** Investing in technologies for active debris removal, such as the ADRAS-J mission by Astroscale, can help mitigate the risks posed by space junk.
- ❖ **Liability Insurance:** Countries and private companies could be required to have insurance policies covering potential damage from space debris.
- ❖ **National Regulations:** Implementing and enforcing national regulations that align with international treaties can ensure that countries take responsibility for their space activities.

## PRIVATE PARTICIPATION OF INDIA'S SPACE SECTOR

**Context:** Information Technology (IT) major Infosys is eyeing opportunities in India's space tech sector and has put forward its name as a contender to build and launch satellites.

### About

- ❖ India's space sector has traditionally been dominated by ISRO, but recent policy changes are opening the sector to private enterprises and startups.
- ❖ The Indian space economy is projected to grow at a 48% CAGR over the next five years, reaching \$50 billion.
- ❖ The privatization of the Indian space sector aims to boost innovation, attract private investment, reduce dependence on imports, and strengthen India's position as a global space power.
- ❖ The establishment of IN-SPACe (Indian National Space Promotion and Authorization Centre) is a landmark step, enabling private enterprises to participate in satellite launches, space-based services, and even deep-space missions.

## Why is Privatization of the Indian Space Sector Necessary?

- ❖ **Increasing Demand for Space-Based Services:** India's space industry is growing rapidly, with demand for satellite-based services exceeding ISRO's capacity.
  - ✓ The private sector's involvement is essential to meet the demand for satellite communications, remote sensing, and geospatial intelligence.
- ❖ **Reducing Import Dependency:** India's import costs in space technology are 12 times higher than its exports (2022-23). Major imported items include high-strength carbon fibers, space-qualified solar cells, and electronic components.
  - ✓ Encouraging private manufacturing can help develop indigenous space-grade materials.
- ❖ **Freeing ISRO to Focus on Core Missions:** Privatization allows ISRO to shift focus towards interplanetary missions, space research, and national security projects.
  - ✓ Private players can take over commercial satellite launches and operational aspects of space technology.
- ❖ **Enhancing Global Competitiveness:** Countries like the United States, Russia, and China have successfully leveraged private enterprises to reduce costs and enhance efficiency.
  - ✓ Companies like SpaceX, Blue Origin, and Arianespace have transformed space commercialization.
  - ✓ India's private space firms must evolve to compete globally and contribute to the \$450 billion global space economy.
- ❖ **Utilizing India's Human Capital:** India produces over 1.5 million engineers annually.
  - ✓ India's space economy is projected to grow at 48% CAGR and reach \$50 billion by 2028.
- ❖ **Risk Sharing:** Space exploration involves high costs and risks. Public-Private Partnerships (PPPs) can distribute costs, reducing financial pressure on the government.

## Major Reforms in the Privatization of India's Space Sector

- ❖ **Indian Space Policy 2023:** Allows private firms to engage in satellite launches, R&D, and exploration.
- ❖ **Establishment of IN-SPACe:** Acts as a single-window agency to regulate and facilitate private sector participation.
  - ✓ Grants private players access to ISRO's launch facilities, R&D centers, and satellite data.
- ❖ **Creation of NewSpace India Limited (NSIL):** Handles the commercial operations of ISRO, such as satellite launches and transponder leasing.
  - ✓ Focuses on monetizing ISRO's technologies through partnerships with private companies.
- ❖ **FDI Policy Reforms:** 74% Foreign Direct Investment (FDI) allowed in satellite manufacturing and operations.
  - ✓ 49% FDI allowed in launch vehicles, spaceports, and associated systems.
- ❖ **Supporting Space Startups:** Over 200 space startups are working in India, developing launch vehicles, satellite services, and space applications.
  - ✓ Vikram-S Rocket: India's first private rocket, launched by Skyroot Aerospace.
  - ✓ Agnikul Cosmos: Developed the world's first 3D-printed rocket engine.
  - ✓ OneWeb India: First company approved by IN-SPACe for satellite broadband services.
- ❖ **Encouraging Global Collaborations:** Indian companies can partner with international space agencies and corporations for knowledge sharing.
  - ✓ Example: ISRO's collaboration with NASA and JAXA for joint lunar and Mars missions.
  - ✓ Atal Tinkering Lab (ATL) Space Challenge: Encourages school students in space innovation.

## Challenges and Concerns in Private Sector Participation

- ❖ **Regulatory and Legal Gaps:** No dedicated space law to govern private sector operations.
  - ✓ Multiplicity of regulations (ISRO, DoS, NSIL, Antrix, IN-SPACe) causes bureaucratic hurdles.

- ❖ **National Security Risks:** Sensitive technology transfer risks due to increased private participation.
  - ✓ Strict cybersecurity policies are needed to protect satellite data.
- ❖ **Intellectual Property (IP) Issues:** Lack of clear IP laws for space technologies may discourage private R&D.
  - ✓ Private firms fear technology leakage or misuse of ISRO's research.
- ❖ **Funding and Investment Constraints:** Space projects require high capital investments and long incubation periods.
  - ✓ Private investors prefer short-term gains in sectors like 5G and fintech.
- ❖ **Dependence on Government Infrastructure:** Private firms rely on ISRO's launch facilities, labs, and ground stations.
  - ✓ High costs of developing private infrastructure hinder independent growth.
- ❖ **Market Saturation & Competition:** Too many players entering the sector could cause instability.
  - ✓ Smaller startups may struggle to compete with large corporations.
- ❖ **Environmental and Space Debris Issues:** Increase in satellite launches could worsen space debris problems.
  - ✓ Sustainable space policies are needed to manage deorbiting and recycling of satellites.

### Way Ahead

- ❖ **Enactment of a Space Activities Act:** Define private sector roles, liability frameworks, and investment policies.
- ❖ **Development of Indigenous Capabilities:** Invest in domestic manufacturing of propulsion systems, AI-driven satellite tech, and 3D-printed components.
- ❖ **Building Private Launch Infrastructure:** Encourage private launchpads and testing centers to reduce dependency on ISRO.



## ENVIRONMENT

### NECESSITY OF MAINSTREAMING WETLAND CONSERVATION

**Context:** The degradation and loss of wetlands have reached alarming levels due to urbanization, agricultural expansion, and industrial activities. Mainstreaming wetland conservation into policy and development agendas is an urgent necessity.

#### About the Wetlands

- ❖ Wetlands, often referred to as the 'kidneys of the Earth', play a vital role in maintaining ecological balance including biodiversity conservation, water purification, and climate regulation.
- ❖ These ecosystems include marshes, swamps, lakes, floodplains, mangroves, and coastal lagoons, which support a wide variety of flora and fauna.
- ❖ These wetlands comprise approximately 4.8% of the total geographical area of India, and it is estimated that at least 6% of India's population relies directly on wetlands for their livelihood.

#### Why Wetlands Need Mainstreaming in Conservation Policies?

- ❖ **Biodiversity Hotspots:** Wetlands support diverse flora and fauna, including migratory birds, fish, and amphibians. Their loss threatens species dependent on these ecosystems.
  - ✓ Keoladeo National Park in Rajasthan, for instance, is a UNESCO World Heritage Site known for its bird population.
- ❖ **Flood Control and Climate Regulation:** Mangrove forests and floodplain wetlands absorb excess floodwater and reduce the impact of natural disasters like cyclones and tsunamis.
  - ✓ Acting as carbon sinks, wetlands help mitigate climate change by storing carbon and controlling temperatures.
- ❖ **Water Purification and Groundwater Recharge:** Wetlands act as natural water filters, trapping pollutants and sediments. They help replenish groundwater reserves.
- ❖ **Livelihoods and Economy:** Millions of people, especially fishing communities, depend on wetlands for their livelihoods.
  - ✓ Chilika Lake in Odisha, for example, supports over 150,000 fisherfolk.
- ❖ **Cultural and Aesthetic Value:** Many wetlands are part of cultural heritage and serve as important sites for local communities.

#### Challenges in Wetland Conservation in India

- ❖ **Urbanization and Encroachments:** Unplanned urban expansion leads to encroachment, altering natural hydrology.
  - ✓ Example: Bhoj Wetland, Madhya Pradesh, faces significant encroachment due to Bhopal's rapid growth (Ramsar Site Report, 2023).
- ❖ **Pollution from Industrial effluents:** Discharge of untreated sewage and industrial waste degrades water quality and aquatic biodiversity.
  - ✓ Example: Yamuna floodplain wetlands, Delhi, suffer from heavy industrial pollution and untreated sewage.
- ❖ **Climate Change Impact:** Rising temperatures and erratic rainfall patterns alter wetland hydrology.
  - ✓ Example: Wular Lake, J&K, faces fluctuating water levels due to glacial melt and occurrence of cloudbursts in Himalayan states.
- ❖ **Unregulated Tourism and Overexploitation:** Excessive human activity leads to habitat destruction.
  - ✓ Example: In recent years, the firefly habitats in Maharashtra have experienced significant degradation due to unregulated tourism.

- ❖ **Invasive Species Proliferation:** Non-native species, such as water hyacinth, choke wetlands, harming biodiversity and local livelihoods.
  - ✓ Example: Vembanad Lake, Kerala, is overrun by water hyacinth, disrupting aquatic ecosystems
- ❖ **Lack of Awareness and Policy Implementation:** Despite conservation laws, enforcement remains weak.
  - ✓ Example: East Kolkata Wetlands, despite Ramsar Site status, suffer from poor enforcement, leading to degradation.

### Initiatives for Wetland Conservation

- ❖ **Legal Protection:** Wetlands are protected under various national laws, including the Indian Forest Act (1927), the Forest (Conservation) Act (1980), and the Indian Wildlife (Protection) Act (1972).
- ❖ **Wetlands of India Portal by MoEFCC:** It provides comprehensive information on India's wetlands. It includes capacity-building materials, data repositories, and dashboards for each state and union territory.
- ❖ **National Plan for Conservation of Aquatic Ecosystems (NPCA):** A central scheme for the protection of wetlands and lakes.
- ❖ **National Wetland Decadal Change Atlas By Space Applications Centre (SAC):** It highlights the changes in wetlands across the country over the past decade.
- ❖ **Integration with Namami Gange: Ministry of Jal Shakti** highlighted the integration of wetland conservation with the Namami Gange program.
  - ✓ National Mission for Clean Ganga (NMCG) has pioneered initiatives that serve as models for wetland conservation nationwide.
- ❖ **Amrit Dharohar Scheme (Union Budget 2023-24):** It is aimed at optimizing wetland utilization over the next three years. Its goals include enhancing biodiversity, increasing carbon stock, boosting eco-tourism, and generating income for local communities, in line with the government's sustainable development vision.
- ❖ **National Wildlife Action Plan (2017-2031):** It emphasizes the conservation of inland aquatic ecosystems, including wetlands. It advocates for a national wetlands mission to preserve these habitats, recognizing their importance for biodiversity and ecosystem services.
- ❖ **Wetlands (Conservation and Management) Rules, 2017:** Framework to regulate activities around wetlands.

### Key Strategies for Wetland Conservation in India

- ❖ **Integrating Wetland Conservation into Urban Planning:** Smart city projects and infrastructure developments must consider wetland preservation.
  - ✓ **Example:** The Amrit Sarovar Mission aims to rejuvenate water bodies within urban areas, integrating them into sustainable city planning.
- ❖ **Strengthening Legal Protection:** Enhancing enforcement of environmental laws and penalizing encroachment.
  - ✓ **Example:** The Supreme Court's intervention in the Deepor Beel Wetland, Assam, led to restrictions on dumping solid waste in the Ramsar site.
- ❖ **Restoration & Scientific Research:** Using advanced technology for wetland restoration and biodiversity conservation.
  - ✓ **Example:** The Namami Gange Programme employs scientific approaches to rejuvenate wetlands along the Ganges.
- ❖ **Community Participation:** Local involvement in conservation efforts ensures sustainable management.
  - ✓ **Example:** The Chilika Development Authority (CDA) involves local fishers in wetland governance, leading to successful conservation outcomes.

- ❖ **Strengthening Policy Enforcement:** Strict implementation of environmental laws is needed to prevent wetland degradation.
  - ✓ **Example:** The National Green Tribunal (NGT)'s orders on Mansagar Lake, Jaipur, prevented construction activities harming the ecosystem.
- ❖ **Funding & Incentives for Wetland Conservation:** Providing financial support for conservation projects through CSR initiatives.
  - ✓ **Example:** Amazon-ARGA MoU (2025) supports women entrepreneurs in wetland-based sustainable livelihoods.
- ❖ **Eco-Tourism and Sustainable Livelihoods:** Promoting wetlands as eco-tourism sites can generate revenue while ensuring protection.
  - ✓ **Example:** The Loktak Lake Floating Homestays Project in Manipur integrates conservation with sustainable tourism.
- ❖ **Scientific Monitoring and Research:** Advanced technology should be used to assess wetland health and formulate data-driven policies.
  - ✓ **Example:** ISRO's National Wetland Inventory and Assessment (2022) provides crucial satellite-based insights into wetland conditions.

## Conclusion

- ❖ Wetlands are indispensable to India's ecological and economic security. While India has taken commendable steps toward conservation, there is an urgent need to integrate wetland management into mainstream policymaking.
- ❖ By combining legal, scientific, and community-driven approaches, India can safeguard these vital ecosystems for future generations.

## US WITHDRAWN FROM LOSS AND DAMAGE FUND

**Context:** The US has withdrawn from the board of the Loss and Damage Fund.

### Loss and Damage Fund (LDF)

- ❖ It was established at the 2022 UNFCCC Conference (COP27) in Egypt to provide financial support to regions suffering both economic and non-economic losses caused by climate change.
- ❖ These include extreme weather events and slow-onset processes, such as rising sea levels.
- ❖ The LDF is overseen by a Governing Board that determines how the Fund's resources are disbursed, with the World Bank serving as the interim trustee.

### Objectives

- ❖ The purpose of the Fund is to assist developing countries that are particularly vulnerable to the adverse effects of climate change in responding to economic and non-economic loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events.

### Concerns

- ❖ Climate funds are often too slow to be accessible immediately after a disaster, particularly for local communities at the sub-national level.
  - ✓ It is anticipated that the LDF may face similar challenges.
- ❖ Without drastic emissions reductions, more countries will suffer from climate change's devastating effects, making additional resources for mitigation, adaptation, and loss and damage critical to achieving the Sustainable Development Goals.
- ❖ The US withdrawal undermines global climate justice and must be held accountable for its role in climate damage and reparations.

## Conclusion and Way Forward

- ❖ The effectiveness of the Loss and Damage Fund depends on addressing gaps left by existing climate finance institutions like the Green Climate Fund.
- ❖ However, for the fund to truly be effective, the root cause of climate change—emissions—must be tackled.
- ❖ India needs a clear legal and policy framework to streamline climate finance for adaptation and loss and damage, in line with locally led adaptation principles crucial for vulnerable communities.

## WORLD AIR QUALITY REPORT 2024

**Context:** According to the World Air Quality Report 2024, thirteen of the world's top 20 most polluted cities are in India, with Byrnihat on the Assam-Meghalaya border being the most polluted.

### Key Findings of the report

- ❖ India is the fifth most polluted country in the world, with an average Air Quality Index (AQI) of 50.6  $\mu\text{g}/\text{m}^3$  – 10 times higher than the World Health Organization's (WHO) annual PM<sub>2.5</sub> guideline value of 5  $\mu\text{g}/\text{m}^3$ .
  - ✓ In 2023, India was the third most polluted country.
- ❖ Delhi continues to be the most polluted Capital city in the world with an average PM<sub>2.5</sub> concentration of 91.8  $\mu\text{g}/\text{m}^3$ .
- ❖ Out of the 138 countries and regions, 126 (91.3%) exceeded the WHO annual PM<sub>2.5</sub> guideline value of 5  $\mu\text{g}/\text{m}^3$ .
  - ✓ Only 17% of global cities met WHO air pollution guidelines.
- ❖ PM<sub>2.5</sub> concentrations decreased in every country in Southeast Asia, though trans-boundary haze and lingering El Niño conditions remain major factors.

### Steps Taken by Government of India to combat Air Pollution

- ❖ **National Clean Air Programme (NCAP):** Launched in 2019, NCAP is a comprehensive initiative with the goal of reducing air pollution in identified cities and regions across India.
  - ✓ The program focuses on improving air quality monitoring, implementing stricter emission standards, and promoting public awareness.
- ❖ **Bharat Stage VI (BS-VI) Emission Standards:** The government implemented BS-VI emission standards for vehicles nationwide in 2020.
- ❖ **Pradhan Mantri Ujjwala Yojana (PMUY):** The PMUY scheme aims to provide clean cooking fuel to households by promoting the use of liquefied petroleum gas (LPG) as an alternative to traditional biomass-based cooking methods.
- ❖ **FAME (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) Scheme:** The FAME scheme promotes the adoption of electric and hybrid vehicles to reduce air pollution caused by vehicular emissions.
- ❖ **Green Initiatives for Sustainable Habitat (GRIHA):** GRIHA is an initiative to promote sustainable and environmentally friendly practices in the construction and operation of buildings.
- ❖ Waste Management Programs including the Swachh Bharat Abhiyan, aim to address solid waste issues and promote cleaner disposal methods.
- ❖ **Commission for Air Quality Management:** The Commission has been set up for Air Quality Management in the National Capital Region and Adjoining Areas for better coordination, research, identification, and resolution of problems surrounding the air quality index.
- ❖ **Graded Response Action Plan (GRAP):** It is a set of emergency measures that kick in to prevent further deterioration of air quality once it reaches a certain threshold in the Delhi-NCR region.



- ❖ **Promotion of Public Transportation:** Encouraging the use of public transportation, such as buses and metro systems, helps reduce the number of individual vehicles on the road, consequently lowering vehicular emissions.

## ALARMING SURGE IN GLOBAL SEA LEVELS IN 2024

**Context:** NASA reported that global sea levels rose faster than expected in 2024, reaching 0.59 cm per year, surpassing the anticipated 0.43 cm.

### Global Mean Sea Level

- ❖ Global mean sea level provides an integrative measure of the state of the climate system, encompassing both the ocean and cryosphere (ice covered portions of Earth).
- ❖ It is the average height of the entire ocean surface.
- ❖ It is a key indicator of climate change, reflecting changes in both the ocean and ice-covered regions.

### Causes of Global Mean Sea Level changes

- ❖ **Ice Melt:** Warming causes ice sheets and glaciers to melt, adding freshwater to the ocean.
- ❖ **Thermal Expansion:** As oceans absorb heat, water expands, raising sea levels.
  - ✓ In 2024, thermal expansion contributed to two-thirds of the rise, a shift from previous years when melting ice was the dominant factor.
  - ✓ It was also the warmest year on record, with Earth's oceans at their highest levels in three decades. Since 1993, global sea levels have risen by 10 cm, with the rate of rise more than doubling.
- ❖ **Land Water Storage:** Changes in water storage on land, such as groundwater pumping or dam building, can alter the amount of water in the ocean.
- ❖ Climate change is the primary driver of global sea level rise.

### Effects of Global Sea Level Rise

- ❖ Threatens infrastructure, including roads, bridges, and buildings, leading to increased repair costs.
  - ✓ Causes more frequent and severe coastal flooding, exacerbating erosion and saltwater intrusion into freshwater supplies.
  - ✓ Endangers coastal ecosystems (e.g., mangroves, coral reefs) and displaces people in low-lying areas, causing social and economic challenges.
- ❖ **Economic and Social Impacts:** Rising seas lead to higher costs for coastal protection (e.g., sea walls) and infrastructure repairs.
  - ✓ Displacement of communities and loss of livelihoods (tourism, fishing, agriculture) due to coastal flooding and erosion.
  - ✓ Disrupts economic activities and places strain on social services, especially in vulnerable regions.

### Countries Most Affected by Rising Sea Levels:

- ❖ **High-Risk Countries:** Bangladesh, China, India, and the Netherlands are highly vulnerable.
- ❖ **Pacific Island Nations:** Kiribati, Tuvalu, and the Marshall Islands face extreme risks due to high exposure to storms and sea-level sensitivity.

### What can be done to counter sea level rise?

- ❖ **Reduce Greenhouse Gas Emissions:** The most important action is to slow global warming by cutting emissions, the primary cause of climate change and sea level rise.
- ❖ **Mitigation and Adaptation:** Build infrastructure like sea walls and storm surge barriers to protect against flooding and erosion.
  - ✓ Improve drainage systems and construct flood-resistant buildings.

- ✓ Restore natural barriers like mangroves, wetlands, and coral reefs to absorb wave energy and reduce storm surge impacts.
- ❖ **Disaster Risk Reduction:** Strengthen disaster risk reduction plans and enhance early warning systems, supported by the UN, to address sea level-related incidents.
- ✓ In some cases, relocate communities from vulnerable coastal areas as part of adaptation strategies.

## MANGROVE FOREST COVER INCREASE

**Context:** Tamil Nadu's mangrove forest cover has nearly doubled from 4,500 ha in 2021 to 9,039 ha in 2024, due to new plantations and preservation of existing mangroves.

### Mangroves

- ❖ Mangroves are salt-tolerant plants found in tropical and subtropical intertidal regions, providing refuge for coastal biodiversity and acting as bio-shields against extreme climatic events.
- ❖ They are adapted to thrive in coastal regions with brackish water and wet, loose soil.
- ❖ They have tangled prop roots that help them survive tides and capture sediments while slowing water flow.

### Importance

- ❖ **Climate Change Mitigation:** Mangroves stabilize coastlines, reduce erosion, encourage biodiversity, and protect coastal communities from sea-level rise and natural disasters.
- ❖ **Carbon Sinks:** Mangroves store carbon at up to four times the rate of terrestrial forests, making them vital for achieving net zero emissions .
- ❖ **Ecosystem and Habitat Support:** Mangroves support interconnected terrestrial, freshwater, and marine habitats, including species like Royal Bengal Tigers and river dolphins.
  - ✓ They capture sediments, create fertile lands, and help marine life thrive by making water clearer.
- ❖ **Disaster Risk Reduction:** Mangroves act as the first line of defense against tropical storms, cyclones, and hurricanes, slowing down winds and minimizing land impact.
- ❖ **Socio-economic Importance:** Mangroves provide critical jobs and protein for millions of small-scale fishers worldwide
  - ✓ They are also important for sustainable timber and fuelwood collection.

### Threats

- ❖ The mangrove ecosystem faces pressures from population growth, land demand, and the need for resources like timber, fodder, fuel-wood, and fisheries.
- ❖ Aquaculture and fisheries obstructing tidal flow are significant threats to mangrove ecosystems.
- ❖ Agricultural and industrial activities in Coastal Regulation Zone areas have led to mangrove destruction.

### Steps

- ❖ **MISHTI Initiative:** The government's MISHTI initiative, aiming for large-scale mangrove plantation, is implemented through the MGNREGS, CAMPA Fund, and other sources.
  - ✓ The MISHTI initiative aligns with India's Nationally Determined Contributions to create an additional 2.5-3 billion tonnes of carbon dioxide equivalent carbon sink by 2030.
- ❖ **Mangrove Alliance for Climate :** India joined the Mangrove Alliance for Climate at the 27th Conference of the Parties in Egypt to address climate change.

### Suggestions and Way Forward

- ❖ Mangroves play a crucial role in global conservation efforts by storing significant amounts of carbon, helping mitigate climate change and reducing greenhouse gas emissions.

- ❖ Mangroves are key guardians of coasts and essential for the environment and communities, making their conservation a necessary priority.
- ❖ There is a need to promote sustainable livelihoods such as eco-tourism and carbon credit programs, as well as district-specific planning for the preservation and expansion of mangrove ecosystems.

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- ❖ **Ice Melt:** Warming causes ice sheets and glaciers to melt, adding freshwater to the ocean.
- ❖ **Thermal Expansion:** As oceans absorb heat, water expands, raising sea levels.
  - ✓ In 2024, thermal expansion contributed to two-thirds of the rise, a shift from previous years when melting ice was the dominant factor.
  - ✓ It was also the warmest year on record, with Earth's oceans at their highest levels in three decades. Since 1993, global sea levels have risen by 10 cm, with the rate of rise more than doubling.
- ❖ **Land Water Storage:** Changes in water storage on land, such as groundwater pumping or dam building, can alter the amount of water in the ocean.
- ❖ Climate change is the primary driver of global sea level rise.

### Effects of Global Sea Level Rise

- ❖ Threatens infrastructure, including roads, bridges, and buildings, leading to increased repair costs.
  - ✓ Causes more frequent and severe coastal flooding, exacerbating erosion and saltwater intrusion into freshwater supplies.
  - ✓ Endangers coastal ecosystems (e.g., mangroves, coral reefs) and displaces people in low-lying areas, causing social and economic challenges.
- ❖ **Economic and Social Impacts:** Rising seas lead to higher costs for coastal protection (e.g., sea walls) and infrastructure repairs.
  - ✓ Displacement of communities and loss of livelihoods (tourism, fishing, agriculture) due to coastal flooding and erosion.
  - ✓ Disrupts economic activities and places strain on social services, especially in vulnerable regions.

### Countries Most Affected by Rising Sea Levels:

- ❖ **High-Risk Countries:** Bangladesh, China, India, and the Netherlands are highly vulnerable.
- ❖ **Pacific Island Nations:** Kiribati, Tuvalu, and the Marshall Islands face extreme risks due to high exposure to storms and sea-level sensitivity.

### What can be done to counter sea level rise?

- ❖ **Reduce Greenhouse Gas Emissions:** The most important action is to slow global warming by cutting emissions, the primary cause of climate change and sea level rise.
- ❖ **Mitigation and Adaptation:** Build infrastructure like sea walls and storm surge barriers to protect against flooding and erosion.
  - ✓ Improve drainage systems and construct flood-resistant buildings.

- ✓ Restore natural barriers like mangroves, wetlands, and coral reefs to absorb wave energy and reduce storm surge impacts.
- ❖ **Disaster Risk Reduction:** Strengthen disaster risk reduction plans and enhance early warning systems, supported by the UN, to address sea level-related incidents.
- ✓ In some cases, relocate communities from vulnerable coastal areas as part of adaptation strategies.

## 1ST GLACIER DECLARED DEAD FROM CLIMATE CHANGE

**Context:** Satellite images taken more than three decades apart show the disappearance of Iceland's Okjökull.

- ❖ It was the first glacier to be officially declared dead as a result of human-caused climate change in 2014.
- ❖ Okjökull was a dome-shaped glacier situated around the summit crater on Ok, a 1,200 meters shield volcano located 71 kilometers northwest of Reykjavík, Iceland.
- ❖ In 2023, Iceland also created the world's first iceberg graveyard, where ice-like headstones were constructed for the 15 major glaciers listed on the Global Glacier Casualty List, all of which are either dead or critically endangered.
- ❖ This list includes the Anderson Glacier in Washington state, which, in 2015, became the first U.S. glacier to be declared dead.

## Earth's Cryosphere

- ❖ **Cryosphere:** The term "cryosphere" originates to the Greek word 'kryos' for frost or ice cold.
- ❖ It includes the components of the Earth System at and below the land and ocean surface that are frozen.
- ❖ They include snow cover, glaciers, ice sheets, ice shelves, icebergs, sea ice, lake ice, river ice, permafrost, and seasonally frozen ground, and solid precipitation.
- ❖ An ice sheet is defined as a mass of glacial land that extends more than 50,000 square kilometers across a land.
- ❖ There are only two ice sheets on Earth today, the Greenland and Antarctic Ice Sheets.
- ❖ Ice on both is more than 2 kilometers thick.
- ❖ Antarctic and Greenland Ice Sheets contain more than 70% of the freshwater ice on Earth.

## Related Facts:

- ❖ 70% of Earth's fresh water exists as snow or ice.
- ❖ Around 10% of Earth's land area is covered by glaciers or ice sheets.

## Roles and Significance of Cryosphere

- ❖ **Climate Regulation:** Reflects sunlight (albedo effect) and helps regulate Earth's temperature.
- ❖ **Sea Level Control:** Stores freshwater; melting contributes to rising sea levels.
- ❖ **Global Water Cycle:** A source of freshwater when glaciers and snow melt.
- ❖ **Habitat:** Provides ecosystems for specialized species.
- ❖ **Indicator of Climate Change:** Sensitive to temperature changes, it serves as a marker for global warming.

## Threats to the Cryosphere and its Global Impact

- ❖ **Global Warming:** Higher global temperatures are causing widespread melting of glaciers, ice caps, and sea ice.
- ❖ **Rising Sea Levels:** Melting ice contributes to higher ocean levels, threatening coastal areas.
- ❖ **Loss of Habitats:** Species dependent on ice-covered regions face habitat loss.
- ❖ It also affects important fish stocks, marine mammals and bird populations.



- ❖ **Permafrost Thawing:** Permafrost is a layer of frozen soil, composed of soil, gravel, and sand bound together by ice.
- ❖ Permafrost contains a lot of carbon dioxide and methane that has been stored over thousands of years.
- ❖ Current rapid thawing releases carbon dioxide and methane into the atmosphere.
- ❖ **Changing Snow Patterns:** Altered snowfall and melting patterns disrupt ecosystems and water availability.

### Global Initiatives to Conserve Cryosphere

- ❖ **Paris Agreement (2015):** A global treaty with the goal of limiting global temperature rise to well below 2°C, ideally to 1.5°C, to reduce the impact on the cryosphere and other ecosystems. It encourages countries to reduce greenhouse gas emissions.
- ❖ **International Cryosphere Climate Initiative (ICCI):** Established in 2009 as a result of the COP-15, it is a network of senior policy experts and researchers that works with governments and organizations.
- ❖ It creates and implements initiatives designed to preserve the Earth's cryosphere.
- ❖ **IPCC Reports and Climate Action:** The Intergovernmental Panel on Climate Change (IPCC) regularly releases reports that emphasize the need for action to mitigate the impacts of climate change on the cryosphere.
- ❖ The National Mission for Sustaining the Himalayan Ecosystem (NMSHE) is one of the eight missions under the National Action Plan on Climate Change (NAPCC) by India.
- ❖ It intends to evolve suitable management and policy measures for sustaining and safeguarding the Himalayan ecosystem.
- ❖ **CryoNet (WMO):** The World Meteorological Organization's Cryosphere Observing Network (CryoNet) aims to monitor and track changes in the cryosphere.
- ❖ **Sustainable Development Goals (SDGs):** The United Nations' SDGs, particularly Goal 13 (Climate Action) and Goal 15 (Life on Land), include objectives to reduce the impacts of climate change on ecosystems, including the cryosphere.
- ❖ **The Arctic Council:** It is a forum for Arctic countries to collaborate on environmental protection, sustainable development, and climate change mitigation in the Arctic region.
- ❖ **Global Ice Monitoring Initiatives:** Programs like the Global Cryosphere Watch (GCW) and the European Space Agency's CryoSat mission provide essential data for monitoring ice mass loss and other cryospheric changes globally.

### Conclusion

- ❖ All living beings depend directly or indirectly on the cryosphere.
- ❖ Conserving the cryosphere is essential for maintaining the balance of Earth's climate, ecosystems, and freshwater resources.

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