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INDEX

1. GENERAL STUDIES 1	1
1.1. INDIAN SOCIETY	1
1.1.1. Nari Shakti: India's Defining Reform for the Next Decade	01
1.2. GEOGRAPHY	04
1.2.1. Dry Days Ahead: Preparing for a Rainfall-Deficit Monsoon in India	04
1.3. CULTURE	09
1.3.1. Subhas Chandra Bose's Intellectual & Political Philosophy	09
2. GENERAL STUDIES 2	12
2.1. POLITY & GOVERNANCE	12
2.1.1. India's Higher Education	12
2.1.2. Constitutional Safeguards and Emerging Concern	16
2.1.3. Jan Vishwas 2.0	20
2.1.4. Reimagining Scholarships as the Bedrock of India's Higher Education	24
2.1.5. The Executive Office Without a Limit	29
2.1.6. Evolution of Identity: Examining the Renaming of Kerala to Keralam	33
2.1.7. On the Sabarimala Temple Entry Case and Review Petition	38
2.1.8. Delimitation in India	41
2.1.9. India's National Rural Livelihood Mission (NRLM)	46
2.1.10. Impact of Weakening Unionisation on Workers' Rights in India	51
2.1.11. The Challenge to Universal Adult Franchise	56
2.2. INTERNATIONAL RELATIONS	61
2.2.1. Neighbours First: Strengthening the India-Nepal Relationship	61
2.2.2. India's Strategic Pragmatism in Foreign Policy	64
3. GENERAL STUDIES 3	67
3.1. ECONOMY	67
3.1.1. Supply Chain Resilience	67
3.1.2. India's LPG Crisis: A Welfare System Without Supply Security	70
3.1.3. Thermal Crisis in India's Textile Surge	76
3.1.4. India's Informal Urban Workforce	81
3.1.5. The Developmental Paradigm in Democratic Politics	84
3.1.6. The Cost of Disinflation: Comparing India, The U.S., and The U.K.	87
3.2. ENVIRONMENT	91
3.2.1. India's Updated Climate Pledges	91
3.2.2. Heat Waves and Urban Heat Islands (UHI)	94
3.3. INTERNAL SECURITY	98
3.3.1. Naxalism in India	98

3.4. SCIENCE AND TECHNOLOGY	103
3.4.1. Artemis II Mission	103
3.4.2. India's Nuclear Energy Program	106
3.4.3. Quantum Technology	110
3.5. DISASTER MANAGEMENT	113
3.5.1. Disaster Management in India	113
4. GENERAL STUDIES 4	118
4.1. ETHICS	118
4.1.1. The Crisis of Moral Legitimacy in Modern Politics	118

GENERAL STUDIES 1

1.1. INDIAN SOCIETY

1.1.1. NARI SHAKTI: INDIA'S DEFINING REFORM FOR THE NEXT DECADE

Context:

- The paradigm shift from "**Development for Women**" to "**Women-led Development**" marks a cornerstone of India's strategy for Viksit Bharat @2047. Nari Shakti (Women Power) is no longer viewed as a welfare objective but as a critical driver of the nation's socio-economic and political transformation.



Key Pillars of Women Empowerment in India

1. Political Empowerment: The Legislative Milestone

The **Nari Shakti Vandan Adhiniyam (106th Constitutional Amendment Act, 2023)** is the flagship reform intended to restructure the political landscape.

- Key Provisions:**
 - Reserves **33%** of seats for women in the Lok Sabha, State Legislative Assemblies, and the Delhi Assembly.
 - Applies to seats reserved for SCs and STs within these bodies.
 - Implementation is contingent upon the **post-2026 Delimitation** exercise and the completion of the next Census.
- Significance:**
 - Breaking the "Proxy" Governance:** Aims to replicate the success of the 73rd/74th Amendments (where over **1.4 million** women serve in local bodies) at the national and state levels.
 - Policy Inclusivity:** Ensures gender-sensitive legislation in areas like finance, defense, and labor.

2. Economic Empowerment: From Job Seekers to Job Creators

The focus has shifted toward building "Technical Sovereignty" and financial independence for women.

- Lakhpati Didi Initiative:** Targets the creation of **3 crore** Lakhpati Didis (rural women earning ₹1 lakh+ annually) by leveraging the network of nearly 10 crore Self-Help Group (SHG) members.
- Financial Inclusion:** Under **PM Mudra Yojana**, approximately **70%** of loans have been sanctioned to women entrepreneurs.
 - Stand-Up India** reserves 80% of its beneficiaries for women, specifically focusing on greenfield enterprises.
- STEM Participation:** India currently boasts a **43% female enrollment** rate in higher education STEM courses, one of the highest globally, signaling a shift in the traditional workforce.

3. Social and Life-Cycle Interventions

True reform requires removing structural "bottlenecks" that limit a woman's time and agency.

- **Dignity and Safety: Swachh Bharat Mission:** Construction of over 11 crore toilets addressed sanitation-related health risks and safety concerns.
 - **Jal Jeevan Mission:** Providing tap water to rural households reduces the "time poverty" of women who traditionally spent hours fetching water.
- **Asset Ownership: PM Awas Yojana (PMAY)** prioritizes women as owners or co-owners of houses, significantly enhancing their bargaining power within the household.
- **Mission Shakti 2.0:** A unified umbrella scheme for the safety (Sambal) and empowerment (Samarthya) of women through a life-cycle approach.

Emerging Opportunities for Nari Shakti

1. Frontier Tech & Digital Economy

- **"AI by HER" Initiative:** Direct funding (up to ₹2.5 Cr) for women-led AI startups targeting healthcare and agriculture.
- **Drone Sakhis (Namo Drone Didi):** Evolution from pilots to **Agri-Tech service providers**, managing drone fleets for precision farming.
- **Semiconductor Mission:** Increasing integration into high-end VLSI design and assembly-test-mark-pack (ATMP) roles.

2. Green Energy & Circular Economy

- **Decentralized Renewable Energy (DRE):** Transition from consumers to **owners** of solar mini-grids and solar-powered industrial units.
- **Oorja Sakhis:** A technical cadre managing solar infrastructure and EV charging stations in Tier-2 and Tier-3 cities.
- **Waste-to-Wealth:** SHG partnerships with global brands for sustainable fashion and ethical plastic recycling.

3. Financial & Strategic Inflection Points

- **WEP Next & Mudra 2.0:** Enhanced credit limits and specialized techno-entrepreneurship incubation for the North-East and hilly regions.
- **SHE-Mart & GeM:** Direct access for women-led SHGs to compete in large-scale government public procurement.
- **Blue Economy:** New leadership roles in maritime logistics and sustainable aquaculture.

4. Space & Defense

- **Space-Tech:** Expansion into **Satellite Data Analytics** and private space-tech startups following Chandrayaan-3's success.
- **Combat & Command:** Entry into all Armed Forces branches, specifically in Cyber Security and Electronic Warfare leadership.

Challenges to Nari Shakti and Women-led Development

1. Political and Governance Hurdles

- **The "Proxy" Phenomenon:** Despite 44% representation in local bodies, "Sarpanch Patis" often hijack decision-making, reducing empowerment to tokenism.

- **Legislative Lag:** Implementation of the **Nari Shakti Vandan Adhiniyam (2023)** awaits the post-2026 census and delimitation, delaying national representation until 2029 or 2034.
- **The "Stained Glass Ceiling" in Judiciary:** Structural barriers in the collegium system and late-stage appointments lead to critically low female representation in the Supreme Court and High Courts.

2. Economic and Labor Market Barriers

- **The "Sticky Floor" Effect:** Nearly 94% of women work in the informal sector (agriculture/textiles), trapped in low-paying roles with zero social security.
- **The Motherhood Penalty:** A "leaky pipeline" at mid-management persists due to lack of flexible infrastructure, forcing high-potential women to exit the workforce.
- **Credit Rationing:** Women-led startups receive only **4% of total venture funding**, hindered by a lack of collateral and systemic investor bias.

3. Socio-Cultural and Structural Constraints

- **Systemic Time Poverty:** Women perform 84% of unpaid care work, creating a "double burden" that limits skill acquisition and leadership opportunities.
- **The "Missing" Asset Base:** Disproportionately low ownership of land and assets weakens women's economic bargaining power within households.
- **Digital Harassment:** Deepfakes and tech-facilitated abuse create a new frontline of violence, silencing women in digital public spaces.

4. Emerging Challenges

- **AI and Design Bias:** With only 22% of AI professionals being women, algorithmic designs often lack gender-sensitive safety and privacy perspectives.
- **Climate-Induced "Triple Burden":** Climate-led male migration forces rural women to manage farm labor, domestic care, and resource scarcity without legal land titles.

Way Forward

- **Transforming Political Representation:** Move beyond tokenism by institutionalizing governance training for women and creating digital whistleblowing channels to eliminate "Sarpanch Pati" (proxy) interference.
- **Judicial and Institutional Diversity:** Reform the collegium system to ensure a mandatory minimum threshold for female representation in the High Courts and Supreme Court.
- **Scaling Economic Independence:** Utilize the LokOS app and Digital Aajeevika Register to monitor income growth, ensuring 3 crore rural women achieve "Lakhpati Didi" status.
- **Market and Career Equity:** Bridge the "Motherhood Penalty" through performance normalization policies and provide SHGs direct market access via SHE-Mart and GeM integration.
- **Digital and Technological Sovereignty:** Increase female participation in AI and STEM to 50% to ensure gender-neutral algorithms while strengthening the Digital India Act against deepfakes and tech-abuse.
- **Climate and Asset Resilience:** Transition women to "Agri-Managers" through climate-smart hiring centers and incentivize joint property titling to secure credit collateral for rural women.

Conclusion

Nari Shakti is the bridge between a developing and a developed India. The next decade will be defined not just by how many women are in the workforce, but by how many are in positions of **command and decision-making**.

***Q.** Examine the role of the 'Life-Cycle' approach in government schemes like Nari Shakti Vandan Adhiniyam in ensuring the long-term dignity and agency of women in India. 15 Marks*

1.2. GEOGRAPHY

1.2.1. DRY DAYS AHEAD: PREPARING FOR A RAINFALL-DEFICIT MONSOON IN INDIA

Context:

- India's **South-West Monsoon** (June–September) is the lifeline of the nation's agriculture, water security and rural economy, contributing nearly **70 per cent of the country's annual rainfall** and sustaining the livelihoods of over half a billion people directly dependent on rain-fed farming.
- Following **two consecutive years of above-normal precipitation**, the **India Meteorological Department (IMD)** has now forecast an **8 percent rainfall deficit** with an uncertainty band of $\pm 5\%$ for the **2026 monsoon season** — a development that demands urgent policy attention, scientific understanding, and institutional preparedness.



Understanding Rainfall Classification

The **India Meteorological Department (IMD)** classifies **seasonal rainfall** relative to the **Long Period Average (LPA)**, currently set at **87 cm for the June–September period** based on the **mean summer-monsoon rainfall over India** for the base period **1971–2020**. The main categories are:

- Normal Rainfall:** Rainfall between **96 per cent and 104 per cent of LPA**. In such years, **agricultural output is largely stable**, reservoir storage is adequate and the macro-economy remains insulated from weather shocks.
- Above Normal / Excess Rainfall:** **Rainfall above 104 per cent of LPA**. While beneficial for water storage and groundwater recharge, excess rainfall can trigger floods, waterlogging and crop damage in vulnerable districts.
- Below Normal Rainfall:** **Rainfall between 90 per cent and 96 per cent of LPA**. This signals an emerging moisture deficit but may not trigger a formal drought declaration unless spatial distribution is severely skewed.
- Deficient Rainfall:** **Rainfall below 90 per cent of LPA at the national scale**. Deficient rainfall over large spatial extents is typically associated with drought conditions, disrupted kharif sowing, and significant agricultural distress.
- Drought:** The term **drought** refers to a **prolonged and significant deficiency of precipitation over a region relative to its expected average**, resulting in **water scarcity that adversely affects agriculture, ecosystems, and human populations**.

- **Drought Classification:** In the **Indian context**, droughts are formally classified into **meteorological drought** (rainfall deficiency), **hydrological drought** (depletion of surface and groundwater), **agricultural drought** (soil moisture deficit hampering crop growth), and **socio-economic drought** (when water scarcity disrupts livelihoods and food security).
- The **National Disaster Management Authority (NDMA)** guidelines provide the **administrative framework for drought declaration, compensation, and relief**.
- **Current Context:** In 2015, the IMD's first-stage forecast was **93% of LPA (below normal)**; the actual rainfall turned out to be **86% of LPA**, which marked a **deficient monsoon** and is widely treated in public discourse as a **drought year**. This historical pattern underscores that **even a "below-normal" forecast can rapidly slide into deficit and drought conditions**.

How the Monsoon Works: Role of Ocean–Atmosphere Linkages

The **Indian summer monsoon** is primarily driven by the **differential heating of land and ocean**. In summer, the **Indian subcontinent** heats up faster than the surrounding seas, creating a **low-pressure zone** over the land.

Warm, moist air from the **southern Indian Ocean** is drawn inland, **rises over mountain ranges** such as the **Western Ghats** and the **Himalayan foothills** and **condenses to produce widespread rainfall**. However, this seemingly straightforward mechanism is heavily modulated by **large-scale ocean-atmosphere interactions**, especially **El Niño**, **La Niña** and the **Indian Ocean Dipole (IOD)**.

A. El Niño: El Niño refers to the **abnormal warming of sea surface temperatures (SSTs) in the central and eastern equatorial Pacific Ocean**, typically occurring at intervals of **two to seven years** and **often exceeding 1°C above normal**.

- **Origin:** The name 'El Niño' (Spanish for 'the Child') was historically used by **Peruvian fishermen** who observed **warm coastal waters around Christmas time**. In meteorological terms, it is the **warm phase of the El Niño–Southern Oscillation (ENSO) cycle** — a **coupled ocean–atmosphere system**.
- **Mechanism:** During an El Niño event, the **Walker Circulation** — the **large-scale east–west atmospheric circulation over the tropical Pacific** — weakens. This suppresses convection (**rising air and rainfall**) over the **Indo-Pacific region** and enhances it over the **central and eastern Pacific**.
- **Impact:** The consequent **anomalous subsidence of dry air** over the Indian subcontinent **weakens the monsoon trough**, reduces **moisture flux from the Arabian Sea and Bay of Bengal**, and leads to **below-normal or deficient rainfall** over **large parts of India**. Since 1950, El Niño has coincided with a deficient monsoon in India **in nine out of sixteen occurrences**.
- **Current Context:** IMD's 2026 forecast anticipates that El Niño conditions will intensify in the **second half of the monsoon season — August and September**, making the latter part of the season particularly vulnerable.
 - Critically, the **timing of El Niño** determines its impact. **When warming peaks outside the monsoon months, its influence is limited**. The **2019 season illustrates this well**: despite early El Niño-like conditions, rainfall turned out to be above normal because the warming was short-lived and did not sustain through the core monsoon months.

B. La Niña: La Niña is the **opposite phase of ENSO**, characterised by **anomalous cooling of SSTs in the central and eastern equatorial Pacific**. The name 'La Niña' (Spanish for 'the Girl') reflects its contrast with El Niño.

- **Mechanism:** During a La Niña phase, the **Walker Circulation strengthens, enhancing convection over the Indo-Pacific region and increasing the supply of moisture** to the Indian subcontinent.
- **Impact:** La Niña years are therefore generally associated with **above-normal or excess rainfall** over India, particularly over **central and peninsular India**, though regional variability persists. India's recent years of **surplus rainfall** can be partly attributed to **La Niña conditions**, illustrating the cyclical nature of **monsoon variability**.

C. Indian Ocean Dipole (IOD)- Counter-Mechanism: The **Indian Ocean Dipole (IOD)** sometimes called the "**Indian Niño**" is characterised by differences in SSTs between the **western Indian Ocean (near the Arabian Sea and East Africa) and the eastern Indian Ocean (near Sumatra and Indonesia)**. Unlike ENSO, which operates in the Pacific, the **IOD is an indigenous Indian Ocean phenomenon** that exercises a more **direct and proximate influence on the Indian monsoon**.

- **Positive IOD:** A **Positive IOD (pIOD)** event occurs when the western Indian Ocean warms anomalously while the eastern Indian Ocean cools. This strengthens the **moisture-laden westerly winds** flowing towards India, enhances convection over the subcontinent, and is associated with **above-normal rainfall** over most of India. Crucially, a positive IOD can **counteract or partially offset the negative effects of a concurrent El Niño**
- **Negative IOD:** Conversely, a **Negative IOD (nIOD)**, in which the eastern Indian Ocean is warmer than the western Indian Ocean, suppresses moisture flux towards India and can compound the deficit effects of El Niño, thereby amplifying the risk of drought.

D. Madden-Julian Oscillation (MJO)-The Intraseasonal Regulator: An **eastward-moving system of enhanced and suppressed convection** over the **tropical Indian and Pacific Oceans**, operating on **30–60 day timescales**.

- **Active Phase over Indian Ocean:** Enhances **moisture convergence and rainfall over India**.
- **Suppressed Phase over Indian Ocean:** Leads to **temporary weakening (break) in monsoon rainfall**.
- Used by the IMD for **extended-range forecasts (2–4 weeks)** aiding **agriculture and disaster preparedness**.

E. Equatorial Indian Ocean Oscillation (EQUINOO): Variability in **convection over the equatorial Indian Ocean**, identified by **Indian Institute of Tropical Meteorology**; complements IOD in influencing **monsoon rainfall**.

- **Eurasian Snow Cover:** Affects **land–sea thermal contrast**, influencing **monsoon onset and strength**.
- **Atlantic Meridional Overturning Circulation (AMOC):** A large-scale **Atlantic Ocean circulation system** influencing **global climate and monsoon via teleconnections**.
- **North Atlantic Sea Surface Temperatures (SSTs):** Alter **atmospheric circulation**, impacting the **Indian monsoon**.

Why Forecasting the Monsoon is Challenging

- Monsoon prediction is inherently difficult due to the **non-linear interaction of multiple climate drivers**, including El Niño, La Niña and IOD.

- **Key challenges include:**
 - **Timing uncertainty**, as the impact of El Niño depends on whether it peaks during or outside monsoon months
 - **Intensity variation**, since weak El Niño conditions may not significantly disrupt rainfall
 - **Regional diversity**, where different parts of India may experience contrasting rainfall patterns
 - For example, in **2019**, despite the presence of El Niño-like conditions, India recorded **above-normal rainfall**, highlighting the limitations of deterministic forecasting.
- These complexities underscore that forecasts are **probabilistic rather than absolute**, requiring cautious interpretation and flexible policy responses.

Emerging Challenges in a Deficit Monsoon Year

- **Agricultural Stress:** Kharif crops such as **rice, pulses, oilseeds** and **sugarcane** are directly sown during the **monsoon season**. A **shortfall reduces sown area**, lowers yields, and **triggers farm distress**, particularly for small and marginal farmers who lack irrigation access.
- **Inflationary Pressures:** Food inflation is a direct consequence of poor monsoons. Shortages in pulses and oilseeds can disrupt the **Consumer Price Index (CPI)**, forcing the **Reserve Bank of India to maintain high interest rates**, thus slowing economic growth.
- **Fertilizer and Input Uncertainty:** Ongoing **geopolitical tensions in West Asia**, a region critical to **India's supply of natural gas used in urea production** could compound agricultural challenges by disrupting fertilizer availability and inflating input costs at a time when farmers are already dealing with weak rains.
- **Rural Demand Contraction:** The rural economy is closely tied to agricultural income. A poor monsoon weakens rural purchasing power, contracts demand for manufactured goods, and can slow the broader economic recovery.
- **Water–Energy Stress:** A deficient monsoon reduces reservoir recharge, leading to **critically low water storage** that affects both **irrigation and drinking supply during the rabi season**, while also **lowering hydropower generation**, thereby increasing reliance on **costlier thermal power and raising overall energy stress**.

Government Initiatives and Institutional Frameworks

- **National Disaster Management Authority (NDMA):** Provides **coordination and policy guidance for drought response**, including early **warning dissemination and inter-state coordination**.
- **Pradhan Mantri Fasal Bima Yojana (PMFBY):** The flagship crop insurance scheme is **designed to compensate farmers for yield losses due to natural calamities, including drought**. However, enrolment gaps and delayed claim settlements remain persistent concerns.
- **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):** Focuses on "Har Khet Ko Pani" (Water for every farm) and "Per Drop More Crop" through micro-irrigation
- **MNREGA Integration:** The rural employment guarantee scheme acts as an automatic economic stabiliser in drought years, providing wage income to rural households when agricultural work declines.
- **National Water Mission:** Aims to **promote water-use efficiency and conservation**, with special emphasis on irrigation modernisation and groundwater regulation.

- **IMD's Agrometeorological Advisory Services:** Provides **district-level crop and weather advisories to farmers through SMS and Kisan Portals**, enabling informed decisions on sowing time, crop choice, and input use.
- **PM-KUSUM and Solar Irrigation:** The **Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM-KUSUM)** aims to reduce dependence on diesel-powered irrigation by promoting solar pumps, thereby reducing operational costs for farmers in deficit rainfall years and curtailing groundwater over-exploitation.

Way Forward: Policy and Institutional Measures

A. Immediate Preparedness Measures

- **Strengthen Weather–Agriculture Advisory Systems:**
 - Better integrate **IMD forecasts** with **extension services** at the block and panchayat levels so that farmers receive **tailored sowing, crop-choice, and water-management advisories**.
 - Promote **short-duration and drought-resilient varieties** (e.g., short-duration paddy, millets, pulses) in regions where deficits are likely.
- **Ensure Timely Availability of Inputs:**
 - **Shore up fertilizer stocks** and monitor **distribution channels** to prevent localised shortages.
 - Ramp up **domestic production of nitrogen-based fertilizers** and **bio-fertilizers** to reduce dependence on imported gas-linked inputs.
- **Manage Water and Storage Prudently:**
 - Prioritise **equitable water distribution** from reservoirs, especially in **inter-state river basins**.
 - Enforce **summer irrigation restrictions, promote micro irrigation, and encourage community level water saving practices**.

B. Medium- and Long-Term Structural Reforms

- **Invest in Water-Harvesting and Groundwater Recharge:** Scale up **watershed development, pond and tank restoration, and artificial-recharge structures** to capture monsoon runoff and reduce dependence on groundwater.
- Promote **regulated well-spacing, aquifer-mapping, and community-level groundwater management**.
- **Diversify Cropping Patterns:** Gradually shift parts of **paddy dominant landscapes** towards millets, pulses, and oilseeds that are less water intensive and more climate resilient.
- Provide **price-support, market-linkage, and procurement mechanisms** for these crops so farmers are not discouraged by price risks.
- **Enhance Climate-resilient Infrastructure:** Improve **flood and drought-resilient rural infrastructure** (e.g., bunds, drainage channels, community-level storage).
- Integrate **climate-risk assessments** into **urban planning**, especially for **water-supply systems, stormwater drainage, and groundwater-management**.
- **Strengthen Forecasting and Early-Warning Systems:** Invest in **high-resolution models, satellite data, and AI-based tools** to improve the **spatial and temporal accuracy** of monsoon forecasts.
- Expand **real-time monitoring** of **soil-moisture, river-flow, reservoir levels, and groundwater** to support anticipatory decision-making and early-warning for droughts and floods.

Conclusion

India's monsoon, shaped by complex interactions such as **El Niño, La Niña and the Indian Ocean Dipole**, poses **significant risks when deficits arise, particularly for agriculture, water resources, and the broader economy**. Addressing these challenges requires a shift toward anticipatory governance that integrates scientific forecasting, institutional readiness and community resilience to effectively manage growing climate uncertainty.

Q. India's monsoon is increasingly influenced by complex ocean-atmosphere interactions rather than simple land-sea thermal contrast. Discuss and suggest a suitable way forward to enhance India's resilience to monsoon variability. 15 Marks

1.3. CULTURE

1.3.1. SUBHAS CHANDRA BOSE'S INTELLECTUAL & POLITICAL PHILOSOPHY

Context:

- Subhas Chandra Bose was not only a nationalist leader but also a **serious political thinker** who attempted a synthesis of **Eastern spirituality and Western materialism**. His thought represents a shift from **idealism** → **pragmatism** → **dialectical activism**.



1. Philosophical Foundations: From Vedanta to Dialectics

Bose's political actions were governed by a deep-seated philosophical evolution that moved from abstract spiritualism to "Revolutionary Pragmatism."

- The Rejection of Maya:** Initially a follower of Shankaracharya's Vedanta, Bose eventually found the Doctrine of Maya (the world as an illusion) incompatible with revolutionary action. He argued that if the world is an illusion, the struggle for freedom loses its moral urgency.
- The Reality of Spirit:** In his autobiography, *An Indian Pilgrim* (1937), he shifted toward the belief that the world is a manifestation of the **Spirit**. He defined the essential nature of this reality as **Love**.
- Hegelian Influence:** Bose adopted **Hegelian Dialectics** (Thesis + Antithesis = Synthesis) as the law of progress. He believed India's mission was to find a "Higher Synthesis" between the spiritualism of the East and the material dynamism of the West.

2. Samyavada: The Doctrine of Harmonious Equality

Bose did not want India to blindly mimic Western "Isms." Instead, he proposed **Samyavada**—an indigenous socialist framework.

- Etymology:** Derived from *Sāmya* (equality/harmony) and *Vāda* (doctrine).
- The Third Way:** Bose viewed Fascism and Communism as competing stages in a dialectical process. He proposed a synthesis that would adopt the **economic planning** and **social equality** of Communism while retaining the **nationalistic discipline** and **cultural identity** often associated with strong-state systems.
- Global Mission:** In *The Anti-Imperialist Struggle and Samyavada* (1933), he claimed that just as France gave "Liberty" and England "Constitutionalism," India's gift to the world would be the realization of Samyavada.

3. Economic Vision: Scientific Modernization

Bose was a staunch proponent of large-scale industrialization, often putting him at odds with the Gandhian "village economy" model.

- **National Planning:** As Congress President at the **Haripura Session (1938)**, he established the **National Planning Committee** (headed by Nehru). He believed poverty could only be eradicated through a "Scientific Blueprint."
- **Key Pillars of Reconstruction:**
 - Social ownership and control of production and distribution.
 - Abolition of landlordism (Zamidari system).
 - Application of scientific methods to agriculture.

4. Political Praxis: The "Strong State" Theory

Bose held a controversial but pragmatic view on the transition of power in a post-colonial society.

- **The Adarsha Sangh:** He believed that a fractured and impoverished India could not afford a slow, decentralized democracy immediately after independence.
- **Temporary Authoritarianism:** He advocated for a **Strong Central Government** with full powers for a "period of reconstruction." He pointed to the rapid transformations in Kemalist Turkey and Soviet Russia as evidence of the efficiency of centralized rule in modernization.
- **Definition of Freedom:** For Bose, independence was not merely political; it was the removal of caste, communalism, and wealth disparity.

5. Comparative Analysis: Bose vs. Gandhi

Feature	Mahatma Gandhi	Subhas Chandra Bose
Ideology	Spiritualism & Ethical Moralism	Revolutionary Pragmatism & Synthesis
Means	Absolute Non-Violence (Ahimsa)	Force as a legitimate moral necessity
Economy	Decentralized, Rural (Charkha)	Centralized, Industrial (Planning)
State	Skeptical of state power	Believed in a strong, centralized state

Critical Evaluation of Bose's Intellectual & Political Doctrine

1. Strengths: The Visionary Realist

- **Indigenization of Socialism:** Bridged the gap between Western Marxism and Indian tradition by framing *Samyavada* as "Harmonious Equality," making socialist ideals culturally resonant rather than a foreign import.
- **Early Architect of Planning:** Pioneered the shift from agitation to administration by establishing the **National Planning Committee (1938)**, recognizing that economic sovereignty is the backbone of political freedom.
- **Social Inclusivity:** Envisioned a radical *Purna Swaraj* that demanded the total eradication of caste and communalism, while actively mainstreaming women in combat and leadership (e.g., Rani of Jhansi Regiment).
- **Pragmatic Geopolitics:** Demonstrated sophisticated statesmanship by leveraging international power dynamics and alliances, viewing the global stage through the lens of strategic realism.

2. Weaknesses: The Risks of Authoritarianism

- **The Authoritarian Trap:** His proposal for a "strong central government" with absolute powers during reconstruction risks the "slippery slope" where temporary emergency rule evolves into permanent erosion of civil liberties.

- **Underestimation of Diversity:** A rigid, top-down "Adarsha Sangh" model arguably overlooked India's vast ethno-linguistic diversity, which required the flexible, federal democratic structure eventually adopted by the Constitution.
- **The "Synthesis" Dilemma:** Attempting to merge Fascism and Communism presents an ideological paradox, as both systems hold irreconcilable views on individual autonomy versus state supremacy.
- **Divergence from Mass Base:** By prioritizing revolutionary praxis and industrialization over Gandhian *Ahimsa* and rural empowerment, he risked de-linking from the agrarian masses that were the movement's primary engine.

Contemporary Relevance of Bose's Doctrine for India

- **Economic Sovereignty & "Atmanirbhar Bharat":** Bose's push for "scientific large-scale production" is mirrored in modern **Make in India** and **PLI schemes**. His legacy of strategic foresight continues through **NITI Aayog**, evolving from his original National Planning Committee (1938).
- **Strategic Autonomy & Multi-Alignment:** His pragmatic "national interest first" diplomacy serves as a precursor to India's current **Strategic Autonomy**. His focus on Southeast Asia remains a cornerstone of the **Act East Policy** and India's engagement in the **QUAD**.
- **Social Engineering & Inclusivity:** The **INA's** model of communal harmony provides a timeless blueprint for national integration. His creation of the **Rani of Jhansi Regiment** pioneered the vision of *Nari Shakti*, now realized through women's permanent commissions in the Armed Forces.
- **Technology and Governance:** As a modernist, Bose advocated applying science to social issues. This vision is manifested today in **Digital India**, where tools like UPI and Direct Benefit Transfer (DBT) utilize a "Scientific Blueprint" to ensure social justice.
- **National Character & Discipline:** Bose emphasized a disciplined "Adarsha Sangh" to lead national reconstruction. This focus on duty and disciplined citizenship resonates with modern initiatives like the **Fundamental Duties** awareness and youth mobilization through the **NCC/NSS** for nation-building.

Conclusion

Netaji's synthesis of **Vedantic idealism** and **scientific modernism** remains a blueprint for a self-reliant India. His legacy of **strategic autonomy**, **social harmony** and **industrial planning** continues to drive India's journey toward a developed, inclusive superpower.

***Q.** Subhas Chandra Bose's concept of Samyavada was an attempt to synthesize Eastern spiritual philosophy with Western political ideologies. Critically examine its relevance and limitations in the context of modern democratic India. 15 Marks*

Scan to attempt more questions...



GENERAL STUDIES 2

2.1. POLITY & GOVERNANCE

2.1.1. INDIA'S HIGHER EDUCATION

Context:

- India's **higher education sector** has witnessed an **unprecedented expansion** over the past seven decades — from a modest network of 1,600 institutions in 1950 to over **69,000 colleges and universities** by 2022.
- However, the *State of Working India 2026 Report* reveals a critical paradox: while **institutional growth** has been impressive, it has **not been matched** by adequate **teaching capacity, equitable access, or quality of education**.
- The focus must now urgently shift from **mere expansion to ensuring equity and quality** in higher education delivery.



Key Trends Highlighted in State of Working India 2026 Report

A. Institutional Expansion: A Quantitative Leap

1. Growth in Colleges and Universities

- 1950:** India had approximately **1,600 colleges and universities**, most being publicly funded.
- 2022:** The number surged to over **69,000 institutions** — a **43-fold increase** in seven decades.
- Most of the **recent expansion** has been **driven by private providers**, shifting the character of higher education from public to commercial.

2. College Density Across India

- College density** rose from **29 colleges per lakh youth in 2010** to **45 colleges per lakh youth in 2021**.

B. Trends in Enrollment and Social Equity

1. Gross Enrolment Ratio (GER)

- India's **Gross Enrolment Ratio (GER)** — the share of the 18–23 age group enrolled in higher education — increased from **16% in 2011** to **28% in 2022**.
- India's GER is now **broadly aligned with countries at similar income levels**, reflecting notable progress.
- Enrolment rates for **men and women have nearly converged**, signalling improvement in **gender parity**.

2. Participation of Disadvantaged Groups

- Scheduled Castes (SC):** Enrolment rates increased from **11% in 2011** to **26% in 2022**.
- Scheduled Tribes (ST):** Enrolment rates rose from **8% in 2011** to **21% in 2022**.

C. Student-Teacher Ratio

- **Regulatory norms** recommend a **student-teacher ratio** of 15–25:1 in colleges.
- **2010:** The average ratio was **24 students per teacher** — just within the acceptable range.
- **2021:** The ratio remained alarmingly high at **32 students per teacher**.
- Faculty numbers have not kept pace with either the growth in institutions or the rise in student enrolment.

Key Challenges in India's Higher Education Sector

The following systemic hurdles are currently being faced by the higher education system, preventing it from achieving **true equity** and **quality standards**:

- **Regional Inequity in College Distribution:** While the national **college density** rose to **45 per lakh youth** in 2021, districts in **Northern and Eastern India** record fewer than **18**. This uneven geographic spread compels millions to either **migrate** or **drop out**, deepening **socioeconomic inequality**.
- **Acute Shortage of Qualified Faculty:** A severe **faculty shortage** is observed, with the **student-teacher ratio** worsening to **32:1** in 2021—far exceeding the **UGC-recommended norm** of **15–25:1**. The reliance on **contractual and ad-hoc faculty** further undermines **academic accountability** and teaching continuity.
- **Financial Exclusion from Professional Education:** High costs act as a silent barrier; **medicine (₹97,400)** and **engineering (₹72,600)** annual fees often exceed the **total annual per capita expenditure** of poor households. Consequently, **professional education** remains a preserve of the wealthy, perpetuating **intergenerational poverty**.
- **Unregulated Privatisation and Commercialisation:** Much of the recent expansion has been **privately driven**, often without adequate **quality assurance** or **fee transparency**. A dominant **profit motive** frequently leads to under-investment in **laboratories, libraries, and faculty development**, leaving students with a **quality deficit**.
- **Income-Determined Stream Selection:** A student's choice of study is increasingly dictated by **household income** rather than **aptitude**. Wealthier students pursue **high-return professional degrees**, while poorer students are defaulted into **lower-cost humanities**, leading to a significant **misallocation of human talent**.
- **Expansion Without Quality Benchmarks:** Speed has been prioritized over **rigour**, leaving a significant portion of institutions **unaccredited by NAAC**. Without **mandatory accreditation**, there is no mechanism to verify **infrastructure adequacy** or **curricula updates**, eroding public trust in **educational credentials**.
- **Credential Inflation and the Employability Gap:** Rising **enrollment numbers** do not reflect **actual learning**. A large proportion of graduates lack the **technical skills** and **critical thinking** demanded by the market, resulting in **credential inflation** where degrees are awarded without corresponding **professional competence**.

Government Initiatives to Overcome Current Hurdles

- **National Education Policy (NEP) 2020: Envisions GER of 50% by 2035** through **multidisciplinary education, Academic Bank of Credits (ABC)**, and flexible degree structures.
 - **Emphasises teacher training** and quality improvement through the **National Professional Standards for Teachers (NPST)**.
- **PM USHA (Pradhan Mantri Uchchatar Shiksha Abhiyan): Launched** to transform higher educational institutions through **grants, infrastructure support**, and quality-focused reforms.
- **Scholarship and Financial Inclusion Schemes: Central Sector Scholarship Scheme:** Supports **meritorious students** from low-income families pursuing higher education.
 - **National Means-cum-Merit Scholarship:** Targets **economically weaker students** at the school-to-college transition stage.
 - **Dr. Ambedkar Post-Matric Scholarships:** Benefits **SC and ST students** for higher education costs.
- **SWAYAM and Digital Education:** The **SWAYAM platform** offers **free online courses** from top institutions, democratising access to quality content.
 - The **DIKSHA and NDEAR frameworks** aim to bridge the **digital divide** in higher education access.
- **HEFA (Higher Education Financing Agency): Facilitates low-cost loans** to universities for **infrastructure improvement**, supporting quality alongside expansion.

Global Best Practices: Lessons for India

- **Finland — Quality Over Quantity:** Finland maintains a **strict teacher-to-student ratio** with highly qualified, **postgraduate-trained faculty** in all institutions.
- **South Korea — Targeted Financial Support:** South Korea's **income-contingent loan system** ensures that repayment is tied to **graduate income**, reducing the financial burden on students from poor households. **Strong government control** over **tuition fee caps** in private institutions is maintained.
- **Germany — Tuition-Free Higher Education:** Germany offers **tuition-free public university education**, making access to quality higher education a **universal right** rather than a privilege. This model can be partially adapted for India through **publicly-funded expansion** of premier institutions.
- **Brazil — FIES and ProUni Schemes:** Brazil's **ProUni programme** provides full and partial **scholarships** to low-income students in private universities, ensuring **equity in access** to professional courses.
- **OECD Countries — Faculty Development Frameworks:** OECD nations maintain dedicated **faculty development centres** with mandatory **continuous professional development** programmes. India can adopt **mandatory retraining** and upskilling policies for existing college faculty as recommended in **NEP 2020**.

Strategic Way Forward: Transitioning from Expansion to Equity

The following measures are proposed to ensure that the growth of the higher education sector translates into **inclusive** and **high-quality** outcomes for all students:

1. Bridging Regional Disparities and Geographic Gaps

- **Targeted public investment** is needed in underserved districts of **Northern and Eastern India** to establish new institutions or strengthen existing ones.
- **District-level mapping** of educational infrastructure gaps must be conducted and published annually to ensure **data-driven policy** interventions.

2. Revitalizing Faculty Capacity and Teaching Standards

- **Fast-track recruitment drives** for **permanent faculty positions** across public universities must be undertaken to address the acute shortage.
- A **National Faculty Development Mission** should be established to train, certify, and **incentivise** teaching professionals.
- **Contractual and ad-hoc faculty dependency** must be systematically reduced through **regularisation policies** to ensure academic continuity.

3. Dismantling Financial and Cost Barriers

- **Expansion of scholarship coverage** for **SC, ST, OBC, and EWS students** in professional and technical courses is critical for social mobility.
- **Income-contingent loan systems**, as adopted in **South Korea**, can be piloted in India to reduce the **upfront financial burden** on families.
- **Regulation of private institution fee structures** must be strictly enforced to ensure **affordability** and prevent commercialisation.

4. Strengthening Regulatory and Accreditation Frameworks

- The **Higher Education Commission of India (HECI)** framework should be operationalised to monitor **quality standards** and **student-teacher ratios** effectively.
- **Mandatory accreditation** for all colleges—including **private institutions**—must be enforced within a **time-bound framework** to ensure basic infrastructure and learning outcomes.

5. Leveraging Digital Technology for Equitable Access

- Platforms such as **SWAYAM, NPTEL, and e-PG Pathshala** must be actively integrated into **formal degree programmes** to supplement and enrich classroom learning.
- **Public digital infrastructure** must be expanded in **rural and semi-urban areas** to reduce the **digital divide** and democratise access to higher education content.

Conclusion

India's **higher education system** has expanded significantly, but **gaps in quality, equity, and teaching capacity** remain major concerns, as highlighted by the **State of Working India 2026 report**. To achieve its vision of becoming **Vikshit Bharat by 2047**, India must prioritise **faculty strength, affordability, and regional equity** to ensure inclusive and meaningful educational outcomes.

***Q.** India's higher education sector has expanded rapidly, but quality and equity have not kept pace. Critically examine in the light of recent trends. 15 Marks*

2.1.2. CONSTITUTIONAL SAFEGUARDS AND EMERGING CONCERN

Context:

- The recent move by opposition parties to begin impeachment proceedings against the **Chief Election Commissioner** marks an important moment in India's democratic journey. It highlights growing doubts about the **independence** of the Election Commission of India and the **fairness of electoral processes**, even though the motion is unlikely to succeed in Parliament.



Chief Election Commissioner — Constitutional Foundation and Powers

A. Constitutional Status and Mandate

The office of the Chief Election Commissioner is established under **Article 324 of the Constitution of India**. The **Election Commission of India (ECI)** is an independent constitutional authority designed to ensure **free and fair elections**.

- Conducts elections to **Parliament, State Legislatures, the Office of the President and the Vice-President**
- Functions as the **sole guardian of democratic processes** — free from executive interference
- As of 2024, the ECI oversees an electorate of approximately **96.8 crore (968 million) registered voters** — the largest democratic electorate in the world.

B. Composition of the Election Commission

- The ECI consists of the **Chief Election Commissioner (CEC)** and one or more **Election Commissioners (ECs)** — all with equal powers, with the CEC acting as Chairperson.
- Appointed by the **President of India** on the **advice of a selection committee** comprising the **Prime Minister**, the **Leader of the Opposition**, and the **Chief Justice of India** (as per the **CEC and Other ECs (Appointment, Conditions of Service and Term of Office) Act, 2023**).

C. Tenure, Security, and Removal Protections

The CEC holds a tenure of **6 years or until the age of 65 years**, whichever is earlier. These protections ensure complete independence from executive pressure:

- The CEC can **only be removed** in a manner **identical to that of a Supreme Court judge** — requiring proof of misbehaviour or incapacity.
- Other Election Commissioners can be removed **only on the recommendation of the CEC** — providing an additional layer of structural independence.
- The salary and service conditions of the CEC are charged to the **Consolidated Fund of India** — not subject to parliamentary voting — to safeguard financial independence.

Removal of the CEC — Constitutional Process

Though commonly referred to as '**impeachment**,' the Constitution uses the precise term "**removal**." The process is governed by provisions analogous to those applicable to Supreme Court judges under **Article 124(4)**.

STEP	DETAILS
1. Notice of Motion	A formal motion must be signed by at least 100 members of the Lok Sabha OR at least 50 members of the Rajya Sabha — preventing frivolous or politically motivated actions.
2. Admission	The Speaker (Lok Sabha) or Chairman (Rajya Sabha) reviews the motion and may admit or reject it based on merit and procedural compliance.
3. Investigation Committee	If admitted, a three-member committee is constituted — comprising a Supreme Court judge , a High Court Chief Justice , and a distinguished jurist — to independently examine the charges.
4. Voting in Each House	If the committee finds merit, each House separately votes. Removal requires a Special Majority : (a) Majority of total membership of the House, AND (b) At least two-thirds (2/3rd) of members present and voting.
5. Presidential Order	If the motion passes in both Houses, the President of India issues the formal order of removal. The process cannot be short-circuited at any stage.

Context of the Current Impeachment Motion

A. Key Allegations Raised by the Opposition

- **Partisan and discriminatory conduct** in the conduct of electoral processes — allegations of favouring one political party over others.
- **Failure to act on complaints** related to electoral fraud and irregularities, thereby compromising the neutrality of the Commission.
- **Large-scale disenfranchisement** of eligible voters through the Special Intensive Revision (SIR) process — particularly in states like West Bengal, Bihar, and Jharkhand.

B. Why This Moment Is Historically Significant

- This is the **first-ever attempt to impeach a CEC** in India's **75-year democratic history** — a threshold that reflects an extraordinary breakdown of institutional confidence.
- **It signals a deep structural mistrust** between the **leading Opposition parties** and the **Election Commission** — with serious implications for democratic governance.
- As a **symbolic act of protest**, the **motion** places the **issue of electoral accountability into national public discourse**, even if it lacks the numbers to succeed in Parliament.

C. Political Reality — Why the Motion is Unlikely to Succeed

- **The ruling alliance holds a comfortable numerical majority** in both Houses of Parliament — making passage of the required special majority virtually impossible.
- The motion, therefore, serves primarily as a **political statement and a tool of public accountability pressure** — rather than a realistic mechanism for removal.

Special Intensive Revision (SIR) of Electoral Rolls and its Concerns

A. About SIR

The SIR is a process conducted by the ECI to clean and update electoral rolls — aimed at removing **duplicate entries, deceased voters, and ineligible individuals** to ensure that electoral rolls are accurate and up-to-date.

- The ECI has the **legal mandate** to revise and maintain electoral rolls under the Representation of the People Act, 1950.
- The SIR involves the use of **AI-based logical discrepancy detection tools**, micro-observers, and in some cases, judicial officers to adjudicate voter eligibility.

B. Concerns Raised — Scale and Severity of Deletions

- **Massive deletion of voters:** Reports indicated that hundreds of thousands (lakhs) of valid voter names were removed from rolls in multiple states, including West Bengal, Bihar, and Uttar Pradesh.
- **"Under adjudication" voters:** A significant number of voter applications and appeals were left unresolved even close to election dates — leaving citizens in a state of **democratic limbo** where they could neither vote nor receive a clear decision.
- **Disproportionate impact on marginalised communities:** Research and ground reports indicate that exclusions disproportionately affected **Scheduled Castes, Scheduled Tribes, migrant workers, and minorities** — groups that already face barriers to voter registration.
- **Lack of transparency:** No clear public disclosure of the methodology, criteria, or audit reports governing the deletion process.
- **Inadequate grievance redressal:** Citizens who found their names missing had limited and cumbersome avenues for timely correction before elections.

Implications for Indian Democracy

A. Arguments IN FAVOUR

- **Ensures accountability of constitutional authorities** – The motion reinforces the principle that even powerful independent bodies like the ECI can be held accountable when their conduct is questioned.
- **Sends a strong democratic message** – It signals that alleged **misconduct, bias, or misuse of power** cannot go unchallenged, even if the office is constitutionally protected.
- **Keeps democratic checks alive** – The impeachment process draws **public and parliamentary attention** to institutional failures, prompting debate, scrutiny, and possible reforms.
- **Forces the ECI to defend its decisions** – The need to respond to the motion can lead to **greater transparency, clarification, and improved accountability** in the functioning of the Commission.

B. Arguments AGAINST

- **Lacks numerical feasibility** – Without the required **special majority**, the motion is unlikely to pass and may be seen as a **symbolic or hollow gesture** rather than a genuine constitutional remedy.
- **Risks normalising impeachment as a political weapon** – If such moves are used frequently, they may become a **routine political tool**, not just against the CEC, but also against other independent bodies, **weakening their independence**.

- **May politicise constitutional institutions** – Treating the **CEC as a political opponent** transforms the ECI into a **site of partisan conflict** rather than a **neutral guardian** of elections.
- **Threatens constitutional stability** – Recurrent or weaponised impeachment attempts can create a **precedent of removal-by-pressure**, undermining the **stability and trust** in several constitutional posts.

Way Forward: Restoring Trust and Fortifying Institutions

A. Transparent Electoral Roll Management

- **Publish clear, simple, and detailed guidelines** for all revisions of electoral rolls, including the criteria used by AI tools.
- Use **technology only with strong human oversight** and **public audit mechanisms** to prevent arbitrary decisions.

B. Strengthening Accountability Mechanisms

- Conduct **periodic, structured parliamentary reviews** of ECI functioning, not just during crises.
- Arrange **independent audits** of major electoral drives (like SIR) by panels of **legal experts, statisticians, and civil society members**.

C. Reforming the Appointment Process

- Broaden the **selection committee** for the CEC and ECs to include:
 - A **judicial member**.
 - **Representatives of opposition parties**.
 - **Non-governmental experts** in governance and elections.
- Make **nomination criteria and shortlists transparent** to reduce suspicion of partisanship.

D. Improving Communication and Stakeholder Engagement

- Hold **regular consultations** with: Political parties, civil society organisations, academics and media.
- Ensure **timely, public clarification** of major ECI decisions, especially those affecting voter rolls.

E. Protecting Voter Rights and Ensuring Inclusion

- Ensure that **no genuine voter is wrongly excluded** by:
- Providing **multiple, easy, and time-bound grievance redressal** channels.
- Extending **deadlines for corrections** before finalising rolls for elections.
- Launch **targeted voter awareness campaigns** for **marginalised groups** to help them understand the revision process and rights.

F. Limiting the Politicisation of the ECI

- Political parties must:
 - **Respect the ECI's constitutional autonomy** and avoid treating the CEC as a political opponent.
 - Focus **criticism on specific decisions**, not on the **entire institution**, to preserve public trust.

G. Defining the Role of the Judiciary

- Courts should generally **keep away from routine electoral administration work**, such as **voter roll verification in bulk**.
- Judicial intervention should be **limited to cases of serious violation**, with **clear, time-bound mandates**, preserving the **normal separation of powers**.

Conclusion

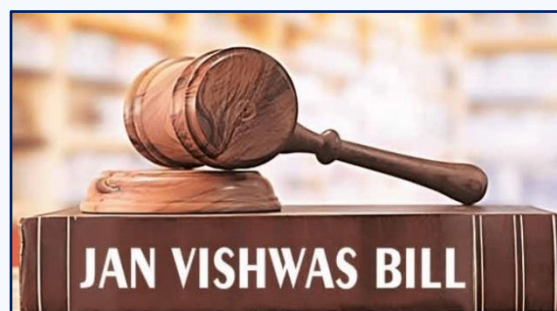
The attempted impeachment of the **Chief Election Commissioner** is not just a political show, but a **deep symptom of institutional stress** in India's electoral system. To protect democracy, the focus must shift from **confrontation to constitutional reform**, ensuring that **every voter's right to vote is respected and protected**.

Q. The attempt to impeach the Chief Election Commissioner reflects deeper concerns about institutional trust rather than merely a political confrontation. Discuss in the context of recent developments. 15 Marks

2.1.3. JAN VISHWAS 2.0

Context:

- The **Jan Vishwas 2.0 Bill** is a landmark legislative effort aimed at "Decriminalizing India" by recalibrating the balance between regulatory enforcement and ease of doing business. It builds upon the foundation laid by the original 2023 Act.



The evolution of the Jan Vishwas framework

1. Pre-Reform Era: The Compliance Paradox

Before 2023, India's regulatory landscape was characterized by "**over-criminalization**."

- **The Burden:** Thousands of minor, technical, and procedural lapses (such as a delay in filing a report or a clerical error in a ledger) carried the threat of imprisonment.
- **The Impact:** This created "compliance anxiety," particularly for MSMEs, and clogged the judiciary with millions of cases that did not involve actual criminal intent (*mens rea*).
- **The Resource Drain:** Administrative and judicial energy was diverted away from serious offenses to monitor minor paperwork issues.

2. Jan Vishwas 1.0 (2023): The Proof of Concept

The **Jan Vishwas (Amendment of Provisions) Act, 2023** served as the first major legislative intervention to systematically "cleanse" the statute books.

- **Scope:** It targeted 42 Central Acts across 19 Ministries.
- **Metric:** Decriminalized **183 provisions**.
- **Key Achievement:** It successfully replaced criminal imprisonment with monetary penalties for technical defaults, establishing the precedent that the state can trust businesses to self-correct without the threat of jail.

3. Jan Vishwas 2.0 (2026): Scale and Sophistication

The 2026 Bill represents a massive scaling-up of the initial logic, moving from a pilot-style reform to a comprehensive overhaul. Scaled up to cover **784 provisions** across **79 Central Acts** administered by 23 Ministries. Moving from a "fear-based" compliance model (criminal sanctions) to a "trust-based" model (civil penalties).

Key Objectives of Jan Vishwas 2.0

- **Trust-Based Governance:** Shifting the state-citizen relationship from suspicion to trust, assuming "good faith" in business and personal compliance.
- **Decriminalization of Minor Lapses:** Removing imprisonment for 717 provisions across 79 Acts, ensuring that technical or procedural errors do not lead to criminal records.
- **Ease of Doing Business (EoDB):** Eliminating "compliance anxiety" to encourage entrepreneurship, reduce the cost of doing business, and attract global investment.
- **Ease of Living:** Reducing the daily legal harassment of citizens by decriminalizing municipal and administrative lapses (e.g., municipal water use or license renewals).
- **Judicial De-clogging:** Reducing the burden on the overstretched judiciary (50M+ cases) by diverting minor violations to administrative adjudicators.

Salient Features of Jan Vishwas 2.0

- **Expansive Scope:** It proposes amendments to **784 provisions** across **79 Central Acts** nearly doubling the reach of the 2023 Act. These acts are administered by 23 different Ministries.
- **Large-Scale Decriminalization:** Out of the 784 provisions, **717 are being decriminalized**. Imprisonment clauses for minor, technical, or procedural defaults are replaced with monetary penalties.
- **Graded Enforcement (Improvement Notices & Warnings):**
 - **First-time offenders:** The Bill introduces "Advisories" or "Warnings" for 76 offenses across 10 Acts.
 - **Rectification:** "Improvement Notices" allow businesses to fix non-compliance within a specific timeframe before a penalty is imposed.
- **Adjudication Mechanism:** It moves away from court-imposed "fines" to **"administrative penalties"** determined by Executive Adjudicating Officers. This bypasses the lengthy criminal trial process.
- **Appellate Structure:** To ensure fairness, it establishes an internal appellate mechanism where an officer higher in rank to the Adjudicating Officer hears appeals.
- **Automatic Inflation Adjustment:** To maintain the deterrent effect, the monetary penalties will automatically increase by **10% every three years** without requiring fresh legislation.
- **Retroactive Relief:** It addresses long-standing concerns by allowing for the **review and closure of pending cases** in criminal courts that relate to the now-decriminalized offenses
- **Specific Sectoral Reforms:**
 - **Motor Vehicles Act:** Introduces a **30-day grace period** for expired licenses.
 - **Health Sector:** Minor violations under the Drugs and Cosmetics Act (non-maintenance of records) will now be civil penalties, not criminal.
 - **NDMC Act:** Modernizes property tax through a uniform **"Unit Area Method"** and reclassifies illegal water use as a civil penalty.

Significance of Jan Vishwas 2.0

1. Economic: Boosting "Animal Spirits"

- **MSME Empowerment:** Eliminates "Compliance Tax" and the threat of jail for clerical errors, allowing small units to scale without legal fear.
- **FDI Attraction:** Enhances India's global image by creating a **predictable, non-punitive** regulatory environment, curbing "tax/regulatory terrorism."
- **Risk Culture:** Protects entrepreneurs from criminal records for procedural failures, fostering a culture of innovation and risk-taking.

2. Judicial: De-clogging the System

- **Case Pendency:** Directly addresses the **50 million+ backlog** by shifting minor technical violations from criminal courts to administrative adjudicators.
- **Resource Optimization:** Frees up police, prosecutors, and judges to focus on **heinous crimes** and national security rather than paperwork errors.

3. Governance: The "Trust-Based" Paradigm

- **Philosophical Shift:** Moves from "Suspicion by Default" to **"Trust by Default,"** treating citizens as partners rather than potential offenders.
- **Principle of Proportionality:** Ensures the "punishment fits the crime" via **Improvement Notices** and civil penalties instead of disproportionate jail terms.
- **Decolonizing Laws:** Modernizes the statute book by purging **colonial-era redundancies**, aligning laws with a 21st-century digital economy.

4. Societal: Ease of Living

- **Decriminalizing Daily Life:** Protects ordinary citizens from criminal records for minor lapses like license renewals or municipal utility issues.
- **Reduced Discretionary Power:** Standardized penalties and the **"Unit Area Method"** for taxes limit the power of low-level officials, effectively curbing petty corruption.

Challenges of Jan Vishwas 2.0

1. Dilution of Deterrence

- **Fear of Impunity:** Critics argue that replacing imprisonment with civil penalties may weaken the "fear of the law," particularly in sensitive sectors like **environmental protection** and **public safety**.
- **Fixed vs. Variable Penalties:** Some penalties remain low (e.g., ₹1,000 for water misuse), which large corporations might treat as a mere "cost of doing business" rather than a deterrent.

2. Institutional Capacity & Impartiality

- **Executive Adjudication:** Shifting power from independent judges to **Executive Adjudicating Officers** raises concerns about the separation of powers and potential bias towards the government.
- **Lack of Training:** Bureaucrats are not traditionally trained in judicial inquiry; their ability to handle complex adjudication in a fair and time-bound manner is yet to be proven.

3. Implementation Inconsistency

- **Ministerial Discretion:** With 23 different Ministries involved, there is a risk of **lack of uniformity** in how "trust-based" principles are applied across different sectors.

- **Overlapping Jurisdictions:** Some offenses are removed from specific Acts but remain criminal under the general law (Bharatiya Nyaya Sanhita, 2023), leading to legal ambiguity.

4. Excessive Delegation

- **Rule-Making Power:** In several instances (e.g., the Apprentices Act), the Bill empowers the executive to set penalty amounts through "Rules" rather than the Act itself. This is seen as **an excessive delegation of legislative power** without sufficient parliamentary oversight.

5. Administrative Hurdles

- **Digital Infrastructure:** The success of the "graded response" (warnings/notices) depends on a robust, real-time digital database of offenders to track first-time vs. repeat violations.
- **Backlog of Transition:** Reviewing and closing millions of pending cases in criminal courts to move them to the new framework is a massive administrative task

Way Forward

1. Institutional Strengthening

- **Capacity Building:** Specialized training for **Adjudicating Officers** is essential to ensure they handle quasi-judicial functions with impartiality and legal soundness.
- **Separation of Roles:** Clearly demarcating the roles of the investigator (who finds the lapse) and the adjudicator (who decides the penalty) to prevent bias.

2. Digital & Technological Integration

- **Unified Compliance Portal:** Develop a "Single Source of Truth" database to track violations across ministries, facilitating the **Graded Enforcement** model (identifying first-time vs. repeat offenders).
- **Automated Notices:** Use AI-driven systems to issue **Improvement Notices** and warnings automatically, reducing human discretion and potential corruption.

3. Monitoring & Evaluation

- **Impact Assessment:** Periodic reviews (e.g., every 2 years) to ensure that decriminalization is boosting **Ease of Doing Business** without compromising environmental or safety standards.
- **Standardized Penalty Scale:** Establish a national framework for calculating penalties to ensure "Uniformity of Justice" across different sectors and states.

4. Harmonization of Laws

- **BNS Alignment:** Ensure that offenses decriminalized under specific Acts are not prosecuted under broader sections of the **Bharatiya Nyaya Sanhita (BNS)**, which would defeat the Bill's purpose.
- **State-Level Adoption:** Encourage States to enact similar "Jan Vishwas" legislation for State-level Acts, as a large chunk of compliance burdens (labor, land, local taxes) falls under State jurisdiction.

5. Collaborative Governance

- **Continuous Stakeholder Dialogue:** Maintain a feedback loop with industry bodies (like CII/FICCI) and civil society to identify emerging "regulatory bottlenecks" that need future rationalization.

Conclusion

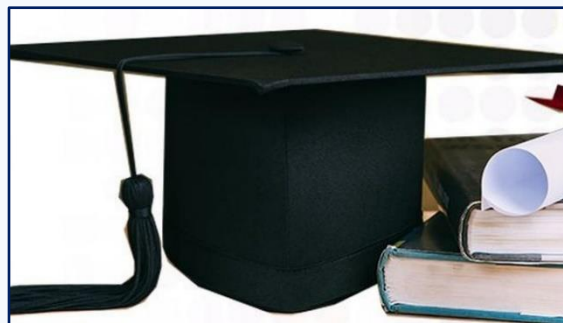
Jan Vishwas 2.0 institutionalizes a **trust-based ecosystem**, bridging the gap between regulatory rigor and economic dynamism. By leveraging technology and proportionality, it pivots India toward a **predictable, investor-friendly future**, balancing growth with responsible governance.

Q. "The Jan Vishwas 2.0 Bill represents a fundamental shift from 'command and control' to 'trust-based' governance." Discuss how this legislative reform seeks to balance regulatory enforcement with the ease of living for citizens. 15 Marks

2.1.4. REIMAGINING SCHOLARSHIPS AS THE BEDROCK OF INDIA'S HIGHER EDUCATION

Context:

- India aims to achieve a **50% Gross Enrolment Ratio (GER) in higher education by 2035** as envisioned in the **National Education Policy (NEP) 2020**. The **real challenge**, however, lies not merely in expanding institutions, but in ensuring that students can access, afford and complete their education with dignity.
- In this context, **scholarships emerge as a transformative tool**, one that connects equity, quality and national growth, determining not just who enters higher education, but who thrives within it.



Current Situation of Higher Education in India

India has made remarkable strides in expanding its higher education infrastructure.

- The number of higher education institutions has grown from **51,534 in 2014-15** to over **70,000 in 2025-26**, as per the **Economic Survey 2025-26**. The student enrolment has crossed **4.33 crore**. Yet, the **GER stands at a mere 29.5% (2022-23)**, starkly below the **NEP 2020 target** and even further from the global average of developed nations.
- This gap exposes a **structural truth: building campuses does not automatically build futures**. For a student from a **marginalised family** in rural Odisha or an urban slum in Patna, three barriers converge simultaneously:
 - Access** — the physical and social distance from quality institutions.
 - Affordability** — the crushing weight of tuition fees, accommodation and living costs.
 - Aspiration** — the erosion of confidence caused by systemic exclusion across generations.
- According to AISHE reports, **Scheduled Caste (SC)** students account for only **14.9%** of total enrolments (against a population share of ~17%), **Scheduled Tribe (ST)** students just **5.8%** (against ~8.6%) and women from economically weaker sections remain **severely underrepresented in STEM and professional fields**. The data reveals a **deeply unequal system**.

Constitutional Framework: Education as a Fundamental Right

Indian Constitution provides a **robust normative framework** that elevates **access to education** including higher education beyond policy preference into a **moral and legal obligation**:

- **Article 21A of the Constitution of India (86th Amendment, 2002): Right to free and compulsory education** for children aged 6–14, creating a **foundational floor** that must logically extend upward.
- **Article 21 of the Constitution of India (Right to Life and Personal Liberty):** The Supreme Court in **Mohini Jain v. State of Karnataka** and **Unni Krishnan v. State of Andhra Pradesh** held that the **right to education is integral to the right to life and human dignity**.
- **Article 41 of the Constitution of India (DPSP):** Directs the State to secure the right to education within its economic capacity a directive that increasingly demands **action in the higher education space**.
- **Article 46 of the Constitution of India:** The State shall promote **educational and economic interests of SC, ST and other weaker sections**, and protect them from **social injustice**.
- **Article 15(5) of the Constitution of India:** Enables **reservation and special provisions for socially and educationally backward classes in educational institutions**.
- **Article 38 of the Constitution of India & Article 39 of the Constitution of India:** The State must strive to **minimise inequalities in income, status, and opportunity** making **scholarship policy a constitutional instrument, not an act of discretion**.
- **Scholarships**, when designed and delivered well, are the **mechanism through which constitutional aspirations become lived reality**. To deny a **capable but poor student a scholarship** is not merely an **administrative failure** it is a **constitutional transgression**.
- The **Supreme Court** in **Ashok Kumar Thakur v. Union of India** reiterated that the State has an **affirmative duty to create conditions for substantive equality in education**. **Scholarships are the operationalisation of this duty**.

Why Scholarships are the Hinge of Educational Transformation

1. Scholarships Address the Access Problem

- Scholarships enable students from **remote, rural and underdeveloped regions** to enter higher education by reducing barriers of distance, opportunity and social disadvantage.
- They ensure that **geographical, social and economic constraints do not block talented students**, thereby promoting **inclusivity, representation and equal participation** in campuses.

2. Scholarships Solve the Affordability Crisis

- Higher education is often a **long-term financial burden**, especially for middle and low-income families, discouraging many from enrolling.
- Scholarships reduce this burden by covering **tuition, living expenses, and academic costs**, allowing students to **focus on learning and complete their education without financial stress**.

3. Scholarships Improve Quality and Outcomes

- Scholarships not only increase enrolment but also improve **academic performance, retention and career outcomes** among students.
- Students receiving support are more likely to **complete degrees on time, perform better academically and secure stable careers**, while institutions benefit from a **diverse and high-quality academic environment**.

4. Scholarships Unlock Hidden Talent

- India's talent is **widely distributed across regions, castes, genders and income groups**, but many lack access to opportunities due to structural barriers.
- Scholarships act as a **bridge between talent and opportunity**, ensuring that **capable but disadvantaged students are supported**, which is essential for increasing enrolment and outcomes.

5. Scholarships Provide Holistic Development

- Modern scholarships go beyond financial aid and include **mentorship, leadership training, career guidance and exposure opportunities**.
- These support systems ensure **overall personality development**, preparing students for **academic success, employability and leadership roles in society**.

6. Scholarships Strengthen Social Mobility

- Scholarships help **break the cycle of poverty and inequality** by providing access to quality education for economically weaker and marginalised groups.
- They enable students to achieve **better education and employment opportunities**, leading to **upward social mobility and a more equitable and just society**.

7. Scholarships Promote Equity and Social Justice

- Scholarships act as an **equaliser**, allowing students from diverse socio-economic backgrounds to **compete on a level playing field**.
- They ensure that **talent is discovered, nurtured, and rewarded regardless of a student's birth, location, or economic status**, strengthening fairness in the education system.

Lessons from India's Ancient Intellectual Heritage

India's commitment to inclusive education is not a modern invention it is a **civilisational value**. At **Takshashila** and **Nalanda**, arguably the world's first **residential universities**, no student was turned away for lack of resources. The ancient system offered multiple flexible pathways:

- **Upfront payment** by those with means
- **Shramadan** — working alongside one's teacher as a form of tuition payment
- **Post-education contribution** — paying back after securing livelihood
- **Community and royal patronage** for students from distant regions

The underlying principle that **Vidya dadati vinayam**. Knowledge begets humility that **no capable student should be denied education due to material poverty** was considered a **dharmic obligation** of the **State** and the educated class.

Key Challenges in the Current Scholarship Ecosystem

Despite these efforts, critical **structural gaps** undermine the **scholarship ecosystem's transformative potential**:

- **Transactional, Annual Renewals**: Most schemes require **annual reapplication**, creating **psychological anxiety** and **administrative burden** for students who need **stability, not uncertainty**.

- **Narrow Scope:** The majority of schemes cover only **tuition fees**, ignoring the '**hidden costs**' like accommodation, food, digital devices, mental health support and healthcare that often trigger **dropout**.
- **Information Asymmetry:** Despite **NSP**, millions of eligible students in **rural and semi-urban areas** remain unaware of available scholarships due to **poor outreach** and **digital illiteracy**.
- **Absence of Mentorship:** Financial aid without **academic and social navigation support** is insufficient for **first-generation learners** who must decode unfamiliar **institutional cultures**.
- **Private Sector Underengagement:** Indian corporates under **CSR obligations** invest significantly less in **education endowments** compared to global counterparts. The ecosystem of **donor-funded scholarships** remains shallow.
- **Data Deficits:** Inadequate tracking of **scholarship outcomes** like graduation rates, employment rates, further study that prevents **evidence-based policy refinement**.

Government Initiatives and Institutional Innovations

- **National Scholarship Portal (NSP):** This acts as a **single-window interface** for students to access schemes across various **Union Ministries** and **State Departments**, streamlining the application and disbursement process.
- **PM-USP (PM Uchchatar Shiksha Protsahan) Yojana:** An umbrella scheme providing **full interest subsidies** on education loans for families earning up to **₹4.5 Lakh annually**, reducing the long-term debt burden on students.
- **PRAGATI & SAKSHAM (AICTE):** Targeted equity schemes where **Pragati** incentivizes girl students in technical education and **Saksham** provides specialized support for students with disabilities.
- **National Means-cum-Merit Scholarship (NMMSS):** Targets the **secondary level** (Class IX-XII) with **₹12,000 annually** to prevent dropouts, serving as a vital feeder for higher education.
- **Institutional Excellence –**
 - **Ashoka University:** Following a **need-sensitive admission process**, Ashoka evaluates a student's financial need independently of their academic merit. Currently, about **20% of their students receive a 100% scholarship**, ensuring talent isn't lost to poverty.
 - **Indian School of Business (ISB) Model:** ISB has created a robust **donor-supported ecosystem**. In their new **PGP-Young Leaders programme**, **40% of the founding class** is supported by **scholarships**.

Global Best Practices

- **United States:** Top universities use comprehensive, multi-year aid packages combining grants, work-study and loan waivers. **U.S. "Pell Grant" and Endowments:** **Ivy League universities** use massive **Endowment Funds** to provide "**Need-Blind**" admissions, ensuring that if you are good enough to get in, the university ensures you can afford to stay.
- **China:** China has successfully used **provincial and city-level scholarships** that are specifically aligned with **local development priorities**. If a city needs **more engineers** for its tech hub, the scholarships are funneled into those specific local institutions.

- **Brazil:** The **PROUNI programme** provides full and partial scholarships to low-income students in private institutions, demonstrating how government-private partnership can massively scale access.

Way Forward

- **Multi-Year Funding Security & Constitutional Anchoring:** Move from **annual renewals** to **guaranteed 3–5 year commitments** covering **total cost of attendance**. Enact a **National Scholarship Rights Act** that codifies entitlements based on **need and merit**, with **grievance redressal mechanisms** and **enforceable disbursement timelines**, shifting scholarships from **discretionary allocation** to **rights-based entitlement**.
- **Region-Specific & Aspiration-Linked Targeting:** Design scholarships around **institutional density** and **regional aspiration indices**, with dedicated pools for educationally backward districts in **Bihar, Jharkhand, Uttar Pradesh** and **northeastern states** enabling local talent to access higher education **without forced migration**.
- **Fiscal Architecture for Philanthropy:** Introduce **enhanced tax incentives** beyond Section 80G and establish a **National Education Endowment Fund** with **government seed capital** attracting **private matching funds** creating a **self-sustaining scholarship corpus** independent of annual budgetary cycles.
- **Holistic Support Ecosystems:** Mandate all scholarships above threshold value to include **mentorship, career guidance, digital skilling**, and **mental health resources** partnering with **NGOs, alumni networks**, and **industry mentors** to ensure complete student wellbeing, not merely tuition support.
- **Outcome-Linked Institutional Accountability & Emerging Skill Frontiers:** Reward institutions demonstrating high **graduation rates, employment outcomes**, and genuine **diversity** through National Assessment and Accreditation Council (**NAAC**) / National Institutional Ranking Framework (**NIRF**) **weightage**. Dedicate scholarship streams to **Artificial Intelligence, Climate Technology, Bioeconomy, Green Energy**, and **Advanced Manufacturing** — aligning financial inclusion with India's **knowledge economy competitiveness**.
- **Real-Time Scholarship Intelligence Systems:** Build a **National Scholarship Analytics Dashboard** tracking **enrolment-to-graduation trajectories**, identifying **at-risk students**, and generating **evidence for policy course-correction**, institutionalising the principle that **what gets measured gets managed, and what gets managed gets improved**.

Conclusion

Scholarships sit at the powerful intersection of **equity, quality, and national growth**, shaping who enters higher education, who persists, and ultimately, how India's vast reservoir of distributed talent is discovered and developed. Moving scholarships from the margins to the very centre of India's higher education strategy is not a narrow funding conversation, it is a decisive choice about what kind of nation India intends to become.

Q. *Scholarships are not merely financial aid but instruments of social transformation. Elaborate with suitable examples. 15 Marks*

2.1.5. THE EXECUTIVE OFFICE WITHOUT A LIMIT

Context:

- Recently a **historic milestone** was reached — the record for the **longest cumulative tenure** as the **head of an elected government** was surpassed, spanning **8,931 days** across State and Union levels.
- This has reignited a **critical constitutional debate**, while the ceremonial **President** is informally limited to **two terms**, the all-powerful **Prime Minister** faces no such restriction.
- This **asymmetry** raises urgent questions about **democratic accountability**, **institutional health** and the long-term vitality of the **Indian Republic**.



Core Imbalance: President vs Prime Minister

The Indian Constitution reflects a notable imbalance between its two highest executive offices. The President, a largely ceremonial figurehead under **Articles 52 to 62**, is guided not only by constitutional provisions but also by an informal yet widely respected **two-term convention**.

- In contrast, the **Prime Minister** whose office derives authority primarily from **Articles 74 and 75**, which provide for a **Council of Ministers** headed by the **Prime Minister** to aid and advise the **President** exercises the real executive power.
- Notably, while the **President's tenure** is formally limited to **five years** (with eligibility for re-election), no explicit constitutional limit is imposed on the tenure of the Prime Minister.
- As a result, the Prime Minister can continue in office indefinitely, so long as a **parliamentary majority** is maintained in the **Lok Sabha**, thereby reinforcing the asymmetry embedded within the constitutional framework.

A. The Presidential Convention

- **Governed by the Ivor Jennings Test:** The convention against a **third Presidential term** satisfies **three conditions** — a **precedent** must exist, **actors** must feel obliged to follow it, and a clear **constitutional reason** must underpin it. All three are met in India's Presidential practice.
- **Strong Moral Force without a Legal Bar:** **Article 57** allows unlimited Presidential re-election, yet no President since 1950 has attempted a third term. **Constitutional morality** has functioned as a **de facto term limit**.
- **Historical Record:** Only one President, Dr. Rajendra Prasad (1950–1962) have served two full terms. Since then, no individual has crossed this informal boundary.

B. The Prime Ministerial Reality

- **Unlimited Tenure by Design:** **Articles 74 and 75** establish the Prime Minister's office but place **no ceiling** on terms served. The only condition is **majority support** in the **Lok Sabha**.
- **The Power Paradox:** The office with **greater power** — commanding the Cabinet, controlling appointments, and directing policy — has the **fewer constraints**. This is not an accident of drafting; it was a **deliberate constitutional choice**.

KEY FACT: India has had **15 Prime Ministers** since **1947**. The longest serving have crossed two full **Lok Sabha terms**, yet not once has the Constitution been invoked to question this. This **silence** is the gap at the heart of this debate.

What the Framers of Indian Constitution Intended And Why It No Longer Holds

The decision to **exclude term limits** was deliberate. During the **Constituent Assembly debates (1946–1949)**, the framers argued that the **Prime Minister** already faces a far more **rigorous check** than a **periodic term limit** through **daily parliamentary accountability**. Over decades, this logic has been **structurally weakened**.

A. The Foundational Argument: Daily vs. Periodic Accountability

- **The Westminster Model as Blueprint:** India modelled its parliamentary system on the **British tradition**, where a **Prime Minister** remains in power only so long as the **legislature's confidence** is maintained. In theory, this provides a '**daily check**' on executive power.
- **Dr. B.R. Ambedkar's Distinction:** During the **Constituent Assembly debates**, it was argued that the Prime Minister faces not just **periodic assessment** through elections, but also **continuous assessment** through **parliamentary tools**, a far more **rigorous check** than a simple term limit.
- **The Three Accountability Instruments:** The framers envisioned three primary tools to **discipline the executive**: (a) **Questions and Supplementary Questions** in Parliament, (b) **Adjournment Motions and Calling Attention Notices**, and (c) **Votes of No-Confidence** in the **Lok Sabha**.

B. Why This Logic Has Been Weakened Over Time

The framers' optimism rested on certain assumptions about how **parliamentary democracy** would function. Over the decades, **structural changes** have eroded these very foundations.

- **Dominance of the Executive over the Legislature:** In practice, the **Prime Minister and Cabinet** who are drawn from the legislature often **control it**, rather than being held accountable by it. **Parliamentary sessions** are increasingly **shorter**, with less time for **meaningful scrutiny**.
- **Weakening of Coalition Accountability:** Ironically, even **coalition governments**, which once forced negotiation and compromise, have given way to **single-party dominance** that reduces **legislative bargaining power**.
- **Decline of Intra-Party Democracy:** Unlike the UK, where **internal party elections** are robust, **Indian political parties** tend to function as **highly centralized organizations**, with power **concentrated** in the **party leadership**.

The Anti-Defection Law — How Accountability Was Broken

The functional reality of **parliamentary accountability** was fundamentally altered by the **Fifty-Second Amendment** in 1985, which introduced the **Tenth Schedule** (Anti-Defection Law). Designed to stop **floor-crossing** and **political horse-trading**, it produced a powerful **unintended consequence**: it made it **legally impossible** for **legislators** to hold the **executive accountable**.

A. How the Anti-Defection Law Works

- **The Core Rule:** Any legislator who votes against the direction of their party whip or abstains without permission is liable to be disqualified from the House. The Speaker of the relevant House acts as the judge.
- **The Supreme Court's View:** In **Kihoto Hollohan v. Zachillhu (1992)**, the Supreme Court upheld the **Tenth Schedule** as **constitutionally valid** while the unintended effect on accountability was left unaddressed.
- **The Unintended Consequence:** The **no-confidence motion** intended as a rolling check on the executive has been rendered a **procedural formality** whenever the ruling party holds a working majority.

B. The Double Lock of Loyalty

The result is a two-layered system of enforced loyalty that makes executive accountability almost impossible from within the system:

- **Lock 1 — Legislators are bound to the Party:** The **Anti-Defection Law** prevents any **Member of Parliament** from **freely voting their conscience on confidence motions**, removing the legislature's power to discipline the executive.
- **Lock 2 — Parties are bound to the Leader:** The **absence of robust intra-party democracy in India** means that **party members cannot challenge or remove their own leader internally**. The leader becomes virtually irremovable from both inside and outside.

Analysis of Democratic Mandate: Limits of Electoral Legitimacy

The primary objection to term limits is powerful: if **voters repeatedly choose** the same leader, who is the Constitution to overrule them?

- **The Voter Sovereignty Case:** Repeated electoral endorsement reflects the **democratic will** of the majority. A term limit appears, at first glance, to be **paternalistic**.
- **Elections Carry Too Heavy a Burden:** When **parliamentary accountability** is broken, elections become the **only check** — an unrealistic burden for a single instrument to bear once every five years.
- **The Unequal Playing Field:** Incumbency compounds through **state resources, media access, and patronage networks**. A 'free choice' made on a **heavily tilted field** is not truly free.
- **Constitutional Safeguards are Not Anti-Democratic:** As **Fareed Zakaria** argues, 'without constitutional liberalism, democracy can produce **illiberal outcomes**.' Term limits are not constraints on democracy — they are its **architecture**.

Key Challenges Arising from Prolonged Incumbency

When **executive power** is concentrated in a single office without formal constraints, constitutional scholars identify **four compounding institutional risks** that threaten democratic health.

- **Control over Key Appointments:** A long-serving government shapes the **Election Commission, higher judiciary, the Comptroller and Auditor General (CAG), the Central Vigilance Commission (CVC),** and central **investigative agencies** over time. Each appointment collectively **tilts the institutional landscape**.

- **Domination of the Information Environment:** Extended incumbency allows the government to regulate **media licensing, advertising flows, and digital platforms** — gradually skewing the information environment in its favour.
- **Incremental Institutional Decay:** In their influential work '**How to Save a Constitutional Democracy**' (2018), legal scholars **Tom Ginsburg and Aziz Huq** argue that democratic decline rarely happens through a single dramatic coup — it happens through the slow, incremental erosion of institutions, each individually defensible, but collectively devastating.
- **Bureaucratic Realignment:** Over time, the **civil service** aligns with a single leadership style. Senior officials begin to prioritize **political loyalty** over institutional neutrality.
- **Normalizing Concentration:** Over time, **citizens and institutions** begin to treat the concentration of power as normal. Checks that were once robust become vestigial. The absence of formal term limits accelerates this normalization.
- **The 'Boiling Frog' Effect:** Institutional decay under long tenures often goes unnoticed until it reaches a critical threshold — by which point, reversing it requires extraordinary political will.

Global Best Practices — How Other Democracies Manage Power

India is a **global outlier** among large democracies in having no formal or conventional limit on prime ministerial tenure. The **global consensus** is clear: **unlimited executive power** carries structural risks.

A. Presidential Republics with Formal Term Limits

- **United States, Two Terms (22nd Amendment, 1951):** Following **Franklin D. Roosevelt's** four consecutive terms, the US constitutionally limited presidents to **two four-year terms**.
- **South Korea, Single Non-Renewable 5-Year Term:** One of the world's **strictest term limit systems**, designed explicitly to prevent **incumbency abuse**.
- **Brazil, Indonesia, Colombia:** All three large democracies impose formal **two-term or single-term limits**, responding to historical experiences of **executive overreach**.

B. Parliamentary Systems and Internal Accountability

- **UK, Australia, Canada, Internal Party as the Check:** Westminster systems without formal term limits rely on robust **internal party democracy** to remove leaders — a mechanism absent in India's **centralised party culture**.

Why India is Different: India combines **no term limits** with **no intra-party democracy** and an **Anti-Defection Law** that blocks legislative accountability. This **triple absence** makes India's situation far more consequential.

Way Forward — Restoring the Balance of Constitutional Power

- **Reform the Tenth Schedule (Anti-Defection Law):** Votes on **confidence and no-confidence motions** should be exempted from disqualification provisions, so that MPs can exercise **independent judgment** without fear of losing their seats. This would restore true **parliamentary accountability**, ensuring that governments must genuinely retain majority support rather than rely on party compulsion.
- **Introduce Term Limits for Executive Leaders:** A constitutional provision for a **two-consecutive-term limit** for the **Prime Minister and Chief Ministers**, along with a **cooling-off period**, would promote **leadership rotation** and prevent excessive concentration of power. This balances the need for **experience** with the principle of **democratic renewal**.

- **Strengthen Intra-Party Democracy:** The **Representation of the People Act, 1951** should be amended to mandate regular **internal elections** within political parties, supervised by the **Election Commission**. This would reduce **centralised leadership control** and enable party members to democratically choose their leaders.
- **Ensure Transparency in Political Parties:** Political parties should be required to publicly disclose **leadership tenure**, results of **internal elections**, and their **decision-making structures**. Such transparency would enhance **public trust**, enable **informed voting**, and improve internal **accountability**.
- **Revive Parliamentary Functioning:** Introducing **minimum sitting days** for Parliament and empowering **Departmental Standing Committees** would strengthen **legislative oversight**. Better-resourced committees and mandatory consideration of their reports would ensure more effective **executive scrutiny**.
- **Promote Constitutional Morality:** Greater emphasis must be placed on **constitutional morality**, as highlighted by **Dr. B.R. Ambedkar**, encouraging all institutions to uphold not just the **letter** but also the **spirit of the Constitution**. This would ensure that power is exercised as a **public trust**, reinforcing long-term democratic stability.

Conclusion

The milestone of **8,931 days** is a constitutional wake-up call for **India** to fix the power gap between a restricted President and an unrestricted Prime Minister. Ultimately, the strength of the Republic depends on ensuring that every leader in **India** remains subject to **institutional accountability**, no matter how popular they may be.

"Constitutional morality is not a natural sentiment. It has to be cultivated. Democracy in India is only a top dressing on an Indian soil, which is essentially undemocratic." — **Dr. B.R. Ambedkar**

Q. The absence of term limits for the Prime Minister, combined with weakened parliamentary accountability, creates a structural imbalance in India's constitutional framework. Critically examine. 15 Marks

2.1.6. EVOLUTION OF IDENTITY: EXAMINING THE RENAMING OF KERALA TO KERALAM

Context:

The Union Government's recent approval of the proposal to rename **Kerala** as **Keralam** has prompted a significant re-examination of the term's **historicity**. This development touches upon foundational myths, the legacy of the **United Kerala Movement**, and the contemporary drive for **linguistic purity**.



Evolution of Identity: From 'Kerala' to 'Keralam'

The transition from *Kerala* to *Keralam* reflects a **historical continuum shaped by mythology, linguistic evolution, and political processes**, rather than a mere change in nomenclature. It represents how identity has been **constructed and reinterpreted over time**.

I. Ancient Foundations: Mythology & Early Evidence

1. Mythological Origins

- As per *Keralolpatti*, Parasurama is believed to have created the land by reclaiming it from the sea.
- The region was mythically described as stretching from Gokarnam to Kanyakumari.
- Importantly, both '*Kerala*' and '*Keralam*' appear **interchangeably in these texts**, indicating that neither term had exclusive historical primacy.

2. Linguistic & Historical Roots

- The name is derived from '*Keram*' (coconut tree), symbolising the region as the "land of coconut trees."
- Hermann Gundert's Malayalam dictionary (1872) treats both *Kerala* and *Keralam* as equally valid forms.
- The Ashokan Edicts refer to *Keralaputra*, confirming the **ancient usage and historical legitimacy** of the term "Kerala".

II. Pre-1956 Phase: Fragmented Political Identity

1. Political Structure

Before independence, the region was not unified but divided into:

- Travancore
- Cochin
- Malabar (under British rule)

Thus, *Kerala as a single political entity did not exist*.

2. Linguistic & Social Complexity

- Travancore had a **significant Tamil-speaking population**, especially in southern regions.
- The rise of **Malayali identity politics** was driven by the need to assert linguistic and cultural dominance in administration and society.
- Social hierarchies (e.g., Pattars vs Namboodiris) further influenced identity formation and group distinctions.

3. Uncertain Post-Independence Future

- Under C. P. Ramaswamy Aiyar, Travancore even considered remaining an **independent state in 1947**.
- This claim was justified on the basis of its **historical autonomy from Mughal and European conquest**, reflecting a fragmented and uncertain political future.

III. Aikya Kerala Movement: Linguistic Nationhood

1. Language as the Basis

- The Aikya Kerala Movement emphasized **Malayalam linguistic unity as the foundation of statehood**, rather than mythological or historical geography.
- Identity thus became **people-centric and language-driven**.

2. Flexible Terminology

- Both '*Aikya Kerala*' and '*Aikya Keralam*' were used interchangeably in discourse, indicating that **the naming issue was not politically contentious** at the time.

3. Pragmatic Territorial Decisions

- Despite mythological claims, **Kanyakumari was excluded** due to its predominantly Tamil-speaking population.
- This highlights a **pragmatic and modern approach to identity formation**, prioritising linguistic homogeneity over tradition.

4. Constitutional Outcome

- The States Reorganisation Act, 1956 formally created the state.
- The Constitution adopted the name "*Kerala*", which continues to be central to present debates on renaming.

IV. Modern Integration: Shared Political Consciousness

1. Cross-Regional Unity

- Anti-colonial struggles, resistance to external dominance, and the rise of **nationalism and communism** helped bridge divisions between Travancore, Cochin, and Malabar.
- These forces fostered a **shared regional consciousness**.

2. Political Mobilisation

- Political movements and grassroots mobilisation in different regions gradually **overcame earlier fragmentation**.
- This led to the consolidation of a broader **Malayali identity cutting across historical boundaries**.

Constitutional Procedure: How a State is Renamed in India

The renaming of a state in India is a **structured constitutional exercise** governed by **Article 3** of the Indian Constitution, which empowers **Parliament** to alter the **name, area, or boundaries** of any state.

- **Initiation by the state legislature:** A **formal resolution** proposing the name change is **passed by the State Legislative Assembly** and forwarded to the **Union Government**.
- **Scrutiny by the Ministry of Home Affairs (MHA):** The **MHA examines the proposal** and seeks '**No Objection Certificates**' from relevant central agencies, including the **Intelligence Bureau**, **Department of Posts** and the **Survey of India**.
- **Presidential referral to the state legislature:** The **President of India refers the bill** to the concerned state legislature for its **views**. These views are **advisory and not binding** on Parliament.
- **Parliamentary approval by simple majority:** A bill is introduced in Parliament and passed by a **simple majority** in both houses. **No special majority** or ratification by other states is required making state renaming a **relatively straightforward legislative exercise**.
- **Presidential assent and constitutional amendment:** **Presidential assent** is obtained, and the **First Schedule** of the Constitution is formally amended to reflect the new name.
- **Administrative updation by the state:** The **state machinery** undertakes **consequential updates** to **official seals, gazetteers, digital databases, legal documents, educational materials**, and **public signage**.

Implications of Renaming Kerala to Keralam

The proposal to transition from the Anglicized '**Kerala**' to the phonetically native '**Keralam**' carries profound consequences.

1. Positive Implications: Cultural and Linguistic Reassertion

- **Linguistic Purity and Authenticity:** The primary driver is to align the official English name with the **native Malayalam pronunciation**. It honors the **Dravidian linguistic identity** by utilizing the suffix '-am', which is intrinsic to the language's phonetic structure.
- **Decolonization of Nomenclature:** Rebranding the state as **Keralam** is seen as an act of **cultural decolonization**. It moves away from **Anglicized versions** imposed or popularized during the colonial era, asserting **indigenous sovereignty** over the state's naming conventions.
- **Strengthening Regional Pride:** By adopting the name used by the people in their mother tongue, the government fosters a deeper sense of **regional belonging** and **Malayali identity**. It reinforces the spirit of the **1956 linguistic reorganization** of states.
- **Symbolic Unity:** It bridges the gap between the **Official Language (Malayalam)** and the **Constitutional Identity** of the state. This creates a uniform identity across local, national, and international platforms.

2. Negative Implications: Administrative and Fiscal Constraints

- **Massive Fiscal Burden:** Renaming a state is an expensive undertaking. Estimates suggest the cost could run into **hundreds of crores of rupees**. This includes updating **land records, identity cards** (Aadhaar, Voter IDs, Passports), **government stationery** and **departmental seals**.
- **Logistical and Bureaucratic Disruption:** A comprehensive update is required across **digital databases** and **national registries**. Coordination with central ministries (Railways, Posts, Civil Aviation) is mandatory to rename **railway stations, postal codes** and **airport codes**, which can lead to temporary **procedural confusion**.
- **Brand Equity and Global Recognition:** 'Kerala' is a high-value **global brand**, particularly in the **Tourism (God's Own Country)** and **Ayurveda** sectors. Transitioning to 'Keralam' internationally risks **brand dilution**. A significant marketing budget would be required to ensure the global audience recognizes 'Keralam' as the same entity.
- **Historical Ambiguity:** Critics point out that since both 'Kerala' and 'Keralam' appear **interchangeably** in ancient texts like the **Keralolpatti** and the **Ashokan Edicts**, the claim of one being "more authentic" than the other is subject to **academic debate**.
- **Socio-Political Integration of Minorities:** A critical socio-political implication involves the **integration of linguistic minorities**. While the change celebrates **Malayalam purity**, the state faces the challenge of ensuring it does not inadvertently signal **linguistic majoritarianism**.

Global Lessons: How Other Nations Have Managed Renaming

The transition of a state's name is often a part of a larger global trend where nations seek to reclaim **cultural identity** and move away from **colonial or external labels**.

- **Turkey to Türkiye (2022):** The change was pursued to better reflect **national cultural identity** in global forums and to remove **unflattering English-language connotations**. It required a **dedicated United Nations referral** and a **sustained international communication campaign** to normalise the new name globally.

- **Swaziland to Eswatini (2018):** The **pre-colonial indigenous name** was restored as a **sovereign act of post-colonial cultural reclamation**. The change was broadly regarded as a **successful assertion of national identity** and was smoothly absorbed into international usage.
- **India's Renaming Precedents:** The renaming of **Orissa to Odisha (2011)**, **Uttaranchal to Uttarakhand (2006)**, and **Pondicherry to Puducherry (2006)** exemplifies India's successful constitutional transitions driven by **cultural and linguistic authenticity**.
 - Similarly, the urban rebranding of **Bombay to Mumbai (1995)**, **Madras to Chennai (1996)** and **Calcutta to Kolkata (2001)** demonstrates that while **administrative adjustment** requires sustained effort, **indigenous names** can be effectively normalized both nationally and internationally.
- **Key Lesson from Global Practice:** Successful renaming requires **broad social consensus**, a **clear and defensible cultural rationale**, and a **well-planned administrative and communications transition** not simply the **political majority** to pass legislation.

Way Forward: A Strategic and Responsible Roadmap

- **Anchor Renaming in Broad Consensus:** Any proposal to **rename a state** must be preceded by **meaningful consultation** with political parties, linguistic minorities, civil society, and local bodies, ensuring that the move reflects **widespread social acceptance** rather than **narrow partisan interest**, while still respecting the **final authority of Parliament under Article 3**.
- **Strengthen Institutional Implementation:** A **central-state joint mechanism** should oversee a phased, cost-efficient update of legal records, databases, transport and postal codes, so that administrative disruption is minimised and the process remains **fiscally sustainable**.
- **Frame Renaming as Inclusive Federalism:** Renaming should be positioned as part of **linguistic federalism and cultural decolonisation**, but must explicitly reassure **linguistic minorities** that their identity and rights will not be compromised by the shift towards a dominant regional language.
- **Protect Brand Equity and Global Image:** A **pre-renaming impact assessment** must be conducted on tourism, investment, and international perception, followed by a **coordinated branding and communication strategy** to retain the existing positive image of the old name while gradually establishing the new official form abroad.
- **Embed in Education and Public Awareness:** State-level identity and naming changes should be integrated into **school and higher-education curricula**, using history, linguistics, and federalism to explain evolving regional identities and avoid treating the new name as a myth-based absolute truth.
- **Establish Transparent Norms for Future Renaming:** The Centre should develop **clear, non-partisan criteria** for renaming states covering linguistic-historical legitimacy, minority impact, and administrative feasibility and institutionalise **advisory review mechanisms** so that future changes are rights-based and not driven purely by short-term political symbolism.

Conclusion

The renaming of **Kerala to Keralam** reflects a living democracy's capacity to renegotiate its identity, yet the historical record confirms that both terms carry **equal legitimacy** across ancient myths, edicts, and the political movements that founded the state. Ultimately, this transition must be guided by **genuine cultural grounding** and **inclusive implementation** rather than a selective reading of history, ensuring the renaming of a people's home upholds the **quality of democratic consensus**.

Q. Identity-driven changes like state renaming can test the stability of India's federal structure by encouraging similar demands. Critically examine. 15 Marks

2.1.7. ON THE SABARIMALA TEMPLE ENTRY CASE AND REVIEW PETITION

Context: The Nine-Judge Bench Review

- The Sabarimala temple entry case represents one of the most profound constitutional dilemmas in contemporary India — the tension between **religious freedom and gender equality**. The 2018 judgment in *Indian Young Lawyers' Association v. State of Kerala* did not merely address the entry of women into a temple; it reopened foundational questions about the **scope of Articles 25–26**, the **Essential Religious Practices (ERP) doctrine**, and the **role of the judiciary in social reform**.



Evolution of Secularism

1. Comparative Models of Secularism

- USA ("Wall of Separation"):** Based on the First Amendment; maintains **mutual exclusion** where the State and religion do not interfere in each other's affairs. It emphasizes **negative liberty**—protecting religious practice *from* state reach.
- France ("Laïcité"):** Born from anti-clerical struggle; treats religion as a **strictly private** matter. The State asserts **primacy** by actively keeping the public sphere free of religious symbols.
- India ("Principled Distance"):** Grounded in *Sarva Dharma Sambhava* (Equal respect). The State maintains a "principled distance," allowing **positive intervention** for social reform (e.g., banning Triple Talaq) and providing financial aid to religious schools.

2. Evolution of Indian Secularism

Phase I: Colonial & Nationalist Roots

- Context:** Countered British "Divide and Rule" to unite a pluralistic society.
- Decision:** The Constituent Assembly rejected "strict separation" to empower the State to reform religion-rooted social evils like untouchability.

Phase II: The Essential Religious Practices (ERP) Era (1954–1980s)

- Shirur Mutt (1954):** Defined the **Essential Religious Practices (ERP)** doctrine; State regulates "secular" aspects (finance/admin) while protecting "essential" rituals.
- S.R. Bommai (1994):** Reinforced the **42nd Amendment**, declaring secularism a part of the Constitution's **Basic Structure**.

Phase III: Transformative Constitutionalism (2015–Present)

- Shift:** Priority moved from "tradition" to **Individual Dignity** (Arts. 14, 15, 21).
- Sabarimala (2018):** Established that "Constitutional Morality" overrides even essential practices; individual rights now outweigh group/denominational autonomy.

Comparison: Article 25 vs. Article 26

Feature	Article 25	Article 26
Focus	Individual Right: Protects the person.	Group Right: Protects the "Religious Denomination."
Applicability	To " all persons " (citizens and non-citizens).	To every religious denomination or any section thereof.
Primary Scope	Freedom of conscience; right to profess, practice and propagate.	Right to manage religious affairs, own property and establish institutions.
Restrictive Clauses	Public order, morality, health, AND other Fundamental Rights.	Public order, morality, and health (NOT explicitly subject to other rights).
State Intervention	Allows State to regulate secular activities and provide for social reform.	Protects autonomy in " matters of religion " from State interference.

Essential Religious Practices (ERP) Doctrine

The **ERP Doctrine** is a judicial tool used by Indian courts to determine which religious practices are integral to a faith and thus protected under **Articles 25 and 26** of the Constitution.

1. Origin and Evolution

- **Shirur Mutt Case (1954):** The Supreme Court (SC) moved away from the "assertion of the community" and held that the Court would decide what constitutes an "essential" practice based on the tenets of that religion.
- **Objective:** To distinguish between **sacred rituals** (protected) and **secular activities** (associated with religion but open to State regulation, e.g., financial management).

2. The Test of Essentiality

To qualify as an ERP, a practice must satisfy the following:

- **Indispensability:** Would the fundamental character of the religion change if this practice were removed?
- **Scriptural/Tenet Basis:** Is the practice supported by the religion's foundational texts or long-standing traditions?
- **Integrity:** Is it a core belief rather than a peripheral or optional ritual?

3. Current Judicial Shift (2015–Present)

The doctrine has evolved from merely protecting tradition to being a tool for **Social Reform**:

- **From Ritual to Reason:** Earlier, courts protected most rituals. Now, they apply a **Constitutional Morality** filter.
- **Conflict with Rights:** If a practice (even if "essential") violates **Article 14 (Equality)** or **Article 21 (Dignity)**, the Court may strike it down (e.g., *Sabarimala Case*, *Triple Talaq*).
- **High Threshold:** In recent cases (*Adi Saiva Sivachariyargal*), the SC held that even pre-constitutional customs are not protected if they aren't core to the faith's identity.

Impact of the Supreme Court Judgment

1. Legal & Jurisprudential Impact

- **Constitutional Morality:** Redefined "morality" in Articles 25 and 26 to mean constitutional values (equality, liberty, dignity) rather than religious or individual standards.
- **ERP Scrutiny:** Raised the bar for **Essential Religious Practices**; a practice must now be "indispensable" to the faith. Exclusionary customs were labeled "backward rituals."
- **Article 17 Expansion:** Broadened "Untouchability" to include social exclusion based on biological factors like menstruation, not just caste.

2. Institutional Impact

- **Limited Autonomy:** Denied Ayyappa devotees "denominational" status, signaling that groups cannot use Article 26 to bypass equality laws.
- **Governance Reform:** Struck down **Rule 3(b)** of the Kerala Rules (1965), removing legal sanction for custom-based gender exclusion.

3. Social & Political Impact

- **Faith vs. Law:** In a deeply religious society, legal mandates that contradict long-standing traditions often face massive public resistance, making them difficult to enforce on the ground.
- **Polarization:** Sparked mass protests in Kerala; critics viewed it as secular "encroachment" on traditional faith.
- **Resistance:** Massive implementation challenges led to 60+ review petitions, necessitating the current nine-judge bench.

4. The "Sabarimala Legacy"

- **Broadened Review:** Opened a "Pandora's box," leading the SC to examine similar issues in other faiths (e.g., Entry of women into Mosques, Parsi Fire Temples, and Female Genital Mutilation Dawoodi Bohra community).
- **Substantive Equality:** Shifted focus from "formal equality" to dismantling structural oppression within religious institutions.

Way Forward

1. Harmonious Construction

- Seek a "**middle path**" where Article 25 (Individual Rights) and Article 26 (Group Autonomy) coexist.
- Religious autonomy should be respected unless it violates the core of human dignity and equality.

2. Refining the ERP Doctrine

- **Judicial Restraint:** Shift focus from interpreting scriptures to evaluating if a practice causes harm or discrimination.
- **Balanced Inquiry:** Consider both ancient texts and the "**living faith**" of the current community to determine what is essential.

3. Substantive Equality

- Move beyond "formal equality" to dismantle structural patriarchy and historical exclusion within religious spaces.
- Ensure "custom" is not used as a legal shield for discriminatory practices.

4. Internal Reform & Legislative Action

- **State Leadership:** The State should drive social reform through legislation (as per Art. 25(2)) rather than relying solely on judicial mandates.
- **Community Dialogue:** Encourage internal reforms led by religious leaders to reduce social resistance and ensure sustainable change.

5. Defining Constitutional Morality

- The Nine-Judge Bench must provide an **objective definition** of "Constitutional Morality."
- This creates a stable legal benchmark and prevents the term from being perceived as subjective judicial overreach.

Conclusion

While the Supreme Court pursues transformative justice, Hobbesian social contract theory warns that judicial intervention in deep-seated faith risks destabilizing the social order. Forcing secular reforms on religious "Leviathans" may undermine the communal stability that the state was originally contracted to protect.

Q. Judicial intervention in religious matters raises concerns of overreach as well as necessity. Discuss the challenges involved and suggest a way forward. 15 Word

2.1.8. DELIMITATION IN INDIA

Context:

- **Delimitation** serves as a foundational mechanism to **readjust parliamentary seats in line with population shifts after every census** so that the principle of one person one vote is upheld across India.
- While the **women's reservation** has already been constitutionally settled, the **real issue** lies in **conducting delimitation** in a manner that **remains politically equitable** and does not disturb the federal balance among states.



Background: Delimitation Commission in India

A. What is Delimitation?

- **Delimitation** refers to the process of redrawing parliamentary and assembly constituency boundaries and reallocating seats based on updated population data obtained from a Census.
- Its core objectives are: ensuring **equal representation (one vote, one value)**, reflecting demographic changes and maintaining fairness in electoral outcomes.

B. Key Constitutional Provisions

- **Article 82:** It mandates that after every Census, the **allocation of seats in the Lok Sabha to the States and the division of each State into territorial constituencies** shall be readjusted by such authority as **Parliament may by law determine**.
- **Article 170:** Similar to Article 82, this provision governs the composition of **Legislative Assemblies in States**, requiring readjustment of boundaries after each decadal Census.

- **Article 81:** Sets the maximum strength of the Lok Sabha at 550 elected members; any increase beyond this requires a constitutional amendment.
- **Article 55:** Governs the election of the President using population data, making delimitation indirectly relevant to Presidential election weightage of states.
- **Article 327:** Empowers Parliament to legislate on elections to Parliament, including the process of delimitation.
- **Article 329:** Bars **judicial review** of delimitation orders, they have the force of law and cannot be challenged in any court.

C. Evolution and Freezing of Delimitation

- **42nd Amendment Act (1976):** During the Emergency, the government froze the allocation of seats in the Lok Sabha and State Assemblies based on the **1971 Census** until the year 2000. This was a policy move to ensure that States' efforts in **family planning** did not lead to a reduction in their political representation.
- **84th Amendment Act (2001):** The freeze on the total number of seats was further extended for another **25 years** (until 2026), with the justification that a uniform population growth rate had not yet been achieved across the country.
- **87th Amendment Act (2003):** While the total number of seats remained frozen based on the **1971 Census**, this amendment allowed for the **internal redrawing** of boundaries within States based on the **2001 Census** to account for **intra-state population shifts**.
- **Article 334-A** (inserted by the **Nari Shakti Vandan Adhiniyam, 2023**): Provides **one-third reservation for women in the Lok Sabha and Vidhan Sabhas**, originally conditioned on **completion of the next Census-based delimitation**.

D. Delimitation Commission: Structure and Powers

- Constituted under the **Delimitation Commission Act**, the commission is headed by a retired Supreme Court Judge and includes the **Chief Election Commissioner of India** and the respective State Election Commissioners.
- Delimitation commissions were constituted after the Censuses of **1951, 1961 and 1971**; the current exercise will be based on **Census 2027**.
- The orders of the Delimitation Commission **have the force of law**, are final and cannot be challenged in any court under **Article 329**.

E. Relevant Supreme Court Judgements

- **Meghraj Kothari v. Delimitation Commission (1966):** The Supreme Court upheld that delimitation orders are **non-justiciable**; Parliament's intent for finality in electoral boundary-setting was clear.
- **Mohinder Singh Gill v. Chief Election Commissioner (1978):** Reaffirmed the independence of the Election Commission and the finality and binding nature of delimitation orders.
- In multiple rulings, the SC has held that the **right to free and fair elections** is a fundamental right under **Articles 19 and 21** indirectly tying the **fairness of delimitation to constitutional rights**.

Intersecting Delimitation with Women's Reservation

Nari Shakti Vandan Adhiniyam (128th Constitutional Amendment) has introduced a new layer of complexity by making women's quota contingent upon the delimitation process.

- **Article 334-A (New Insertion):** This mandate states that the **33.3% reservation** for **women** will only come into effect after a fresh Census is conducted and the subsequent delimitation exercise is completed.
- **2027 Census and Implementation:** Current projections suggest that if the Census is conducted in 2027, the delimitation report might only be ready by 2028 or 2029, potentially pushing the **implementation of women's reservation** to the **2029 General Elections**.

Key Challenges in Delimitation

The current debate surrounding the redrawing of India's electoral map is not merely a technical task but a profound challenge to the nation's **federal compact** and **social justice** framework.

1. The Federal Imbalance and the "Penalty for Progress"

- **Demographic Divergence:** States in **South India** (Tamil Nadu, Kerala, Karnataka, Andhra Pradesh) and parts of the **East (West Bengal)** successfully implemented aggressive **family planning** and social development programs decades ago.
- **Challenge of Relative Disadvantage:** A delimitation based purely on **raw 2027 population data** would reduce the relative share of Lok Sabha seats for these "stabilized" states. This creates a "**Penalty for Progress**," where states are politically weakened for achieving national developmental goals.
- **Magnification of Influence:** Even with a proportionate increase in total seats, the absolute numerical gap between high-population and low-population states widens, leading to a decline in the **relative political influence** of southern and smaller states in the Union.

2. Erosion of Democratic Process and Inter-State Trust

- **Bypassing Consensus:** The notification of a **special session** (April 2026) without sharing official proposals or holding an **all-party meeting** undermines the tradition of consensus-building.
- **Challenge of Federal Trust:** India's stability rests on a **constitutional compact** an implicit assurance of equitable representation. Unilateral, rushed changes to seat allocation without interstate consultation can deepen regional alienation and reduce **interstate trust**.
- **Historical Contrast: 73rd and 74th Amendments (1993)** involved **five years of national debate**, which secured the legitimacy of women's reservation in local bodies.

3. Constitutional Integrity and the Census-Delimitation Link

- **Procedural Decoupling:** Articles **82 and 170** establish that delimitation must follow a **completed Census**. The **postponement of the 2021 Census** has created a data vacuum, and attempting to redraw boundaries before the **2027 Census** is fully published risks violating constitutional intent.
- **Impact on Entitlements:** The Census delay has **direct socio-economic costs**, such as depriving over **10 crore people** of benefits under the **National Food Security Act (2013)**.

- **Irreversibility Challenge:** Under **Article 329**, delimitation orders are **non-justiciable** (cannot be challenged in court). If the process is rushed or based on flawed data, the resulting errors become a **permanent constitutional reality** that cannot be corrected by the judiciary.

4. Social Justice and the Caste Census Conflict

- **Inclusion Deficit:** The **Nari Shakti Vandan Adhiniyam, 2023** provides a sub-quota for SC/ST women but excludes **OBC women**. Given that OBCs constitute nearly **50% of the population**, this is viewed as a significant gap in **substantive equality**.
- **Derailment of Data:** Critics argue that hurried delimitation may be a strategy to **delay or derail the Caste Census**.
- **Challenge of Social Empowerment:** Without updated caste data, the social justice agenda remains incomplete. Successful surveys in **Bihar and Telangana** prove that such enumeration is technically feasible and should not be used as an excuse to delay electoral reforms.

5. Institutional and Quality-of-Governance Hurdles

- **Deliberative Quality:** Expanding the Lok Sabha to **800+ seats** (as the new Parliament suggests) poses a challenge to the **deliberative quality** of the house. With more members, **individual speaking time decreases**, and the scrutiny of complex legislation may suffer.
- **Administrative Complexity:** Shifting to a **Digital Census** for the first time carries inherent risks of data gaps. Ensuring **arithmetic accuracy** while maintaining **political equity** requires a level of transparency that a rushed timeline may not afford.

Way Forward: Seeking a Harmonious Balance

1. Strengthening the Democratic and Consultative Process

- **Restoring Consensus-Based Governance:** The Union government should shift from a "special session" approach to a **formal all-party consultation** framework. No constitutional amendment affecting the state-wise distribution of seats should be passed without a consensus among major national and regional political stakeholders.
- **Inter-State Council Engagement:** Utilize the **Inter-State Council (Article 263)** as a platform for Chief Ministers to voice regional anxieties. A mandate of **50% state concurrence** for any change in the seat-allocation formula would ensure that the "Union of States" remains a cooperative reality.

2. Procedural Integrity: Synchronizing Census and Delimitation

- **Census-First Mandate:** In line with **Articles 82 and 170**, the **Census 2027** must be fully completed and the data officially published **before the Delimitation Commission begins its work**. This prevents the use of provisional or estimated data for permanent constitutional changes.
- **Comprehensive Data Collection:** The 2027 Census should include a **Caste Enumeration**. Updated caste data is not just a political demand but a functional necessity for defining **"quota within quota"** and ensuring that the women's reservation is socially inclusive.
- **Digital Transparency:** Given the transition to a **Digital Census**, the government must establish an independent audit mechanism to ensure data accuracy and prevent any "digital divide" from skewing seat distribution.

3. Implementing Federal Safeguards and Equity Formulas

- **Adopting a "Seat-Floor" Mechanism:** To protect the interests of states that have successfully stabilized their populations (like **Tamil Nadu, Kerala, and West Bengal**), a **Floor Rule** should be implemented. This ensures that no state sees a reduction in its **absolute number** of Lok Sabha seats, even if the total house strength increases.
- **Performance-Linked Representation:** The Delimitation Commission should move beyond raw population counts and adopt a **multi-weighted index**. This formula should factor in:
 - **Human Development Index (HDI)** scores.
 - **Success in Population Stabilization** (TFR rates).
 - **Literacy and Healthcare Performance**.
- **Weightage Adjustment:** By giving weightage to development indicators, the process rewards states for effective governance rather than penalizing them for demographic success.

4. Enhancing Social Justice and Substantive Equality

- **Inclusive Women's Reservation:** Amend the **Nari Shakti Vandan Adhiniyam, 2023** to include a **sub-quota for OBC women**. This fulfills the constitutional promise of **substantive equality** and ensures that the **33% reservation** reflects the actual social diversity of the Indian electorate.
- **Data-Driven Empowerment:** Use the findings of the 2027 Caste Census to redraw **Reserved Constituencies** (SC/ST) more accurately, ensuring that the most marginalized sections within these categories receive fair representation.

5. Long-Term Institutional and Parliamentary Reforms

- **Strengthening the Rajya Sabha:** To balance any population-based tilt in the Lok Sabha, the powers of the **Upper House** (Council of States) should be enhanced. The **Rajya Sabha** could be restructured to provide more **equitable weightage to states** as entities, acting as a "federal anchor."
- **Permanent Electoral Reforms Commission:** Instead of ad-hoc commissions, a **permanent body** could be established to provide ongoing, neutral oversight of electoral reforms.

Conclusion

Delimitation represents a constitutional moment that will shape the **federal balance and democratic representation in India** for the coming decades. By prioritising consensus, political equity and long-term national interest the country can ensure that both women's reservation and delimitation reinforce rather than weaken the world's largest democracy.

***Q.** Delimitation in India is not merely a technical exercise but a test of federal equity. Discuss how a balanced approach can ensure democratic legitimacy, social justice and cooperative federalism in India. 15 Marks*

2.1.9. INDIA'S NATIONAL RURAL LIVELIHOOD MISSION (NRLM)

Context:

- In 2011, the **Government of India** launched the **National Rural Livelihood Mission (NRLM)** under the **Ministry of Rural Development**, built on the philosophy of **Self-Help Groups (SHGs)**, financial inclusion, skill development and self-employment, with the ambitious objective of reducing multidimensional poverty in rural India.
- **Fifteen years on**, the NRLM has not only exceeded its domestic targets but has emerged as a **globally admired model of rural development**, attracting interest from African nations and reshaping India's **South-South cooperation** framework.



About National Rural Livelihoods Mission (NRLM)

The **National Rural Livelihoods Mission (NRLM)**, a flagship programme under the **Ministry of Rural Development (MoRD)**, aims to reduce **multidimensional poverty** by promoting **self-employment, financial inclusion and skill development** in rural areas. It was launched in **2011** to replace the earlier **Swarnjayanti Gram Swarozgar Yojana (SGSY)**, which was criticised for being **fragmented and supply-driven**.

Unlike SGSY, NRLM follows a **demand-driven and institution-led approach**, focusing on building **strong grassroots institutions** and ensuring **sustainable livelihoods**.

A. Core Features and Programme Components

1. Social Mobilisation and Institutional Structure

- NRLM mobilises the rural poor, especially **women**, into **Self-Help Groups (SHGs)**, which are small, community-based groups promoting **collective savings, credit access and livelihood diversification**.
- These SHGs are further organised into a **federated structure** comprising **Village Organisations (VOs), Cluster Level Federations (CLFs) and Block Level Federations (BLFs)**, ensuring **participatory governance and sustainability**.

2. Financial Inclusion and Credit Support

- NRLM strengthens financial access through **Revolving Funds (RF)** and **Community Investment Funds (CIF)**, which enhance the **financial capacity of SHGs**.
- It facilitates **bank linkages under Deendayal Antyodaya Yojana – NRLM (DAY-NRLM)** and strengthens the **SHG-Bank Linkage Programme (SBLP)** to ensure **affordable and timely credit**.

3. Livelihood Promotion and Skill Development

- The mission promotes **farm livelihoods** through improved agricultural practices and allied activities, and **non-farm enterprises** such as dairy, handicrafts, and micro-enterprises.
 - **Community Cadres: Over 1 crore trained community resource persons (CRPs), Community Mobilisers, Pashu Sakhis (livestock), Krishi Sakhis (agriculture), Bank Sakhis** deployed across India for last-mile service delivery.

- It also supports **skill development and employment** through **Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)**, enabling rural youth to access **formal sector jobs**.

4. Last-Mile Delivery and Digital Inclusion

- NRLM ensures effective service delivery through **community cadres**, including **Business Correspondents (BCs)/Bank Sakhis**, who provide **last-mile banking and support services**.
- It promotes **digital literacy, mobile banking and digital payments**, and integrates SHGs with **social security schemes and financial inclusion initiatives** for improved outreach and transparency.
- **JAM Trinity Embedding**: Rural women enrolled in formal financial systems via **Jan Dhan Yojana (PMJDY — Pradhan Mantri Jan Dhan Yojana) bank accounts, Aadhaar biometric identity and Mobile banking**
- Scheme Convergence: **NRLM SHG platform used for convergent delivery of**:
 - **MGNREGS — Mahatma Gandhi National Rural Employment Guarantee Scheme** (wage employment)
 - **PM-KISAN — Pradhan Mantri Kisan Samman Nidhi** (farmer income support)
 - **PMJDY — Pradhan Mantri Jan Dhan Yojana** (financial inclusion)
 - **PM-SVANidhi — Pradhan Mantri Street Vendor's AtmaNirbhar Nidhi** (micro-credit for street vendors)
 - **PMAY-G — Pradhan Mantri Awaas Yojana – Gramin** (rural housing)

B. Key Achievements—Scale of Transformation

The NRLM's data (as of 2024-25) reflects **one of the largest social mobilisation programmes in the world**:

- **Mass Outreach**: NRLM has reached over **10 crore households across 742 districts**, making it one of the largest livelihood programmes globally.
- **Women-Centric Growth**: Over **9 million SHGs** have been mobilised, with **over 20 million women earning more than ₹1 lakh annually**.
- **Financial Inclusion**: Around **5 crore women have accessed institutional credit**, with total bank linkage exceeding **₹12 lakh crore**.
- **Community Cadre System**: Deployment of **community resource persons and banking correspondents** has ensured **last-mile delivery**, with presence in over **60% of Gram Panchayats**.
- **Budgetary Support**: The **Union Budget 2026–27 allocated ₹19,200 crore**, reinforcing NRLM's centrality in rural development.

Significance of National Rural Livelihoods Mission (NRLM)

1. Social Significance

- **Women's Empowerment**: **Collective agency through SHGs** has reduced domestic violence, child marriage, and enhanced financial decision-making.
- **Social Capital**: **Trust-based peer lending** and collective savings have rebuilt grassroots solidarity.

- **Health & Nutrition:** **NRLM-linked SHGs** have been instrumental in COVID-19 relief, mask production and nutrition gardens.
- **Financial Inclusion:** **Bank Sakhis and Business Correspondents** have brought banking to doorsteps of unbanked rural women.

2. Economic Significance

- **Poverty Alleviation:** **NRLM is India's flagship instrument** for reducing rural multidimensional poverty.
- **Boost to Female Labour Force Participation Rate (FLFPR):** **Rose from 17% to ~37% (2018-2023)** partly driven by SHG-linked livelihoods.
- **Microenterprise Promotion:** SHG members entering non-farm livelihoods, handicrafts, food processing, agri-enterprises.
- **GVA Contribution:** **SHG-linked economic activities** contribute meaningfully to rural Gross Value Added (GVA).

3. Governance & Institutional Significance

- Decentralised delivery through **Panchayati Raj Institutions (PRIs)** and community federations.
- Accountability mechanisms embedded via **social audits, community monitoring and digital tracking.**
- Model for **convergent governance** — linking multiple ministries (Finance, Agriculture, Education, Health) through SHG platform.

4. Diplomatic Significance — NRLM as a Tool of Development Diplomacy

- Study delegations from **Ethiopia, Tanzania, Malawi, Kenya, Rwanda** have visited India to understand NRLM's operational mechanics.
- Aligns with India's philosophy of **South-South Cooperation (SSC)** — sharing developmental knowledge, not just capital.
- Complements India's **ITEC (Indian Technical and Economic Cooperation)** and **IAFS (India-Africa Forum Summit)** diplomatic frameworks.

NRLM Crossing Borders — India's Global Development Footprint

A. Why African Nations are Attracted

- **Women-Centric Focus:** **SHG model resonates** with Africa's agenda for deepening women's economic participation.
- **Cost-Effectiveness:** **Community-driven processes** reduce dependency on heavy capital investment — critical for resource-constrained governments.
- **Informality Compatibility:** **NRLM suits large informal economies** of Africa where livelihood diversification is essential.
- **Institution Building:** **Beyond a scheme — NRLM strengthens local governance,** accountability, and long-term community capacity.
- **Peer Learning:** **Global South nations prefer learning from peers** with similar structural realities over Western templates.

B. How India is Engaging

- **Delegations, Study Tours and Immersion Visits** to state livelihood missions (SRLMs)

- Technical capacity building through India's **ITEC programme**.
- Proposed **Rural Livelihoods Knowledge Exchange Platform** linking Indian state missions with African government agencies.
- Joint **Pilot Projects** to adapt SHG-based models to African local contexts.

Challenges in Scaling and Adapting the National Rural Livelihood Mission (NRLM) Model

1. Domestic Challenges: Ensuring Depth and Quality

Despite massive quantitative success, the mission faces qualitative challenges in sustaining the momentum across India.

- **Regional Disparities in Institutional Strength:** There is a significant "North-South Divide" in SHG performance. While states like **Kerala (Kudumbashree)** and **Andhra Pradesh** have mature federations, the "social capital" in central and eastern India is still evolving, leading to uneven poverty reduction.
- **The "Credit-Limit" Ceiling:** While bank linkages have improved, many SHGs struggle to move beyond **consumption-oriented loans** toward **productive capital investment**. Banks remain hesitant to provide high-value loans to groups without physical collateral.
- **Sustainability of "Lakhpatis":** Moving from a subsistence income to a consistent annual profit of **₹1 lakh** requires market intelligence and value-chain integration, which many primary SHGs currently lack.
- **Administrative Overburdening:** The **Community Resource Persons (CRPs)** and **Bank Sakhis** are often overburdened with multiple government schemes, which can dilute their core focus on **social mobilization** and financial mentoring.

2. Global Challenges: Cross-Border Adaptation Issues

Exporting a "**Social-Sector Institution**" to the **Global South (particularly Africa)** involves navigating complex external variables.

- **Socio-Political and Land Variations:** The Indian SHG model assumes a certain level of **local governance** and stable **land tenure systems**. In many African nations, differing tribal laws and land ownership patterns can hinder the formation of agri-based collective enterprises.
- **The Digital Divide and Infrastructure Gaps:** The "**Indian Miracle**" is now heavily reliant on **Digital Public Infrastructure (DPI)** like Aadhaar and UPI. Countries with low digital penetration or erratic electricity struggle to implement the "**Fintech**" aspect (e.g., mobile banking and digital ledgers) of the model.
- **Credit Risk and Banking Underdevelopment:** The transition from **informal micro-credit** to **formal bank linkages** requires a robust, rural-facing banking sector. In many parts of the Global South, the lack of **Regional Rural Banks (RRBs)** or cooperative networks makes last-mile credit nearly impossible.
- **Institutional Gestation Period:** Social mobilization is not an "overnight" success. Developing a **trained cadre** (the human capital) requires years of state-funded investment. Partner nations often seek immediate results, which contradicts the slow, transformative nature of the **NRLM framework**.

- **Cultural Specificities:** Collective action models depend on **social trust**. Replicating the "**peer-pressure**" repayment model in societies with different **communal or individualistic value systems** requires significant **contextual customization**.

Way Forward: A Comprehensive Roadmap

To maximize the impact of this **diplomatic tool**, India must move toward a more formal and integrated structure of knowledge sharing.

- **Value Chain Upgradation and Market Linkages:** Move **SHG** members beyond subsistence by scaling micro-enterprises through integration with the **Open Network for Digital Commerce (ONDC)**, **Government e-Marketplace (GeM)** and **PM Vishwakarma**, ensuring rural products reach national and global markets.
- **Climate-Resilient and Holistic Convergence:** Integrate **agroforestry**, **solar energy enterprises** and **water conservation** into **livelihood portfolios** while strengthening the **NRLM-Health-Nutrition nexus** to ensure economic gains translate into improved **human development outcomes**.
- **Global Knowledge Exchange Infrastructure:** Establish a dedicated **Rural Livelihoods Knowledge Exchange Platform** under the joint aegis of the **Ministry of External Affairs (MEA)** and **Ministry of Rural Development (MoRD)** to link successful state models like **Kudumbashree (Kerala)** or **JEEViKA (Bihar)** with international partners.
- **Technological Bundling (DPI Integration):** Offer a "**plug-and-play**" development package to the Global South by bundling **SHG institutional training** with India's **Digital Public Infrastructure (DPI)** expertise, specifically in **UPI** and **Direct Benefit Transfer (DBT)** systems.
- **Capacity Building and Immersion Fellowships:** Expand **ITEC-linked training** and offer **extended immersion fellowships** for foreign bureaucrats and community leaders to provide a deep, hands-on understanding of the **social engineering** and micro-level mechanics of the Indian mission.
- **Professionalization through Global Certification:** Standardize the training and accreditation of **Community Resource Persons (CRPs)** to create a **globally recognized workforce** of certified rural development experts capable of mentoring projects across diverse geographies.
- **Strategic Trilateral and Multilateral Partnerships:** Collaborate with global financial institutions like the **World Bank** or **African Development Bank (AfDB)** to create a framework where India provides **technical expertise** while multilateral agencies provide the **scaling capital** for pilot projects in partner nations.

Conclusion

The **NRLM** has proven that India can generate grassroots solutions that are universally applicable, turning rural transformation into a powerful **diplomatic asset**. By institutionalizing this knowledge-sharing, New Delhi is defining a **new paradigm for global development**—one that empowers the most vulnerable through collective action and self-reliance.

Q. *The success of NRLM lies not only in poverty alleviation but in building sustainable community institutions. Critically Examine and suggest a comprehensive roadmap for its effective expansion.*
15 Marks

2.1.10. IMPACT OF WEAKENING UNIONISATION ON WORKERS' RIGHTS IN INDIA

Context:

- In recent months, India has witnessed a **wave of protests by workers** demanding **higher minimum wages, broader social security coverage, and an end to contractualisation of jobs**. These agitations, particularly in the **manufacturing sector**, have brought the **role of trade unions into sharp focus**.
- The **weakening of unionisation**, often referred to as **deunionisation**, has raised concerns about the **erosion of workers' bargaining power** and the **dilution of their rights**.



Background

1. Gradual Shift from Trade Unionisation to Deunionisation in India

- The **trade union movement** in India began to take shape in the **early 20th century**, emerging from **colonial labour conditions** and the broader **freedom struggle**. Workers in textile mills, railways, and ports organised themselves into **associations and unions** to demand **better wages, safer working conditions, and legal protections**.
- **First Formal Recognition through Trade Union Act:** The **Trade Unions Act, 1926** provided the first formal legal recognition, defining a trade union as “**any combination, whether temporary or permanent, formed primarily for the purpose of regulating the relations between workmen and employers, workmen and workmen, or employers and employers, or for imposing restrictive conditions on the conduct of any trade or business.**” This law established the **legal basis for registration**, while also allowing the state to **impose reasonable restrictions** on union activities.
- **Post Independence Organisation:** After **Independence**, the **Industrial Disputes Act, 1947**, the **Minimum Wages Act, 1948**, and related labour statutes created a **protective framework** for organised workers.
 - The **public sector expansion** under the **dirigisme (state-led economic planning) model** strengthened the **role of trade unions**, which became key actors in **wage bargaining, dispute resolution, and policy advocacy**.
- **Shift after Economic Liberalization:** The **liberalisation, privatisation and globalisation (LPG) reforms of 1991** marked a turning point.
 - The shift towards **market competitiveness** and **labour flexibility** reduced the size of **public sector employment** and encouraged **outsourcing, contract labour, and non-standard employment**.
 - As a result, the **informal sector** absorbed a **growing share of the workforce**, while the **formal-sector bargaining power of trade unions** weakened.

2. Constitutional Provisions Establish the Legal Basis for Trade Unions

- **Article 19(1)(c)** guarantees the **fundamental right to form associations or unions**, thereby recognising trade unions as legitimate instruments of collective action.
- **Article 19(4)** allows the State to impose **reasonable restrictions** in the interest of public order, sovereignty, and integrity of the nation.

- The **Directive Principles of State Policy** further emphasise labour welfare:
 - **Article 43** directs the State to ensure a **living wage and decent standard of life for workers**.
 - **Article 43A** promotes **worker participation in the management of industries**, thereby strengthening industrial democracy.
- These provisions collectively reflect the **constitutional commitment to social justice and labour welfare**.

3. Judicial Pronouncements Define the Scope of Trade Union Rights

- In **All India Bank Employees' Association vs National Industrial Tribunal (1962)**, the Supreme Court clarified that although the **right to form associations is fundamental**, the **right to recognition or collective bargaining is not guaranteed**.
- In **Kameshwar Prasad vs State of Bihar (1962)**, the Court recognised peaceful demonstrations as part of fundamental rights but held that **strikes can be reasonably restricted**.
- In **T.K. Rangarajan vs Government of Tamil Nadu (2003)**, the Court ruled that **government employees do not have a fundamental right to strike**, reinforcing regulatory limits on labour actions.
- Thus, judicial interpretations ensure a balance between **labour rights and broader public interest considerations**.

Significance of Trade Unions in the Contemporary Labour Market

1. Collective bargaining and wage negotiation

- Trade unions serve as the **primary institutional mechanism for collective bargaining**, enabling workers to negotiate **wages, working hours, job security, and employment-conditions** as a **unified group** rather than as isolated individuals.
- When unions are strong, employers are compelled to **engage in dialogue** and are less likely to impose **unilaterally disadvantageous terms**.
- By aggregating worker interests, unions help **counter employer dominance** and prevent **exploitative wage practices**, especially in **large-scale industries** where labour supply is high and workers' bargaining power is weak.
- Collective bargaining helps secure **fair wages, overtime rules, and workplace safety standards**, reducing the risk of **undervalued labour** and **abusive working conditions**.

2. Dispute resolution and industrial harmony

- Trade unions play a **critical role in dispute resolution**, participating in **conciliation boards, labour courts, and other statutory forums** to mediate conflicts between workers and employers.
- This **institutionalised negotiation** helps maintain **industrial harmony** and ensures disputes are resolved through **legal and structured processes** instead of **prolonged strikes or violent agitations**.

- In the absence of strong unions, disputes often remain **unresolved or poorly managed**, leading to **spontaneous strikes, lockouts, or confrontations** that harm both workers and employers.
- The lack of **stable channels for negotiation** can create **social unrest and economic instability** in industrial belts, undermining **long-term industrial peace**.

3. Social security and policy advocacy

- Trade unions act as **advocacy bodies** pushing for the expansion of **social security nets**, including **pension schemes, health insurance, maternity benefits, and unemployment protection**.
- They campaign for **legislative reforms, better implementation of labour laws, and inclusive coverage of informal and contract workers**.
- In states with **strong trade union movements**, such as **Kerala and Tamil Nadu**, workers have often secured **higher minimum wage settlements** and **more robust social security provisions** through sustained collective action.
- Unions monitor **government schemes and employer compliance** to ensure benefits **reach workers in practice**, not just on paper, thereby **closing gaps in social protection**.

4. Psychological and structural empowerment

- Trade union membership provides **psychological empowerment and collective identity**, helping workers understand their **rights, legal protections, and negotiation strategies**.
- This reduces fear of **job loss, discrimination or victimisation** and strengthens workers' confidence in asserting their demands.
- Structurally, strong unions act as **checks on arbitrary managerial authority**, ensuring **lay-offs, transfers, and disciplinary actions** follow **transparent procedures and due process**.
- This promotes **organisational fairness and an equitable workplace culture**, while **collective bargaining and representation** enhance workers' **voice, agency, and democratic participation** in the workplace.

Key Challenges and Impact on Trade Unionisation Today

1. Declining Union Density

- The **unionisation rate among the workforce is estimated at 6.3%**, with **only 1.8% in the private sector and 11.8% in the public sector**. This low coverage reflects the **expansion of informal employment**, where **half or more of the workforce** operates outside **formal contracts, statutory protections, and institutionalised collective representation**.
- Informal workers such as **agricultural labourers, domestic workers, construction labourers, and street vendors** are often **difficult to organise** due to **fragmentation, low wages, and lack of stable employer relationships**.
- The **growth of micro-enterprises and small-scale industries** further complicates **unionisation**, as these workplaces often lack the **scale and visibility** needed for collective bargaining.

2. Fragmentation, Political Affiliation, and Credibility Issues

- Trade unions in India are **highly fragmented** along **political lines**, with multiple national and regional federations representing the same workforce. This **fragmentation** leads to **internal rivalries, competing demands, and reduced bargaining strength**.
- Many workers view unions as **extensions of political parties** rather than **independent worker-representation bodies**, leading to **scepticism and low participation**. This **perception of politicisation** further erodes the **legitimacy and effectiveness** of trade unions.
- The **lack of trust** in unions reduces their ability to **mobilise workers** during crises, limiting their impact on **policy and negotiation outcomes**.

3. Legal and Structural Constraints under the Labour Codes

- The **recent Labour Codes** the **Code on Wages, the Industrial Relations Code, the Social Security Code**, and the **Occupational Safety, Health and Working Conditions Code** introduce several changes that affect unionisation.
- One particularly significant change is the **higher threshold for forming a trade union**: instead of allowing **eight workers** to come together and register a union, the **new regime often requires about 10% of the workforce** in an establishment, making it **harder for small unions** to gain statutory recognition.
- Moreover, the Codes have reduced the scope of state supervision by labour departments in some areas, weakening the enforcement of union rights and influencing dispute resolution dynamics.
- In practice, this can tilt the balance of power **in favour of employers**, especially in sectors with **large labour supply and weak union presence**. The **weakening of statutory oversight** further undermines **workers' protections**.

3. Rise of Contract Labour, Gig Work, and Flexible Employment

- In such arrangements, workers often lack **direct employment relationships with the principal employer**, making it **difficult for unions to organise and negotiate** on their behalf.
- The **outsourcing of core functions** and **fragmentation of the workforce** further dilute traditional union structures. **Gig and platform workers** often operate through **digital apps and algorithms**, without **stable workplaces, supervisors, or formal employment contracts**.
- This **technological dispersion** complicates the application of **traditional collective - bargaining models** and raises questions about **who an employer is** in gig work.

Global Best Practices

Globally, several countries have adopted best practices to strengthen trade unions and protect workers' rights:

1. **Nordic Model (Sweden, Denmark, Norway)**: These countries have **strong tripartite systems involving government, employers, and trade unions**, ensuring **collective bargaining and social dialogue**. High unionisation rates and robust social security systems contribute to low inequality and high worker satisfaction.

2. **United States:** The **National Labor Relations Act (NLRA)** protects **workers' right to organise and bargain collectively**, with **mechanisms for dispute resolution** and **enforcement**. Despite challenges, the U.S. labour movement has secured significant gains for workers.
3. **International Labour Organization (ILO):** The **ILO promotes the right to organise** and **collective bargaining through conventions such as Convention No. 87** (Freedom of Association) and **Convention No. 98** (Right to Organise and Collective Bargaining). These conventions provide a global framework for protecting workers' rights.

Way Forward for Strengthening Workers' Interests

To address the challenges facing trade unions and protect workers' rights, several measures can be implemented:

- **Strengthen Legal Frameworks:** Amend the **Labour Codes** to lower the threshold for forming trade unions and ensure robust protection against **employer intimidation**. Strengthen provisions for **collective bargaining** and **dispute resolution**.
- **Promote High Unionisation:** Encourage unionisation in the **informal sector** and among **younger workers** through **awareness campaigns, education, and outreach**. Support the formation of **smaller unions and federations**.
- **Enhance Social Security:** Expand **social security coverage** to all workers, including **gig and platform workers**, through **universal social security schemes**. Ensure timely and adequate benefits for **unemployment, health, and old age**.
- **Foster Social Dialogue:** Revive **tripartite mechanisms** involving **government, employers, and trade unions** to ensure **inclusive decision-making**. Promote **social dialogue** at the workplace, sectoral, and national levels.
- **Combat Exploitation:** Implement strict regulations against **contract labour** and ensure fair treatment of **informal workers**. Strengthen **labour inspection** and **enforcement mechanisms**.
- **Empower Workers:** Provide **education and training** on **workers' rights, collective bargaining, and unionisation**. Encourage **worker participation** in union leadership and decision-making.
- **International Collaboration:** Engage with international organisations like the **International Labour Organization (ILO)** to adopt **best practices** and align with **global labour standards**.

Conclusion

While economic transformations have weakened traditional union structures, their relevance remains indispensable in ensuring **fair wages, social security, and dignified work conditions**. Therefore, revitalising trade unions through inclusive and adaptive strategies is essential for achieving **equitable and sustainable labour governance**.

Q. The weakening of trade unions in India has significantly altered the balance of power in labour markets. Critically examine the causes of declining unionisation and its impact on workers' rights in India. 15 Marks

2.1.11. THE CHALLENGE TO UNIVERSAL ADULT FRANCHISE

Context:

- The principle of **universal adult franchise**, which guarantees every adult citizen the right to vote without discrimination, forms the **moral and constitutional foundation of India's democracy**; however, in rapidly urbanising areas, this right is increasingly being undermined through administrative processes that exclude the poor, migrants, and marginalised groups.
- The ongoing debate around the **Special Intensive Revision (SIR) of electoral rolls** has exposed a deeper **structural crisis of urban electoral disenfranchisement**, calling for urgent attention from institutions and society.



Background: Understanding Universal Adult Franchise in Urban India

I. Meaning of Universal Adult Franchise

- Universal adult franchise** refers to the right of **every citizen above a prescribed age (18 years in India)** to vote in elections **without discrimination** based on caste, class, gender, religion, or economic status. It reflects the democratic principle of “**one person, one vote, one value**”, ensuring **political equality**.

II. Pre-Independence Roots: A Contested Right

Under colonial rule, the right to vote was severely restricted tied to property ownership, tax payment, and literacy effectively confining political participation to a narrow elite and excluding the vast majority of Indians, particularly the poor, Dalits, and women.

- Government of India Act, 1919 (Montagu-Chelmsford Reforms):** This Act introduced limited franchise but restricted voting to a small propertied class, excluding the overwhelming majority of Indians from political participation.
- Government of India Act, 1935:** The franchise was widened marginally extending to **approximately 14% of the total population** but continued to exclude the poor, most women, and the landless, reflecting the colonial logic of exclusion.
- Constituent Assembly Debates (1946–1949):** The Constituent Assembly, under the leadership of **Dr. B.R. Ambedkar**, decisively rejected the **colonial tradition of restricted franchise** and adopted **universal adult suffrage** without any qualification of property, literacy, caste, religion, or gender a revolutionary democratic commitment for a newly independent, largely illiterate nation.

III. Post-Independence Evolution: Deepening the Franchise

India's first **General Elections (1951–52)** were a defining moment in world democratic history, as approximately **17.3 crore voters** exercised their right to vote for the first time, making it the **largest electoral exercise** undertaken by any democracy at that time.

- **Expansion of Franchise through 61st Constitutional Amendment Act, 1988:** The voting age was lowered from **21 years to 18 years**, bringing approximately **5 crore additional young citizens** into the electoral fold and significantly deepening the democratic base.
- **Electronic Voting Machines (EVMs), 1998:** The nationwide introduction of Electronic Voting Machines improved the accessibility and efficiency of elections, particularly for first-time and differently-abled voters.
- **Systematic Voters' Education and Electoral Participation (SVEEP) Programme, 2009:** The **Election Commission of India** launched this programme specifically to enhance voter registration and participation among marginalised and underrepresented groups, including urban migrants and slum dwellers.
- **Indrajit Gupta Committee Recommendations:** This led to the adoption of **Electors Photo Identity Cards (EPIC)** to prevent impersonation while ensuring the genuine voter is not excluded.

IV. Constitutional and Legal Framework

- **Article 326 of the Constitution of India:** This is the primary constitutional provision that guarantees the right to vote through elections to the Lok Sabha and state legislative assemblies to every citizen of India who is not less than 18 years of age and is not otherwise disqualified.
- **Article 324 of the Constitution of India:** This article vests the **superintendence, direction, and control of elections** in the **Election Commission of India (ECI)**, an independent constitutional body responsible for ensuring free and fair elections.
- **Article 325 of the Constitution of India:** This article explicitly **prohibits the exclusion of any person from the electoral roll on grounds of religion, race, caste, or sex**, directly reinforcing the non-discriminatory character of the franchise.
- **The Representation of the People Act, 1950:** This legislation governs the **preparation, maintenance, and revision of electoral rolls**, prescribing the qualifications for voter registration and the procedure for inclusion and deletion of names making it the primary statutory framework directly relevant to the SIR controversy.
- **The Representation of the People Act, 1951:** This Act governs the actual **conduct of elections**, including qualifications for candidates, offences, and the resolution of election disputes through Election Tribunals and High Courts.

V. Key Judicial Pronouncements

- **Mohan Lal Tripathi v. District Magistrate, Rae Bareilly (1992):** The Supreme Court held that the **right to vote, though a statutory right**, is not an ordinary right, it is a **constitutional right of the highest significance**, and any arbitrary deletion from the electoral roll without due process violates the principles of natural justice.
- **People's Union for Civil Liberties (PUCL) v. Union of India (2003):** The Supreme Court recognised the right of voters to know the **criminal antecedents, assets, and educational qualifications** of candidates significantly expanding the quality and substance of democratic participation beyond mere registration to informed voting.

- **Lily Thomas v. Union of India (2013):** The Supreme Court struck down **Section 8(4) of the Representation of the People Act, 1951**, holding that a Member of Parliament or a state legislator convicted of a crime and sentenced to two or more years of imprisonment is **immediately disqualified** reinforcing that the integrity of the electorate and the elected must go hand in hand.

Significance of Universal Adult Urban Franchise in India

In the urban context, **universal adult franchise** assumes greater importance due to the presence of **diverse, mobile, and economically vulnerable populations**, making electoral inclusion essential for equitable governance.

- **Voice for the Marginalised:** Universal franchise acts as a crucial equaliser by enabling **slum dwellers, migrant workers, and informal sector populations** to elect representatives who address basic needs such as **housing, water, sanitation, and livelihoods**, thereby making urban governance more inclusive.
- **Instrument of Economic Justice:** The right to vote translates **political equality into economic demands**, allowing vulnerable groups to seek **better wages, social security, and redistribution of resources**, thus linking democracy with material outcomes.
- **Ensuring Accountable Urban Governance: Urban Local Bodies** such as municipal corporations become truly representative and accountable only when **all sections, including migrants and marginalised communities**, actively participate in elections.
- **Representation of Migrant Population:** With India's urban population projected to reach **around 600 million by 2031 (World Bank)**, ensuring voting rights for **migrant workers** is essential so that governance reflects the needs of those who sustain urban economies.
- **Strengthening Democratic Legitimacy and Social Cohesion:** Inclusive electoral rolls build **trust in institutions** and strengthen the **social contract**, while exclusion of minorities and vulnerable groups leads to **alienation and weakened legitimacy**.
- **Gateway to Other Rights:** Being enrolled as a voter often facilitates access to **welfare schemes, housing benefits, and identity-linked services**, making the right to vote a **foundational enabler of broader socio-economic rights**.

Challenges to Urban Franchise and Democratic Integrity

1. **Exclusion of the Urban Poor through the SIR Process:** The **Special Intensive Revision (SIR)** of electoral rolls, though intended to ensure accuracy, has in practice resulted in the **exclusion of urban poor, migrant workers, and marginalised communities** due to its reliance on **strict documentary proof of residence**.
 - **Massive Deletion Trends:** Recent data illustrates a staggering scale of voter removal across major industrial and metropolitan hubs:
 - **Ghaziabad (UP):** ~36.67% of voters removed, primarily affecting the mobile workforce.
 - **Lucknow (UP):** ~30.88% of names deleted post-revision.
 - **Patna (Bihar):** A massive **16.5 lakh** names removed from draft rolls.
 - **Mumbai (Maharashtra):** Under the 2025 SIR, **14 lakh** names were deleted; approximately 50% of informal housing residents are currently unregistered or removed.

- **Gulshan Colony (Kolkata):** An extreme case where **90% of voters** were found missing from the rolls.
- **Disproportionate Impact on Marginalised Groups:** Vulnerable groups such as **Dalits, minorities, and informal workers** face a **dual burden**, as they struggle both with **initial registration** and with **higher rates of deletion**, leading to deepened disenfranchisement.
- 2. **Selective Filtration through Rigid Documentation:** The SIR process results in a **selective filtration of the electorate**, where **documentation requirements exclude the poor and mobile populations**.
 - **Rigid Documentation Requirements:** Proofs such as **long-term residence records (e.g., from 2002/2005)** are often **impossible for migrants and slum dwellers** to provide.
 - **Migration as a Structural Barrier:** Since **internal migration is central to urbanisation**, requiring stable residence disproportionately excludes **migrant workers**, who form the backbone of urban economies.
 - **Informal Settlements and Data Reality:** With nearly **40% of urban population living in slums (World Bank)**, the absence of formal address proof makes **mass exclusion inevitable** under current systems.
- 3. **Compromised Secrecy of the Ballot:** The principle of **secret ballot**, essential for free and fair elections, faces challenges in urban contexts.
 - **Booth-Level Disclosure:** Voting patterns revealed at the **booth level** can, in smaller or dense localities, allow inference of **community-wise voting behaviour**, exposing voters to **pressure, intimidation, or retaliation**.
- 4. **Urban Youth Exclusion and Participation Gap:**
 - Around **28% of India's urban population is below 18 years**, making them ineligible to vote. When combined with **non-registration and deletions**, this creates a significant **gap between total population and actual electoral participation**, weakening democratic representation.
- 5. **Weak Urban Electoral Infrastructure:**
 - **Low Voter Registration:** Urban areas record **lower registration rates** due to high mobility, limited outreach in informal settlements, perceived weak link between voting and benefits.
 - **Absence of Migrant Voting Framework:** The lack of a **portable voter registration system** forces migrants to remain registered in their home constituencies, leaving many **effectively disenfranchised in practice**.

Global Best Practices in Inclusive Electoral Participation

- **Canada: Proactive Enumeration Model:** Canada follows a **door-to-door enumeration system**, where election officials actively reach out to citizens, especially in **low-income and transient communities**, thereby reducing the burden of registration on individuals and ensuring wider inclusion.
- **Brazil: Compulsory Voting with Accessibility:** Brazil combines **compulsory voting** with targeted outreach in **slums and informal settlements**, resulting in **high electoral participation** and demonstrating that administrative support can overcome structural exclusion.

- **Estonia: Digital and Remote Voting Systems:** Estonia enables **online voter registration and remote voting**, allowing citizens to vote from anywhere, thus ensuring continuous electoral access for **mobile and migrant populations**.

Way Forward: Strategies for an Inclusive Franchise

- **Reform the SIR Process Towards Inclusion:** The **Special Intensive Revision (SIR)** must shift from a **documentation-heavy model** to a **proactive outreach approach**, with officials conducting registration drives in **slums, labour markets, and informal settlements**.
- **Simplification of Residence Proof:** Following the philosophy of **former Chief Election Commissioner T.N. Seshan**, an address should be defined as "**where the person resides**," allowing for **self-declaration or community verification for slum dwellers**.
- **Introduction of Totalizer Machines:** To ensure the **Confidentiality of the Franchise**, the Election Commission should adopt Totalizers that aggregate results from several Electronic Voting Machines before declaration.
- **Introduce Portable Voter Registration for Migrants:** Amendments to the **Representation of the People Act, 1950** should enable a **portable registration system**, allowing migrants to vote at their **place of work or current residence** without losing their original registration.
- **Integrate Electoral Rolls with Digital Databases:** Linking voter rolls with **Aadhaar, MGNREGA records, urban local body data, and the National Population Register (NPR)** can enable **automatic and continuous updating**, reducing exclusion.
- **Ensure Due Process Before Deletions:** Legal provisions should mandate that **every voter deletion** is preceded by: **Individual notice, Field verification, Grievance redressal mechanism**. This will prevent **arbitrary mass deletions**.
- **Strengthen Secrecy of the Ballot:** The system should ensure **anonymisation or aggregation of booth-level data** to prevent **inference of community voting patterns**, thereby protecting voter confidentiality.
- **Enhance Role of Civil Society:** **Civil society organisations and academic institutions** should be empowered to **monitor electoral roll processes**, audit deletions, and ensure **transparency and accountability**.

Conclusion

Universal adult franchise is not merely a constitutional guarantee but the **foundation of India's democratic identity**; however, it loses meaning when administrative processes exclude vulnerable citizens from participation. Therefore, it is both a **constitutional obligation and democratic necessity** to reform urban electoral systems, ensure **proactive inclusion**, and protect the **equal right to vote** for every citizen, as the strength and legitimacy of democracy ultimately depend on the **breadth and integrity of its franchise**.

Q. *Universal Adult Franchise is the cornerstone of Indian democracy, yet urban electoral processes are leading to increasing disenfranchisement." Examine the challenges and suggest reforms. 15 Marks*

2.2. INTERNATIONAL RELATION

2.2.1. NEIGHBOURS FIRST: STRENGTHENING THE INDIA-NEPAL RELATIONSHIP

Context:

- The recent change in Nepal's leadership presents a fresh opportunity for India to **revive bilateral ties** through proactive diplomatic engagement. It is essential that the "**Neighbourhood First**" policy is prioritized to ensure regional stability and shared economic growth between the two nations.



EVOLUTION OF INDIA-NEPAL RELATIONS

The relationship between India and Nepal has been shaped by centuries of shared history, geography, and cultural overlap.

- Historical Foundations**
 - Ancient **civilizational links** through shared **Hindu-Buddhist heritage**, pilgrimage sites (Lumbini, Pashupatinath), and cultural exchanges.
 - Treaty of Sugauli (1815-16)** defined much of the modern **1,751 km open border** with British India.
- Post-Independence Era (1947–1990)**
 - Diplomatic relations established: **17 June 1947**.
 - Cornerstone: **1950 Treaty of Peace and Friendship** — open borders, free movement of people and goods, reciprocal rights, and security cooperation.
 - Key water resource agreements: **Kosi (1954)** and **Gandak (1959)**.
 - Special relationship** marked by economic assistance and people-to-people ties (including Gorkha recruitment in Indian Army).
- Democratic Transition and Economic Deepening (1990–2014)**
 - Support for Nepal's **multiparty democracy** (1990) and **Comprehensive Peace Agreement (2006)**.
 - Mahakali Treaty (1996)** for integrated river development.
 - Renewal of **Trade and Transit treaties**; focus on **hydropower cooperation** and addressing trade imbalances.
- 21st Century: Connectivity and Functional Cooperation (2015–Present)**
 - India's **Neighbourhood First** policy intensified high-level engagements (over 17 Head of Government/State visits since 2014).
 - Major Infrastructure: Motihari-Amlekhgunj petroleum pipeline**, cross-border railways (**Jayanagar-Kurtha, Raxaul-Kathmandu progress**), Integrated Check Posts, and freight services.
 - Energy Sector Breakthrough: Long-term Power Trade Agreement**; commitment for India to import **10,000 MW** of electricity from Nepal over the next decade; new hydropower projects (**Arun-III, Lower Arun, Phukot Karnali**) and cross-border transmission lines.

- **Digital Integration: UPI interoperability** and enhanced people-to-people linkages.
- **Education & Culture:** Thousands of scholarships are provided annually by India, and the **Pashupatinath-Kashi** religious circuit continues to draw millions of pilgrims.
- **Contemporary Trends (2025–2026)**
 - Emphasis on **pragmatic economic interdependence** in **energy, connectivity, and green power trade**.
 - Progress in trilateral arrangements (e.g., with Bangladesh) and updates to transit protocols.
 - Resilience rooted in deep **cultural affinity**, open border, and mutual interest in regional stability and development.

CHALLENGES IN THE INDIA-NEPAL RELATIONSHIP

- **Territorial and Border Disputes:** Differing interpretations of the **Treaty of Sugauli (1815–1816)** remain a core issue. Contested areas include **Kalapani, Lipulekh, and Limpiyadhura**.
 - Nepal incorporated these territories in its **2020 constitutional map amendment** and featured them on new **Rs 100 currency notes in 2025**.
 - India maintains administrative control and rejects Nepal's claims. Plans to resume **India-China border trade via Lipulekh Pass in June 2026** have further reignited Nepali concerns over sovereignty.
- **Perceptions of Asymmetry and the 1950 Treaty:**
 - Structural asymmetry in size and influence fosters Nepali perceptions of an Indian **“big brother” attitude**.
 - The **1950 Treaty of Peace and Friendship** is increasingly viewed by Nepal's younger generation as an **unequal colonial relic**.
 - The **Eminent Persons Group (EPG) report** recommending revisions has not been formally accepted by India, deepening the trust deficit.
- **Economic Imbalances and Trade Deficit:**
 - A staggering **trade deficit** is faced by Nepal, as it relies on India for nearly 70% of its imports. Issues such as **non-tariff barriers** on Nepali agricultural products (like ginger and tea) and delays in the GST refund process for Nepali traders frequently cause economic tension.
- **Security Issues from the Open Border:**
 - The **1,751 km open and porous border** enables strong people-to-people ties but facilitates challenges such as **smuggling**, human trafficking, counterfeit currency circulation, and transnational crime. Effective border management requires continuous bilateral coordination.
- **Water Resources and Hydropower Implementation:**
 - Shared rivers offer significant potential for energy and irrigation, yet disputes persist over **benefit-sharing**, project delays, and downstream impacts.
 - Slow progress on initiatives like the **Pancheshwar Multipurpose Project** highlights differing priorities and implementation hurdles.
- **Geopolitical Diversification and the China Factor:**

- Nepal's expanding partnerships with China, including participation in the **Belt and Road Initiative (BRI)**, introduce triangular dynamics. India monitors enhanced Chinese infrastructure and connectivity projects in Nepal with strategic concern.
- **Domestic Political Instability in Nepal:**
 - Frequent government changes, coalition politics and events such as the **2025 Gen-Z protests** and **2026 parliamentary elections** affect policy continuity. Rising **nationalism** and youth-driven demands occasionally amplify anti-India sentiments in domestic discourse.

WAY FORWARD: STRATEGIC ROADMAP FOR INDIA-NEPAL RELATIONS

- **Resolve Territorial and Border Issues through Dialogue:**
 - Shift **Kalapani, Lipulekh and Limpiyadhura** disputes from public rhetoric to quiet, sustained diplomatic channels.
 - Empower the **Joint Boundary Working Group** and technical experts to find mutually acceptable solutions based on historical evidence and mutual consent, while avoiding unilateral actions.
- **Modernise the 1950 Treaty Framework:**
 - Formally acknowledge and initiate phased deliberations on the **Eminent Persons Group (EPG) report**.
 - Update the **1950 Treaty of Peace and Friendship** to reflect contemporary realities of **sovereign equality**, while preserving the unique **open border** and people-to-people linkages.
- **Accelerate Hydropower and Energy Cooperation:**
 - Fast-track implementation of key projects including **Arun-III, Pancheshwar Multipurpose Project** and cross-border transmission lines.
 - Fully operationalise the long-term **Power Trade Agreement** to enable Nepal's **10,000 MW electricity exports** to India, creating win-win economic gains and green energy integration.
- **Enhance Connectivity and Infrastructure Delivery:**
 - Ensure timely completion of **cross-border railways** (e.g., Raxaul-Kathmandu), petroleum pipeline extensions, **Integrated Check Posts** and inland waterways. Focus on efficient project execution to build trust and deliver visible development benefits.
- **Address Economic Imbalances and Promote Trade:**
 - Diversify trade through a possible **Bilateral Economic Partnership Agreement**, improve border infrastructure and support Nepal's export competitiveness. Reduce the persistent **trade deficit** via greater Indian investment in agriculture, tourism, and manufacturing.
- **Strengthen Border Management and Security Cooperation:**
 - Maintain the **open border** for humanitarian and economic benefits while introducing enhanced joint mechanisms for surveillance, data exchange (pre-arrival export information), and combating **smuggling**, trafficking and transnational crime.
- **Deepen Digital and Technological Partnership:**
 - Advance **UPI interoperability**, cross-border digital payments, fintech, AI, and cybersecurity cooperation. Leverage forums like the **Nepal-India Tech Forum 2026** to support Nepal's digital public infrastructure and skill development.

CONCLUSION

The unique bond between these India and Nepal can be strengthened by focusing on **economic cooperation** and mutual respect. A stable and prosperous future will be achieved if both sides prioritize **modern connectivity** over old disagreements. By working together as equal partners, a stronger and more integrated **South Asia** can finally be built.

***Q.** India–Nepal relations, despite deep historical and cultural ties, face recurring geopolitical and economic challenges. Examine these challenges and suggest measures to strengthen bilateral ties under India’s ‘Neighbourhood First’ policy. 15 Marks*

2.2.2. INDIA’S STRATEGIC PRAGMATISM IN FOREIGN POLICY

Context:

- India’s foreign policy is witnessing a significant pivot from "emotional diplomacy" to "strategic pragmatism." Following a period of diplomatic freeze triggered by the **May 2025 India-Pakistan conflict (Operation Sindoor)**, New Delhi has initiated a re-engagement process with **Turkiye and Azerbaijan**. This shift underscores India's traditional strength in maintaining bilateral ties based on national interest rather than being confined to rigid multilateral "camps" or hyphenated with Pakistan.



Background of Strained Relations -The "Diplomatic Chill"

The conflict led to a sharp freeze in relations with countries perceived as supportive of Pakistan's stance or military capabilities.

A. Adversarial Groupings

- The "Triple Adversary" Concept:** For the first time, Indian military briefings explicitly named **Turkiye** as a functional adversary alongside Pakistan, citing their diplomatic and military support.
- Azerbaijan’s Role:** Baku was believed to have provided technological and intelligence support to Pakistan during the 96-hour conflict.
- Malaysia & The OIC:** Statements from Malaysia and several OIC members questioning India’s decision to launch strikes led to immediate diplomatic demarches.

B. Economic and Social Hardline

- Boycott Movements:** Significant drops in trade and tourism occurred as influential Indian social media accounts called for boycotts of Turkish and Azerbaijani goods/travel.
- Visa & Trade Restrictions:** India suspended the SAARC Visa Exemption Scheme for Pakistani nationals and kept the **Indus Waters Treaty** in abeyance as a pressure tactic.

C. Strategic Counter-Alignments

- The Armenia-Greece Axis:** India pointedly built a counter-alignment with **Armenia and Greece** (traditional rivals of Azerbaijan and Turkiye).
- Alternative Land Routes:** During the evacuation of Indians from Iran in June 2025 (following Israel-Iran tensions), the MEA explicitly directed citizens to use Armenia and Turkmenistan, avoiding Turkiye and Azerbaijan.

Key Drivers of the Recent Diplomatic Shift

1. Regional Volatility and the "Iran Factor"

- **Logistical Necessity:** The June 2025 U.S.-Israel strikes on Iran made the boycott of Turkiye/Azerbaijan land routes unsustainable.
- **Humanitarian Icebreaker:** Azerbaijan's recent facilitation of **200+ Indian evacuees** from Iran prompted a diplomatic rethink.
- **Energy Resilience:** Restoring ties ensured the resumption of Azerbaijani crude (98% of bilateral trade) and protected **ONGC Videsh** investments.

2. Breaking the Trilateral "Axis"

- **Strategic De-hyphenation:** Revived Foreign Office Consultations (Baku, April 3; Delhi, April 8) force bilateral engagement, bypassing their "brotherly" ties with Pakistan.
- **Mirror Diplomacy:** Leveraging strong partnerships with **Greece and Armenia** to signal that India has viable alternatives if Ankara and Baku remain recalcitrant on Kashmir.

3. Economic "Realpolitik"

- **Economic Recovery:** Reversing the 2025 "Boycott Turkiye" impact, which caused a **36% drop in tourism** and a **16% trade decline**.
- **Mutual Interests:** India seeks market access in Turkiye (its 2nd largest market after China), while Turkish firms target "Make in India" opportunities.
- **Connectivity:** Engagement is essential for the **INSTC**, India's primary gateway to Europe and Central Asia.

4. "Counter-Terrorism" as a Common Language

- **Direct Engagement:** Post-Operation Sindoor, India is centering "Cross-border Terrorism" in formal FOC readouts.
- **Conditional Normalization:** Security cooperation is now a prerequisite for trade, signaling an end to India's tolerance for pro-Pakistan rhetoric while keeping the door open for functional ties.

Key Challenges in Re-engagement

- **The Trilateral Entrenchment:** The deeply rooted **Pakistan-Azerbaijan-Turkiye axis** remains a hurdle, as these nations often coordinate their diplomatic stances against India on international forums like the OIC.
- **Sovereignty & Kashmir Rhetoric:** Ankara's persistent tendency to comment on India's internal security and the **Kashmir dispute** continues to trigger diplomatic friction and limits the scope of a full "strategic partnership."
- **Public Sentiment & Digitized Outrage:** The rapid escalation from **online boycott campaigns** to official policy makes diplomacy vulnerable to domestic emotional outbursts, which can undermine long-term pragmatic goals.
- **The "Armenia-Greece" Balancing Act:** India must carefully manage its new, robust defense and strategic ties with **Armenia and Greece** without letting them become a permanent barrier to functional engagement with their rivals, Baku and Ankara.
- **Military Distrust:** Overcoming the lingering military suspicion from **Operation Sindoor**, where Turkiye was viewed as a "functional adversary," requires significant transparency and confidence-building measures (CBMs).

- **Multilateral "Camp" Pressure:** Navigating a fractured global order without being forced into rigid blocs, ensuring India maintains its **Strategic Autonomy** while dealing with nations that are historically closer to its adversaries.

Way Forward

- **Pragmatic Compartmentalization:** Decouple core economic/connectivity interests (like INSTC) from political disagreements on Kashmir. Engage where interests align and hold firms where they don't.
- **Institutionalizing Dialogue:** Transition from sporadic, reactive meetings to regularized **Foreign Office Consultations (FOC)**. This ensures communication channels remain open even during periods of high tension.
- **Leveraging "Mirror Diplomacy":** Use the strong strategic ties with **Armenia and Greece** as a diplomatic stabilizer. It creates a balance of power that encourages Baku and Ankara to treat India with greater parity.
- **Shifting the Narrative:** Move the bilateral conversation toward **trans-national challenges**—such as climate change (DAC technology), energy security, and digital public infrastructure—to dilute the focus on historical rivalries.
- **Counter-Terrorism Diplomacy:** Firmly integrate "cross-border terrorism" into all bilateral frameworks, making it clear that regional stability is a shared responsibility and a prerequisite for advanced trade ties.
- **Managing Domestic Perception:** The government needs to balance nationalistic public sentiment with strategic goals, ensuring that **online outrage** does not restrict the state's room for diplomatic maneuvering.

Conclusion

India's re-engagement with Türkiye and Azerbaijan signals a return to **Strategic Autonomy**. By prioritizing **Realpolitik** over emotion, New Delhi is successfully de-hyphenating regional interests, balancing rivalries to assert itself as a pragmatic global power.

Q. *In the context of the India–Pakistan conflict of 2025, examine the challenges and opportunities in India's relations with countries aligned with Pakistan. How should India balance strategic interests and diplomatic principles? 15 Marks*



Scan to attempt more questions...

GENERAL STUDIES 3

3.1. ECONOMY

3.1.1. SUPPLY CHAIN RESILIENCE

Context:

- In the traditional economic sense, a supply chain is a linear network of organizations, people and resources involved in moving a product from supplier to customer. However, **Supply Chain Resilience (SCR)** is the **adaptive capacity** of an ecosystem to anticipate, resist and recover from unexpected disruptions whether they are geopolitical (wars, sanctions), environmental (climate change), or systemic (pandemics).



Why Supply Chain Resilience is Critical for India

The global shift from "**Efficiency-First**" (Just-in-Time) to "**Resilience-First**" (Just-in-Case) is driven by India's need to decouple its growth from external shocks.

1. Shielding from "Imported Inflation"

- The Energy-Inflation Link:** 85% crude dependency means a \$10/barrel price hike drains **\$13–14 billion** in forex and spikes the **CPI** by 30–40 bps.
- The Fiscal Burden:** Supply shocks in natural gas (e.g., Russia-Ukraine) inflate the **fertilizer subsidy bill**, straining the fiscal deficit and threatening food security for the common man.

2. Transitioning to "Deep Manufacturing"

- The "Midstream" Gap:** Reliance on a single source (China) for **70% of APIs** and critical semiconductors creates a "choke-point" for our \$300 billion electronics and pharma targets.

3. Safeguarding "Strategic Autonomy"

- Weaponization of Markets:** Over-dependence on specific geographies for critical inputs (e.g., Lithium for EVs) allows foreign powers to use supply disruptions as diplomatic leverage.
- The "China Plus One" Edge:** A resilient, predictable supply chain is India's primary USP to attract MNCs looking to diversify their manufacturing base away from China.

4. Powering the "Green Transition"

India's **Net Zero 2070** goal necessitates a massive shift to EVs and Renewables.

- The Mineral Challenge:** To avoid replacing "Oil Dependency" with "**Mineral Dependency**" (Lithium, Cobalt, REEs), India must secure resilient supply chains through KABIL and circular economy (recycling) initiatives.

5. Mitigating "Climate-Induced" Volatility

- Agri-Resilience:** Erratic monsoons and heatwaves frequently shock the supply of pulses and oilseeds. Building **climate-resilient supply chains** and strategic reserves is vital to preventing rural distress and food inflation.

Sector-wise Analysis of Supply Chain Risks

1. Energy Supply Chains: The "Import-Inflation" Trap

Energy is India's primary shock-transmission channel.

- **Import Reality:** India imports **~85% crude oil and ~50% natural gas**. Price spikes in chokepoints like the **Strait of Hormuz** instantly inflate transport and manufacturing costs.
- **Strategic Gap:** Current **Strategic Petroleum Reserves (SPR)** cover only **~9.5 days** of net imports—insufficient for prolonged geopolitical conflicts.
- **Macro-Impact:** A \$10/barrel hike typically increases **CPI inflation by 30–40 bps** and swells the Current Account Deficit (CAD).

2. Food & Fertilizer: The "Rural Distress" Link

Despite being a net exporter of food, India's production inputs are externally anchored.

- **The "P&K" Gap:** While Urea is largely domestic, India relies heavily on imports for **Phosphatic (P) and Potassic (K)** fertilizers from Morocco, Jordan, and Russia.
- **Edible Oil/Pulses:** India meets only **44% of edible oil demand** domestically. Supply shifts in Indonesia (Palm) or South America (Soybean) trigger immediate "Agri-inflation."
- **Fiscal Risk:** Global gas price hikes lead to a skyrocketing **Fertilizer Subsidy bill**, straining the fiscal deficit.

3. Manufacturing & Tech: The "Midstream" Gap

India dominates assembly ("Downstream") but lacks component depth ("Upstream").

- **Pharma (API Risk):** India relies on China for **65–70% of Active Pharmaceutical Ingredients**. Any disruption in China threatens India's "Pharmacy of the World" status.
- **Electronics/Semiconductors:** The **\$300bn electronics target** is vulnerable to the Taiwan-South Korea "Fab" concentration. Current value-addition remains low at 15–20%.
- **Capital Goods:** Dependence on imported high-end industrial machinery (Robotics/CNC) limits indigenous industrial competitiveness.

4. Critical Minerals & Future-Tech: "Green" Dependency

The transition to a "Green Economy" creates new structural risks.

- **Concentration Risk:** Minerals like **Lithium, Cobalt, and REEs** (essential for EVs/Defense) are globally concentrated, with China controlling **>60% of processing**.
- **Energy Security 2.0:** Moving to 500 GW of non-fossil capacity risks replacing **Middle East oil dependency** with **Chinese mineral dependency**.
- **Tech Chokepoints:** Quantum computing and AI chips are held by a few global players, exposing India to potential "Technology Denials."

Government Initiatives for Supply Chain Resilience

1. **Production Linked Incentive (PLI) Schemes:** Targeting 14 key sectors (e.g., ACC Batteries, Pharma), the scheme incentivizes incremental production to shift India from low-value assembly to high-value **component-level manufacturing**.
2. **PM Gati Shakti & National Logistics Policy (NLP):** A digital and physical integration of 16 ministries to reduce logistics costs from **14% to 8% of GDP**.

3. **National Green Hydrogen Mission:** Aiming for **5 MMT p.a. by 2030**, it seeks to decarbonize "hard-to-abate" sectors like Steel and Refineries, reducing long-term reliance on imported fossil fuels like Natural Gas.
4. **KABIL (Khanij Bidesh India Ltd):** A specialized Joint Venture to secure "**Energy Security 2.0**" by acquiring strategic overseas assets of critical minerals like Lithium and Cobalt for the EV and Defense sectors.
5. **India Semiconductor Mission (ISM):** A **\$10 billion** incentive framework to establish domestic "Fabs" and display ecosystems, breaking the "Silicon Dependency" on East Asia for digital sovereignty.
6. **Strategic Petroleum Reserves (SPR) – Phase II:** Expansion of storage at **Chandikhol and Padur** to increase India's fuel buffer, safeguarding the economy against maritime blockades or West Asian geopolitical shocks.

Global Trends

1. **"Friend-Shoring" & "Ally-Shoring":** Countries are shifting supply chains to "Trusted Partners" with shared values (e.g., US-India-EU) to prevent economic coercion by adversarial nations.
2. **The "China Plus One" Strategy:** MNCs are diversifying their manufacturing bases away from China to India, Vietnam, and Mexico to mitigate "Single-Source" risks. India, Vietnam, and Mexico
3. **Decoupling vs. De-risking:** Led by the EU and G7, there is a trend of "De-risking"—reducing critical dependencies on specific nations (like China for Rare Earths or Russia for Gas) without completely "Decoupling" or isolating from global trade.

Challenges in Building Supply Chain Resilience

1. **High Logistics Costs:** Despite **PM Gati Shakti**, India's logistics cost remains **13–14% of GDP**. This "internal tax" makes domestic intermediate goods more expensive than imported alternatives, hindering import substitution.
2. **Inverted Duty Structure:** In several sectors, **import duties on raw materials exceed those on finished goods**. This discourages domestic value-addition and incentivizes "assembly" over "production."
3. **MSME Technology Gap:** Most Indian MSMEs lack the **economies of scale and R&D** required to produce high-precision intermediates (e.g., specialized chemicals) that meet global "Six Sigma" quality standards.
4. **Critical Mineral "Blind Spot":** India has limited domestic reserves of **Lithium, Cobalt, and REEs**. Securing these from the "Lithium Triangle" or Australia involves intense geopolitical competition and high capital risk.
5. **Long Gestation Periods:** High-tech resilience, like the **India Semiconductor Mission**, requires decades of sustained investment in "water-power-talent" ecosystems. It is a long-term marathon, not a quick fix for immediate shocks.
6. **"Efficiency vs. Resilience" Trade-off:** Building buffers and localizing is **expensive**. Shifting from "Lowest-Cost" sources (China) to "Trusted-Sources" can lead to higher end-consumer prices and inflationary pressure.

Way Forward: Strategies for a Resilient India

1. **Deepening "Midstream" Manufacturing:** Pivot from final assembly to the domestic production of high-value intermediates (APIs, semiconductors, specialized chemicals) to eliminate **"up-stream chokepoints."**
2. **Accelerated "Resource Diplomacy":** Use **KABIL** to aggressively secure long-term "Off-take Agreements" for critical minerals (Lithium, Cobalt) in the Lithium Triangle and Africa, insulating the **Green Energy transition.**
3. **Reducing Logistical Friction:** Fully operationalize **PM Gati Shakti** and the **National Logistics Policy** to slash logistics costs to **8% of GDP**, making domestic components price-competitive against global imports.
4. **Institutionalizing Multi-Sectoral Buffers:** Expand Strategic Reserves beyond oil (SPR Phase II) to include **Edible Oils, Pulses, and Fertilizers**, acting as a shock absorber against maritime and price disruptions.
5. **Strengthening "Trust-Based" Networks:** Leverage mini-lateral frameworks like **SCRI** (Japan/Australia) and **iCET** (USA) to facilitate **"Friend-Shoring"** and secure access to sensitive high-end technologies.
6. **Mainstreaming the Circular Economy:** Promote **"Urban Mining"** to recover Rare Earth Elements from e-waste, reducing primary raw material import demand and enhancing environmental sustainability.

Conclusion

Future-proofing India's \$5 trillion trajectory requires transitioning from a "Global Price-Taker" to a "Strategic Value-Maker." By integrating **Aatmanirbharta** with **Trust-based Global Value Chains**, India can ensure a resilient, shock-proof, and sovereign economic era.

***Q.** The West is fostering India as an alternative to reduce dependence on China's supply chain and as a strategic ally to counter China's political and economic dominance.' Explain this statement with examples. 10 Marks*

3.1.2. INDIA'S LPG CRISIS: A WELFARE SYSTEM WITHOUT SUPPLY SECURITY

Context:

- India has expanded **clean cooking access** to about **33 crore households**, mainly through **LPG**, but a recent crisis caused by the **West Asia conflict** and disruption in the **Strait of Hormuz** has exposed **high import dependence and weak storage capacity.**
- It is now being revealed that the transition, meant for **women empowerment and welfare**, is built on **fragile global markets instead of secure, state-managed supply systems.**



Background: From Kerosene to LPG

1. Kerosene Era – State-Controlled Welfare

- For decades, **kerosene** was the main cooking fuel for millions, supplied through the **Public Distribution System (PDS)** using **ration cards.**

- The state maintained **physical stocks** in **local depots**, managed the **entire supply chain**, and insulated households from **international price shocks**.
- However, burning kerosene and biomass caused severe **indoor air pollution**, contributing to **respiratory diseases** and **premature deaths**, especially among women and children.

2. Shift to LPG – Modern Energy Upgrade

- Since **2016**, the government launched a major push to replace kerosene with **LPG**, especially under **Pradhan Mantri Ujjwala Yojana (PMUY)**.
- By **2024**, **13 States and Union Territories** were declared “**kerosene-free**”, marking a major shift in energy policy.
- LPG offers much **higher calorific value** than kerosene, leading to **faster, cleaner, and more efficient cooking** and **reduced time burden** on women.

3. Changing Role of the State

- Earlier, the **state directly controlled the fuel** (kerosene).
- Now, with LPG, the **state’s role has shifted** from **direct control of stocks** to **subsidy management and market regulation**.
- This has **withdrawn the state’s physical responsibility** for maintaining large reserves, leaving households **exposed to global price and supply shocks**.

Current LPG Crisis in India: Rising Imports, Supply Disruptions, and Storage Shortfalls

1. Rising Import Dependence

- **India’s LPG consumption** has surged to about **31–33 million tonnes per year** (FY-25 and FY-26 projections).
- **Imports now meet about 60–65% of domestic demand** (up from **47% in 2015**), meaning **more than half of India’s LPG is imported**.
- In **2024–25 alone**, imports reached roughly **20 million tonnes**, a **threefold increase** over the last decade.

2. Reliance on West Asia and Hormuz

- About **90% of India’s LPG imports come from West Asia**, mainly from the **UAE, Qatar, Saudi Arabia, and Kuwait**.
- **Over 85–90% of these imports pass through the Strait of Hormuz**, a narrow, conflict-prone waterway.
- When **war and blockades in West Asia** disrupt shipping, **nearly half of India’s LPG supply chain is directly affected**.

3. Storage Gap and Strategic Imbalance

- **Monthly LPG consumption** in India is about **3 million tonnes** (roughly **80,000 tonnes per day**).
- **Total existing underground storage capacity** (Mangaluru + Visakhapatnam) is only about **1.4 lakh tonnes**, which is **less than two days of national consumption**.
- In contrast, India’s **strategic crude oil reserves** cover about **60 days of consumption**, highlighting a **strategic imbalance** in energy security planning.

4. Short-Term Impact of the Crisis

- Preliminary data for **March 2026** shows **LPG consumption fell by around 17–18%** in the first half of the month due to **supply disruptions**.
- The government has been forced to **prioritize household supplies** and **cut allocations to commercial and industrial users** (hotels, restaurants, industries) to protect **PMUY households**.

Understanding LPG, LNG, and PNG

1. Liquefied Petroleum Gas (LPG) – Cooking Gas for Households

- **Chemical composition:** A mixture of **propane and butane**.
- **State and storage:** Liquefied under **moderate pressure at ambient temperature**, stored in **steel cylinders**; easy to transport and ideal for **rural and remote areas**.
- **Source:** By-product of **natural gas processing** and **oil refining**.
- **Logistics in India:** **60–65% imported** via **sea tankers**, then moved by **rail and road** to dealers.
- **Key use:** Main fuel for **household cooking** under **PMUY**.

2. Liquefied Natural Gas (LNG) – Bulk Transport for Power and Industry

- **Chemical composition:** Mostly **methane (CH₄)** with small amounts of **ethane, propane, and butane**.
- **State and storage:** Natural gas **cooled to –162°C (cryogenic state)**, shrinking its volume by about **600 times**, enabling **long-distance sea transport**.
- **Logistics:** Requires **specialized cryogenic tankers** and **regasification terminals** (e.g., **Dahej, Kochi, Mundra**) to convert LNG back to gas for pipelines.
- **Key use:**
- Feedstock for **fertilizer plants**.
- **Power generation** and **heavy-duty transport (ships, trucks)** as a “**bridge fuel**” toward cleaner energy.

3. Piped Natural Gas (PNG) – Piped Gas for Cities

- **Chemical composition:** Like LNG, mainly **methane (CH₄)**.
- **State and distribution:** Delivered in **gaseous form** through **City Gas Distribution (CGD) pipelines** at **low pressure (<1 bar)** for safety.
- **Logistics:** Needs **dense pipeline network**, so it is mainly **urban and peri-urban**.
- **Key use:** **Uninterrupted household cooking** and **Small-scale industrial heating**.

Significance of Clean Cooking Welfare

1. Scale and Reach

- **Total domestic LPG connections** have risen to **around 33 crore**, more than **doubling coverage in a decade**.
- **PMUY alone has provided over 10.33 crore connections** to women from **Below Poverty Line (BPL)** and **economically weaker sections**.
- This has made **India the second-largest LPG consumer globally**, after the USA.

2. Health and Time-Saving Benefits

- Studies (e.g., by the **International Institute for Sustainable Development – IISD**) show that households switching from biomass (wood, dung) to LPG **save about 1 hour per day in fuel-collection and cooking time**.
- LPG use reduces exposure to **indoor air pollution**, which is linked to **respiratory diseases, eye problems, and low-birth-weight babies**.
- Evidence from **panel-data studies** suggests **significant health improvements for women**, who spend more time indoors.

3. Social and Governance Significance

- The scheme is branded as a **visible state welfare programme**: cylinders carry **government logos**, and **subsidies are paid as Direct Benefit Transfer (DBT)** to bank accounts.
- This has **increased women's agency** in household energy decisions and **reduced dependence on polluting fuels**.

Government Schemes for Clean Cooking and Gas-Based Energy

1. Pradhan Mantri Ujjwala Yojana (PMUY)

- Launched in **2016** to provide **free LPG connections** to BPL women.
- **Milestones:**
- Over **10 crore connections** by 2022.
- **Total PMUY connections** now exceed **10.33 crore** under **PMUY 1.0, 2.0, and 3.0**.
- **Support:** Cash assistance for **cylinder, regulator, and safety equipment**; subsidies for **refills** (around **₹300 per refill** under certain schemes).

2. GOBARdhan Scheme

- **Full name:** Galvanising Organic Bio-Agro Resources Dhan.
- **Objective:** Convert **cattle dung and organic waste** into **biogas and compost**, reducing dependence on LPG and improving rural sanitation.
- **Broad idea:** Each **biogas plant** can serve **5–10 households**, especially in **village clusters**.
- However, many earlier biogas plants remain **dormant due to poor maintenance and lack of technical support**.

3. Strategic Petroleum Reserves (SPR)

- India has **strategic storage for crude oil** (about **60 days of consumption**) to act as a **buffer against global oil shocks**.
- There is **no equivalent large-scale strategic LPG reserve**, although **underground caverns at Mangaluru and Visakhapatnam** hold only **1.4 lakh tonnes – less than two days of supply**.

Key Challenges and Structural Gaps in India's LPG-Based Welfare System

1. Economic Barriers to Refills

- Although **initial connections are free or highly subsidized**, **refill prices** often exceed **₹800–₹1,000** in many markets.

- **One in four PMUY beneficiaries** reportedly **cannot afford even a single refill** during normal times, leading to **“connection without usage”**.
- Refill **subsidies** are **inadequate for many poor households**, especially in **rural and remote areas**.

2. Logistical and Supply-Chain Gaps

- **Rural areas** often face **mandatory booking gaps of 45 days or more**, even before the crisis.
- With **supply tightening**, **waiting time increases** and **cylinders may be diverted away from poorer areas**.
- The **lack of pipeline infrastructure** (PNG) in villages means **cylinders are the only option**, which depend on **road and rail logistics**.

3. Social Inequities and Access Issues

- Studies and field reports indicate that caste and social hierarchies influence gas distribution networks at the village level.
- **Scheduled Caste and Tribal households** often report **lower priority in cylinder allocation** and **difficulty in booking refills**.
- Women, though **nominal beneficiaries**, have **little control over pricing, booking, and delivery**, which remain in the hands of **dealers and intermediaries**.

4. Gendered Burden Returns in Crisis

- When **LPG becomes scarce or unaffordable**, **women are forced back to biomass** (firewood, dung cakes).
- This increases **time burden, health risks, and physical strain**, reversing gains made through PMUY.
- The **energy-transition** remains **incomplete** for many households, especially in **drought-prone and remote forested regions**.

5. Misalignment Between Policy Goals and Infrastructure

- The **policy goal** is **universal clean cooking access**, but **physical infrastructure** (storage, pipelines, alternative fuels) has **not kept pace** with the expansion of connections.
- The state has treated LPG mainly as a **“connection-centric subsidy programme”** rather than a **comprehensive energy-security system**, so **strategic storage, diversified routes, and local alternatives** were not prioritized.
- This mismatch creates a **“welfare-without-security” trap**: the state can **distribute cylinder connections widely**, but cannot **guarantee a continuous, affordable physical supply** during global crises, leaving the most vulnerable back to the smoke of biomass stoves.

Way Forward: Building Redundancy and Resilience

1. Expand Strategic Storage for LPG

- India needs a **minimum strategic LPG buffer** covering **45–60 days of consumption**, similar to **crude oil reserves**.
- **Underground storage options** include:

- **Salt caverns** in **Rajasthan (Bikaner-Barmer region)** – naturally impermeable, low cost, and suitable for rapid withdrawal.
- **Rock-cavern projects** in **stable granite/gneiss formations** of the **Peninsular Shield**.
- **Depleted gas fields** in the **KG Basin and Cambay** could be repurposed for **large-scale gas storage**.

2. Diversify Supply Sources and Routes

- Current dependence on **West Asia** is risky. New and expanded **long-term contracts with the USA, Australia, and Africa (e.g., Angola)** can **reduce over-concentration**.
- A **statutory minimum** of **LPG imports** should be **routed through alternative sea lanes** and **non-Hormuz paths** (e.g., via the **western coast of India** and longer routes).
- **Transit-time buffer**: Supplies from the **USA take about 45 days**, compared to **shorter routes from the Gulf**, so **strong storage buffers** are essential.

3. Adopt Global Best Practices

- The **European Union** requires **member countries to maintain at least 90% filling of gas storage** before **winter and high-demand seasons**.
- India can adopt a similar rule for **LPG storage** before **winter and festival seasons** (Diwali, weddings, etc.), when **demand spikes**.
- **Transparent norms** for **prioritizing households, hospitals, and essential services** during crises should be **publicly notified**.

4. Revive and Scale Alternative Fuels

- **Biogas through GOBARdhan** should be **revived and expanded**:
- Proposals suggest a **₹10,000 revival subsidy per unit** to **repair and reactivate around 50 lakh dormant biogas plants**.
- This can provide **local, decentralized cooking fuel** and **reduce pressure on LPG cylinders**.
- **Promote improved biomass stoves** (smokeless or low-emission) in **areas where LPG is not yet reliable**, to **minimize health damage**.

5. Accelerate PNG and City-Gas Infrastructure

- **Piped Natural Gas (PNG)** in **urban and semi-urban areas** can **steady supply** and **eliminate cylinder-delivery problems**.
- The **Petroleum and Natural Gas Regulatory Board (PNGRB)** can **fast-track new CGD networks** and **expand coverage to 100+ cities by 2027**.
- **Closed-loop digital systems** can track **refill demand** and **route PNG to high-density areas**, reducing dependence on **LPG cylinders**.

6. Strengthen Crisis Protocols and Governance

- The government must publish **clear triage rules** for **fuel allocation during emergencies**:
- **Priority**: Households, especially women-headed, SC/ST, and rural homes.
- **Second priority**: Hospitals, schools, and essential services.
- **Lower priority**: Large commercial users and export-oriented industries.

- A **real-time monitoring system** (dashboard at state and district level) can track **connections, refills, and gaps** to prevent misuse and ensure **equitable distribution**.

Conclusion

India's **LPG-driven clean-cooking welfare** has expanded access to millions but remains **vulnerable** due to **heavy dependence on global markets, weak strategic storage, and gaps in last-mile delivery and affordability**. To make this **welfare durable**, the state must build **supply security**—through **diversified imports, large-scale storage, stronger PNG networks, and revived local alternatives**—so that global crises do not push the poorest back to the smoke of biomass stoves.

***Q.** Critically examine how India's clean cooking push under PMUY has exposed vulnerabilities in energy supply chains amid global disruptions. Suggest a resilient way forward. 15 Marks*

3.1.3. THERMAL CRISIS IN INDIA'S TEXTILE SURGE

Context:

- India's textile sector is witnessing a **historic surge** in global orders as buyers shift from politically unstable hubs such as **Bangladesh**, making the country a preferred manufacturing destination under the **Make in India** initiative.
- Yet this boom is now colliding with a **harsh biological and mechanical reality: extreme heat stress** that is **quietly crippling** worker productivity, factory output, and long-term industrial competitiveness.



Overview of India's Textile Industry

The **textile sector** is a **cornerstone of the Indian economy**, acting as a **bridge** between **agriculture and industrialization**. Its scale and reach are reflected in the following data points:

- **Economic Contribution and GDP Share:** The industry contributes approximately **2.3% to India's GDP**, accounts for **13% of total industrial production**, and contributes **12% to the national export basket**.
 - In the 2023-24 fiscal year, India exported textile items worth **\$34.4 billion**, with apparel constituting **42% of the export basket**.
- **Global Standing and Production Capacity:** India is currently the **world's 6th largest exporter** of textiles and apparel and the **2nd largest producer and consumer of cotton and silk** globally.
 - The country is unique in producing **all four commercial varieties of silk Mulberry, Tasar, Muga, and Eri**—producing a total of **38,913 MT** in 2023-24.
- **Employment and Market Scale:** It is the **second-largest employment generator** after **agriculture**, providing direct livelihoods to over **45 million people**, including many women and the rural population.
 - The market size is projected to reach **\$350 billion by 2030**, a significant leap from the current **\$174 billion**.
- **Role of MSMEs:** Nearly **80% of the industry's capacity** is spread across **Micro, Small, and Medium Enterprises (MSME)** clusters, emphasizing the inclusive nature of the sector.

- **Global Showcasing:** Events like **Bharat Tex 2024** underlined India's ambition, attracting over 1,20,000 visitors from 120+ countries and showcasing the entire value chain from farm to fashion.

Importance of the India's Textile Industry

The textile industry is not merely a commercial entity but a vital tool for socio-economic transformation in India:

- **Employment Engine:** The textile industry serves as a powerful engine for inclusive growth, generating massive employment for **rural youth, women, and MSMEs** while driving foreign exchange earnings and regional development in states like **Tamil Nadu, Karnataka, Maharashtra, and Gujarat**.
- **Export Earnings and Foreign Exchange:** Contributes significantly to **India's export basket**, strengthening the **external sector**.
- **Inclusive Growth through MSMEs:** The dominance of MSMEs ensures **regional spread of industrialisation** and **balanced development**.
- **Linkages with Agriculture:** Supports farmers engaged in **cotton, silk, and jute production**, ensuring **income diversification**.
- **Strategic Role in Global Supply Chains:** India is emerging as a **reliable alternative manufacturing hub**, enhancing its **geopolitical and economic importance**.
- **Alignment with National Missions:** The sector is perfectly aligned with the **"Make in India," "Skill India,"** and **"Atal Innovation"** missions, serving as a laboratory for domestic manufacturing excellence.

Challenges Faced by the India's Textile Industry

Despite the growth, a **"mechanical and biological reality"** is crippling industrial heartlands. The surge in orders from global buyers shifting away from unstable hubs like Bangladesh is hitting a wall of extreme heat.

1. Heat Stress and Productivity Loss

- **Extreme heat is leading to a biological slowdown in human labour capacity**, directly affecting productivity and efficiency.
- Scientific evidence shows that **at temperatures of 33–34°C, worker productivity declines by nearly 50%**, as the human body reduces physical effort to prevent overheating.
- In many textile units, **indoor temperatures frequently exceed 35–40°C**, which is far above safe and permissible working conditions.
- **India has already suffered massive losses:**
 - Around **259 billion labour hours annually (2001–2020)** due to heat stress.
 - This translates into an economic loss of nearly **\$600 billion per year**.
- **Future projections** indicate that by **2030, India may lose 5.8% of total working hours**, which is equivalent to **34 million full-time jobs**, highlighting the scale of the crisis.

2. Impact on Workers (Human Cost)

- **Workers bear the direct and disproportionate burden of heat stress**, especially those in informal and low-income segments.
- They experience:

- **Loss of wages due to reduced work capacity**, as productivity declines in extreme heat.
- **Absence of cooling breaks, paid sick leave or social security**, making them highly vulnerable.
- Health risks are severe and long-term, including:
 - **Heatstroke and exhaustion**
 - **Dehydration and fatigue**
 - **Kidney-related illnesses and chronic health conditions**
- Heat stress effectively acts as a “**regressive tax on the poor**”, where **economically weaker workers absorb the highest costs of climate change**.

3. Industrial and Production Disruptions

- Extreme heat is not only affecting workers but also **disrupting industrial operations and output levels**.
- Factories report:
 - **Up to 50% decline in production capacity** during peak heat conditions.
 - In several cases, **working hours are reduced to 4–5 hours per day** due to unsafe conditions.
- Industrial machinery is also impacted:
 - **Overheating of equipment leads to breakdowns**
 - **Frequent shutdowns and technical failures disrupt production cycles**
- As a result, there is a **breakdown of tight production schedules**, reducing reliability in supply chains and affecting export commitments.

4. Supply Chain Pressures and Global Inequality

- Global textile supply chains are governed by **strict deadlines and heavy financial penalties for delays**, imposed by international brands.
- Factory owners are caught in a difficult situation:
 - Either **push workers beyond safe physiological limits to meet deadlines or face financial losses due to delayed shipments**.
- At the same time, global brands often:
 - **Shift sourcing to other countries like Vietnam and Mexico**.
 - **Avoid sharing the cost of climate adaptation**.
- This creates an unequal system where:
 - **Risks are transferred downward to MSMEs and workers**.
 - While global firms remain insulated from climate-related disruptions.

5. Climate Change as a Structural Economic Risk

- Heat stress is no longer a short-term or seasonal issue; it has become a **systemic and long-term constraint on economic growth**.
- It creates a “**thermodynamic bottleneck**”, where production is limited by **human physiological capacity and environmental conditions**.

- Studies indicate that there is a **2% decline in annual economic output for every 1°C rise in temperature**.
- This shows that climate change is directly affecting **industrial productivity, competitiveness, and long-term growth prospects**.

6. Financial and Institutional Constraints

- A large part of the textile sector, especially MSMEs, faces **serious financial limitations**.
- **Key issues include:**
 - **Lack of capital to invest in cooling infrastructure**, ventilation systems, and heat-resistant technologies.
 - **Limited bargaining power in global supply chains**, restricting their ability to renegotiate contracts.
- Additionally, financial institutions **do not adequately incorporate climate risks into lending and credit decisions**, which limits investments in **climate adaptation measures**.

7. Labour and Regulatory Gaps

- Existing labour laws in India are **not adequately equipped to deal with heat stress and climate-related workplace risks**.
- There is a clear absence of:
 - **Enforceable temperature thresholds for workplaces**
 - **Mandatory rest breaks and cooling provisions**
 - **Guaranteed access to drinking water and shaded areas**
- As a result, **worker safety and health are often compromised**, especially in informal and unregulated units.

Major Government Initiatives for India's Textile Modernization

The Government of India has launched several flagship schemes to modernize the textile sector in India and address its structural challenges:

- **PM MITRA (Mega Integrated Textile Region and Apparel) Parks:** With a budget of **₹4,445 crore**, seven parks are being established to provide **integrated industrial infrastructure**, reducing logistics costs and increasing FDI.
- **Production Linked Incentive (PLI) Scheme:** An outlay of **₹10,683 crore** aims to increase manufacturing in **Man-Made Fibre (MMF)** and technical textiles.
- **Technology and Skill Development**
 - **ATUFS (Amended Technology Upgradation Fund Scheme):** A budget of **₹17,822 crore** supports capital investment in technology for MSMEs.
 - **Samarth Scheme:** Focuses on skill training, having already trained over **3.82 lakh beneficiaries** with a 77% placement rate.
- **Sector-Specific Missions**
 - **National Technical Textiles Mission (NTTM):** A **₹1,480 crore** mission to position India as a global leader in high-tech specialty fibres.
 - **Kasturi Cotton Bharat:** A programme focused on the **branding and traceability** of Indian cotton using Blockchain technology.

- **Silk Samagra and Jute-ICARE:** Schemes dedicated to improving the quality and productivity of silk and jute through research and development.
- **Trade Agreements:** Additional measures include **Rebate of State and Central Taxes and Levies (RoSCTL) rebate, 14 Free Trade Agreements (FTAs)**, including recent ones with the **UAE** and **Australia**, to provide duty-free market access for Indian textiles.
- **Budget Push: Union Budget 2025-26** allocated **₹5,272 crore** to the **Ministry of Textiles (19% increase)**, introducing **duty exemptions** on shuttle-less looms, customs duty hikes on knitted fabrics to curb cheap imports, and the **five-year Cotton Mission** for higher productivity.

Way Forward: Transitioning to a Climate-Smart Supply Chain

To sustain long-term growth, India must shift from **labour-exploitative, climate-blind production** to a **climate-resilient and worker-centric textile model**. A systemic transformation is required:

- **Recognising Heat Stress as an Economic Risk:** Heat stress must be treated as a **core economic and supply chain risk**, and integrated into **industrial policies, trade agreements, and export strategies** to ensure sustainability and competitiveness.
- **Mandatory Heat Action Plans:** Industrial units must enforce **temperature thresholds (around 30°C), cooling breaks, and flexible shifts**, supported by **real-time heat monitoring systems** to protect worker productivity and health.
- **Climate-Sensitive Financing:** Banks should **incorporate climate risks into lending decisions**, while the government must provide **subsidised credit for cooling infrastructure, water systems, and heat-resilient technologies**.
- **Strengthening Labour Protection Framework:** Labour laws must include **explicit heat stress provisions**, ensuring **safe working conditions, access to water, shaded rest areas, and mandatory rest breaks** for workers.
- **Promoting Technological Innovation:** Investment should focus on **wearable cooling devices, energy-efficient factory designs, and heat-resistant cotton varieties** to reduce climate vulnerability.
- **Ensuring Accountability of Global Brands:** International buyers must adopt **fair pricing and flexible delivery timelines**, sharing the **cost of climate adaptation** to create an equitable supply chain.
- **Climate-Resilient Industrial Planning:** Development of **green textile clusters, improved ventilation systems, and heat-resilient infrastructure** is essential for sustainable industrial growth.
- **Strengthening Data, Research, and Collaboration:** Policymaking must rely on **real-time heat data and research**, with stronger collaboration between **government, industry and academic institutions**.

Conclusion

The Indian textile industry's path to becoming a **\$350 billion economy** must be paved with climate-resilient infrastructure and robust labor protections. By integrating worker welfare, technological innovation, and global responsibility into its growth strategy, the nation can secure both economic prosperity and the well-being of millions who power its textile dream.

Q. Climate change is emerging as a structural constraint on labor-intensive industries in India. Examine this statement in the context of the India's textile industry. 15 Marks

3.1.4. INDIA'S INFORMAL URBAN WORKFORCE

What is the Urban Informal Sector?

The **Urban Informal Sector** refers to the segment of the city economy consisting of small-scale, unincorporated enterprises and workers who operate outside the formal regulatory framework. It is characterized by a lack of legal recognition, irregular incomes, and the absence of social security.



Key Characteristics

- **Legal Status:** Enterprises are typically "unincorporated," meaning they are not registered under the Companies Act or formal tax regimes (like GST).
- **Employment Nature:** Relationships are based on casual or oral agreements rather than written contracts.
- **Workforce:** Includes both the **self-employed** (street vendors, rickshaw pullers) and **wage earners** in small workshops (garment units, construction).
- **Capital & Tech:** Operations are usually labor-intensive with low capital investment and traditional technology.

Significance of India's Urban Informal Sector

1. Economic Weight & GDP Contribution

- **The 50% Pillar:** Despite its lack of formal registration, this sector contributes nearly **half of India's Gross Domestic Product (GDP)**.
- **Fiscal Resilience:** During economic downturns (like the post-2020 recovery), the informal sector acts as a "**Shock Absorber**," absorbing labor displaced from the formal sector.
- **Cost Efficiency:** It provides low-cost intermediate goods and services (logistics, waste management, repair) that lower the operational costs for formal industries.

2. Employment & Poverty Alleviation

- **Mass Employment:** It employs over **90% of the urban workforce**. For millions of rural-to-urban migrants, it is the first point of entry into the city economy.
- **Poverty Buffer:** By providing immediate, low-barrier employment (e.g., street vending, construction), it prevents millions of urban residents from falling below the extreme poverty line.

3. Social & Urban Functionalism

- **Essential Service Providers:** Urban life would come to a standstill without informal workers. They manage:
 - **Urban Logistics:** Delivery partners and rickshaws.
 - **Sanitation:** Informal waste pickers who handle a significant portion of urban recycling.
 - **Food Security:** Street vendors provide affordable, nutritious food to the urban poor and middle class.

- **Social Mobility:** It provides a platform for marginalized communities (SC/ST/OBC and women) to engage in economic activity and achieve a degree of financial independence.

4. Supporting the "Formal" Ecosystem

- **The Symbiotic Link:** There is a "blurred line" between sectors. Formal companies outsource labor-intensive tasks (packaging, delivery, assembly) to informal units to maintain competitiveness in global markets.

5. Strategic Significance for "Atmanirbhar Bharat"

- **Localized Manufacturing:** The unincorporated manufacturing sector (MSMEs) is crucial for import substitution and achieving the goal of self-reliance.
- **Digital Transformation:** The rapid adoption of UPI and digital tools by informal vendors (e.g., the success of **PM SVANidhi**) is driving India's goal of becoming a "less-cash" economy.

Challenges Faced by India's Informal Sector

1. Structural & Economic Challenges

- **The "Dwarfism" Trap:** Over **60%** of unincorporated enterprises are "owner-operated" (single-person units). These "dwarf" firms rarely scale up, lacking the capital to transition into mid-sized, formal companies.
- **Stagnant Productivity:** While the sector added **74.5 lakh jobs** last year, GVA per worker grew by only **4.5%**. This suggests the sector is absorbing surplus labor (distress-driven) rather than creating high-value jobs.
- **The "Missing Middle":** A lack of mid-sized firms prevents economies of scale, leaving a polarized landscape of a few large formal firms and millions of tiny, informal units.

2. Labor & Social Vulnerabilities

- **Absence of "Safety Nets":** Despite the **e-Shram** portal (31 crore registrations), actual access to insurance, maternity benefits, and pensions remains low due to implementation gaps and lack of employer contribution.
- **Occupational Hazards:** Workers in construction, waste management, and home-based manufacturing often work in hazardous conditions without protective gear or health coverage.

3. Emerging "Digital" Challenges (Gig Economy)

- **Hidden Costs:** Workers often bear the entire risk and cost of equipment (bikes, phones, fuel), while their "independent contractor" status denies them labor rights.
- **The Gendered Digital Divide:** Women in the informal sector face higher barriers to digital literacy, restricting them to low-value, home-based activities.

4. Financial & Regulatory Hurdles

- **Credit Starvation:** Only about **14%** of informal MSMEs have access to formal credit. Most rely on moneylenders with interest rates reaching **30-50% annually**.
- **Compliance Burden:** Even with the **GST** and **Udyam** portals, the "cost of formalization" (hiring accountants, filing returns) often exceeds the benefits for small-scale urban units.

Government Initiatives for India's Urban Informal Sector

1. **e-Shram Portal (2.0):** Acts as a **National Database of Unorganized Workers**, now integrated as a "One-Stop Solution" to provide a portable Universal Account Number (UAN) for 14+ social security schemes.
2. **PM SVANidhi Scheme:** Provides **collateral-free working capital loans** to urban street vendors, recently extended to March 2030 with enhanced credit limits and digital payment incentives.
3. **Pradhan Mantri Awas Yojana - Urban (PMAY-U) 2.0:** Focuses on **Affordable Rental Housing Complexes (ARHCs)** to provide dignified living conditions for migrant workers and the urban poor near their workplaces.
4. **Code on Social Security (2020/2025):** Legally recognizes **Gig and Platform workers** for the first time, mandating a dedicated Social Security Fund to provide health, disability, and maternity benefits.
5. **PM-Vishwakarma Scheme:** Offers **end-to-end support** (skill training, toolkit incentives, and credit) to traditional urban artisans and craftspeople to integrate them into the global value chain.
6. **Deendayal Antyodaya Yojana-NULM:** Focuses on **poverty alleviation** through skill training, supporting Self-Help Groups (SHGs), and creating urban livelihoods via the "City Livelihood Centres."

Way Forward

1. **Universal Social Security Portability:** Ensure benefits like health (Ayushman Bharat) and pensions follow migrant workers across states by fully utilizing the **e-Shram UAN** as a "Single Identity."
2. **DPI-Linked Credit Access:** Use **Digital Public Infrastructure** (UPI transaction history) to provide "Information Collateral," allowing informal micro-units to access formal bank loans without physical assets.
3. **Algorithmic Accountability:** Implement the **Code on Social Security** to protect gig workers from arbitrary platform decisions and ensure a transparent "minimum floor wage."
4. **Inclusive Urban Planning:** Designate permanent **Legal Vending Zones** and expand **Affordable Rental Housing (PMAY-U 2.0)** near work hubs to reduce the high "cost of living" for informal labor.
5. **Formalizing the Circular Economy:** Integrate informal waste pickers into municipal contracts, transforming "survivalist" activities into recognized, safe, and productive **"Green Jobs."**
6. **Gender-Centric Infrastructure:** Boost urban female LFPR by providing **safe public transport** and **community crèches** near industrial clusters to support working mothers.

Conclusion

The urban informal sector is India's vital economic stabilizer. Sustainable growth necessitates transitioning from "survival-led" to "productivity-led" informality by integrating digital credit, portable social security, and inclusive urban planning to empower this essential workforce.

Q. Discuss the structural challenges faced by India's informal urban workforce. Suggest policy measures for achieving "formalisation without exclusion." 15 Marks

3.1.5. THE DEVELOPMENTAL PARADIGM IN DEMOCRATIC POLITICS

Context

In contemporary democratic discourse, "development" has become the primary electoral currency. In India, political narratives often conflate short-term redistributive measures (welfare) with long-term structural transformation (development). While visible infrastructure and social protection are vital, the blurring of these lines poses risks to fiscal sustainability and genuine economic evolution.

Defining the Dichotomy: Welfare vs. Development

Though frequently used interchangeably in political manifestos, the two concepts possess distinct characteristics:



Feature	Welfare (Social Protection)	Development (Structural Growth)
Primary Goal	Alleviating poverty and reducing immediate vulnerability.	Structural transformation and economic growth.
Nature	Consumption-oriented and redistributive.	Production-oriented and capability-enhancing.
Time Horizon	Short-term; provides immediate relief.	Long-term; unfolds over decades.
Examples	Food security, cash transfers, loan waivers.	Human capital (education/health), R&D, infrastructure.

The risks of 'Welfare Populism'

1. Fiscal Instability & Debt Traps

- **Expansion of Fiscal Deficit:** Populist transfers (e.g., loan waivers, free electricity) often exceed revenue receipts, leading to a ballooning fiscal deficit.
- **Debt Servicing Costs:** High borrowing to fund welfare increases interest payments, leaving less "fiscal space" for future shocks or emergencies.

2. Crowding Out Productive Investment

- **Revenue vs. Capital Expenditure:** When a large share of the budget goes toward **consumption-oriented** subsidies (Revenue Exp), the funds available for **asset-creating** infrastructure like dams, R&D, and ports (Capital Exp) shrink.
- **Private Sector Squeeze:** High government borrowing can drive up interest rates, making it more expensive for private businesses to borrow and invest.

3. Erosion of Human Capital & Public Goods

- **Institutional Decay:** Resources are often diverted from long-term public goods (quality schools, public health, rule of law) toward direct cash transfers that have higher immediate "electoral resonance."
- **Dependency Culture:** Over-reliance on handouts can reduce incentives for skill acquisition, entrepreneurship, and workforce participation.

4. Economic Distortions & Inflation

- **Demand-Pull Inflation:** Large-scale cash transfers can increase immediate disposable income without increasing the supply of goods, potentially driving up prices of essential commodities.
- **Resource Misallocation:** Subsidies (like free power) can lead to environmental degradation (groundwater depletion) and inefficient industrial use.

5. Weakening of Democratic Foundations

- **Competitive Populism:** A "race to the bottom" where parties compete on the scale of freebies rather than on governance performance or policy innovation.
- **Focus on 'Visibility':** Prioritizes short-term "ribbon-cutting" projects over "invisible" but crucial gains like infant mortality reduction or primary literacy.

The Capability Approach (Amartya Sen)

1. Core Philosophy

- **Beyond Income:** It argues that poverty is not just a lack of money, but the **deprivation of basic capabilities** (e.g., being healthy, educated, and well-nourished).
- **Agency:** It views individuals as active agents of change, not just passive recipients of state benefits.

2. Key Concepts: "Functionings" vs. "Capabilities"

Concept	Definition	Example
Functionings	The "beings and doings" that a person actually achieves.	Being healthy, having a job, traveling.
Capabilities	The real opportunity or freedom a person has to achieve those functionings.	Having access to a clinic (capability) to be healthy (functioning).

3. Focus on "Human Freedom"

Sen identifies five types of instrumental freedoms that support one another:

- I. **Political Freedoms:** Freedom of speech and democratic elections.
- II. **Economic Facilities:** Access to credit and open markets.
- III. **Social Opportunities:** Access to healthcare and education.
- IV. **Transparency Guarantees:** Prevention of corruption and trust in government.
- V. **Protective Security:** Social safety nets for the vulnerable (e.g., unemployment insurance).

Importance of Public Goods

1. **High Positive Externalities:** Unlike "freebies," public goods create ripple effects that benefit society as a whole. For example, a well-educated workforce (Human Capital) attracts investment, boosts innovation, and increases the national tax base.

2. **Non-Excludable & Non-Rivalrous:** These goods are available to all regardless of income level. This ensures **inclusive growth**, as the poorest citizens gain access to the same quality of infrastructure or legal protection as the wealthy, reducing the "opportunity gap."
3. **Enhancement of Productivity:** Public goods like reliable electricity, high-speed rail, and digital connectivity lower the "cost of doing business." This raises the overall economic efficiency and global competitiveness of the nation.
4. **Durable and Cumulative Impact:** While populist transfers provide immediate relief, public goods are long-term assets. Their benefits are **cumulative**—an investment in a primary health center today reduces the disease burden and improves labor productivity for decades.
5. **Foundation for Capability Building:** As per the **Amartya Sen model**, public goods are the "instrumental freedoms" (social opportunities) required to convert a person's potential into actual economic and social achievements.

Way Forward

1. **From Subsidies to Capabilities:** Shift focus from "consumption-led freebies" to "investment-led welfare." Prioritize schemes that act as a **springboard for mobility** (e.g., skill development and nutrition) rather than just a safety net.
2. **Outcome over Outlay:** Transition to **Outcome-Based Budgeting**. Use social audits and robust monitoring to ensure that public spending translates into measurable ground impact rather than mere decimal allocations.
3. **Decentralized State Capacity:** Empower **Panchayats and Urban Local Bodies** to improve the "Last Mile" delivery of public goods. Strengthening local governance reduces administrative friction and ensures better targeting.
4. **Fiscal Discipline:** Adhere to **FRBM targets** to prevent welfare from "crowding out" productive capital investment. Mandating **Fiscal Impact Statements** for election manifestos can curb competitive populism.
5. **High-Externality Infrastructure:** Prioritize public goods with high positive externalities—such as R&D, digital public infrastructure, and green energy—to foster an ecosystem where citizens can exercise their "**reasoned agency**."

Conclusion

Sustainable development requires moving beyond short-term populism to a **capability-led framework**. By balancing fiscal discipline with investment in public goods, India can transform welfare from a consumption-based safety net into a springboard for long-term growth.

***Q.** In democratic politics, the conflation of welfare and development often leads to policy distortions. Critically examine the differences between welfare and development and discuss how a balanced approach can ensure sustainable and inclusive growth in India. 15 Marks*

3.1.6. THE COST OF DISINFLATION: COMPARING INDIA, THE U.S., AND THE U.K.

Introduction: The Uneven Cost of Price Stability

The post-pandemic global economy witnessed one of the sharpest inflation surges in decades, driven by supply disruptions, massive fiscal stimulus, and geopolitical shocks such as the Russia-Ukraine conflict. In response, major central banks including the U.S. Federal Reserve, the Bank of England, and the Reserve Bank of India embarked on aggressive monetary tightening between 2022 and 2023.



By 2025, inflation had moderated across economies. However, the **economic cost of bringing inflation down varied significantly**, raising important questions about the trade-offs involved in monetary policy.

Understanding the Sacrifice Ratio

The concept of the **sacrifice ratio** is central to evaluating the cost of disinflation. It measures the **loss in economic output (or rise in unemployment)** required to reduce inflation by one percentage point.

For example, if lowering inflation by 1% leads to a 2% loss in GDP, the sacrifice ratio is 2. This makes it a practical policy tool to judge how painful disinflation is for an economy.

- A **low sacrifice ratio** indicates that inflation was controlled with minimal economic disruption.
- A **high sacrifice ratio** reflects significant output loss, often accompanied by recession.

The sacrifice ratio captures the core dilemma of modern monetary policy, there is no free lunch. Every attempt to stabilize prices involves balancing inflation control with economic growth. The goal of policymakers is not just to reduce inflation, but to do so at the lowest possible cost to the economy.

The U.S. Experience: A Rare Soft Landing

The U.S. Federal Reserve raised interest rates aggressively from near zero in early 2022 to 5.25–5.50% by mid-2023 through 11 consecutive hikes. Despite this, the U.S. economy **avoided a recession**, defying conventional expectations.

Reasons for Success:

- **Rapid easing of supply chain bottlenecks:** Pandemic disruptions in shipping, logistics, and production gradually normalized. As ports cleared, freight costs fell and availability of goods improved, reducing supply-side price pressures and helping inflation decline without cutting demand sharply.
- **Decline in global energy prices:** Cooling crude oil and gas prices lowered fuel, transport, and production costs across sectors. Since energy feeds into almost all goods and services, this had a broad disinflationary effect.
- **Strong labour market and consumer demand:** Low unemployment and steady incomes kept consumption resilient. This allowed economic growth to continue even as inflation fell, preventing a recession.

Outcome: Inflation was brought down **without a significant fall in economic output**, meaning the economy did not suffer a recession or major job losses. This led to a **near-zero sacrifice ratio**, making it a rare example of a “**soft landing**” where price stability is achieved without harming growth.

However, even though inflation slowed, **prices did not fall back to earlier levels**. Instead, they stabilized at a higher level, meaning households continue to face **permanently higher costs of living**, especially for essentials like food, housing, and fuel.

The U.K. Experience: High Cost of Disinflation

The Bank of England acted early, beginning rate hikes in December 2021 and sharply increasing interest rates from 0.1% to 5.25% by August 2023. However, **inflation remained stubbornly high despite this proactive tightening**, indicating deeper structural issues in the economy.

Structural constraints played a key role:

- The U.K.'s **heavy dependence on imported energy** made it highly vulnerable to rising global oil and gas prices.
- The **European gas price shock**, triggered by geopolitical tensions, sharply increased energy costs for households and industries.
- At the same time, **labour shortages** led to rising wages, which further pushed up service-sector inflation.

As a result, the economy could not absorb the impact smoothly:

- It slipped into a **recession in late 2023**, indicating a contraction in economic activity.
- **Unemployment increased**, reflecting weakened business conditions.
- Yet, **inflation remained above the central bank's target even by 2026**, showing incomplete success.

This combination of **high economic cost and limited inflation control** led to a **high sacrifice ratio**, meaning the U.K. paid a steep price in terms of lost output without fully restoring price stability.

India's Position: A Calibrated Trade-off

The Reserve Bank of India raised the repo rate from 4% to 6.5% between May 2022 and February 2023 to curb inflation, and then adopted a cautious pause with gradual easing.

Outcomes:

- Economic growth moderated from over 8% to about 6.5%, indicating a slowdown but not a contraction.
- Inflation declined sharply to around 2% by mid-2025.
- Importantly, **India avoided a recession**, maintaining macroeconomic stability.

Why the sacrifice ratio appears low:

- **Slower monetary transmission:** Interest rate changes take longer to affect borrowing, spending, and investment in India.
- **High food share in CPI (~46%):** Food inflation is largely driven by monsoon, supply conditions, and MSP policies rather than interest rates.
- **Government interventions:** Measures like buffer stocks, subsidies, and supply management helped contain prices.

Limitations of the Sacrifice Ratio

While the sacrifice ratio is a useful tool in macroeconomics, it has important limitations:

1. **Estimated after the fact (ex-post, not predictive):** The sacrifice ratio is usually calculated only *after* disinflation has occurred, using historical data on GDP loss and inflation decline. Policymakers cannot know its exact value in advance, making it an **imperfect guide for real-time decision-making**.
2. **Assumes a stable inflation-output relationship:** It relies on a predictable link between inflation and output, often derived from the Phillips Curve. However, this relationship can shift due to structural changes, globalization, or supply shocks, making the ratio **unstable and context-dependent**.
3. **Ignores distributional impacts:** The sacrifice ratio measures aggregate output loss but does not capture **who actually bears the cost**. In reality, the burden is uneven: workers may face unemployment, small firms may shut down, and certain sectors (like construction or MSMEs) may suffer more than others.

Thus, while the sacrifice ratio offers a useful broad estimate of the cost of disinflation, it fails to fully capture the complexity and evolving nature of real-world economic conditions. This becomes particularly evident when examining the practical challenges faced by central banks today.

Monetary Policy Challenges and Emerging Pressures

1. Limited Effectiveness Against Supply Shocks

A significant portion of recent inflation across economies has been driven by **supply-side factors** such as rising energy prices, disrupted supply chains, and geopolitical tensions. Interest rate hikes primarily curb demand, but they **cannot directly resolve supply constraints**, making monetary policy less effective in controlling such inflation.

2. Divergent Growth–Inflation Trade-offs

The impact of tightening varied across economies:

- The U.S. managed a **soft landing**, controlling inflation without a recession.
- The U.K. faced a **sharp trade-off**, with inflation control leading to recession and unemployment.
- India achieved a **balanced outcome**, reducing inflation while sustaining growth, though at a slower pace.

This highlights how structural differences shape policy outcomes.

3. India's Emerging Currency Pressure

India is now facing **exchange rate depreciation**, with the rupee weakening significantly. This increases the cost of imports especially crude oil leading to **imported inflation** and external sector vulnerability.

4. Policy Dilemma for the Reserve Bank of India

The RBI faces a complex trade-off:

- **Cutting rates** may support growth but risk further currency depreciation.
- **Raising rates** may stabilize the currency but dampen growth.

- **Maintaining status quo** may contain risks but delay economic recovery. This creates a **policy trilemma** with no easy solution.

5. Structural Limitation of Monetary Policy

In India, nearly half of inflation is driven by **food prices**, which depend on monsoon, supply conditions, and government policies rather than interest rates. This limits the RBI's ability to control **headline inflation**, reducing the overall effectiveness of monetary policy.

Way Forward: Towards a Balanced Policy Framework

1. Strengthening Supply-Side Measures

Inflation in economies like India is often driven by **supply constraints rather than excess demand**. Therefore, improving **agricultural supply chains** (storage, logistics, cold chains) can reduce food price volatility. Investing in **energy diversification** such as renewables can lower dependence on imported oil. Reducing import reliance overall helps insulate the economy from global price shocks.

2. Enhancing Monetary Transmission

For policy rate changes by the Reserve Bank of India to be effective, they must quickly influence borrowing and spending. This requires **strong financial markets**, efficient banking systems, and better **credit delivery mechanisms**, ensuring that interest rate changes reach businesses and consumers in a timely manner.

3. Coordinated Policy Approach

Monetary policy alone cannot control inflation effectively. It must be supported by **fiscal policy** for instance, reducing taxes on essential goods or managing supply bottlenecks. Instead of broad stimulus (which can fuel inflation), governments should use **targeted subsidies** to protect vulnerable sections without distorting the overall economy.

4. Managing External Vulnerabilities

To reduce exposure to global shocks, countries should **build adequate foreign exchange reserves**, which help stabilize the currency during volatility. At the same time, promoting **exports and domestic production** while reducing unnecessary imports can improve the balance of payments and strengthen economic resilience.

5. Flexible Inflation Targeting

Inflation targeting should account for **country-specific realities**. In India, where food has a large share in the inflation basket, strict adherence to targets without considering supply shocks may harm growth. A **flexible approach** allows policymakers to balance inflation control with growth and stability objectives.

Conclusion: Different Paths, Different Costs

The experience of the U.S., the U.K., and India demonstrates that while inflation control is a common objective, the **cost of achieving it varies widely across economies**. Structural factors, external dependencies, and policy choices shape outcomes. Going forward, central banks must adopt **context-specific, flexible strategies**, recognizing that the path to price stability is neither uniform nor costless.

Q. The cost of disinflation varies significantly across economies depending on structural and policy factors. Discuss this statement using the experiences of India, the United States, and the United Kingdom. 15 Marks

3.2. ENVIRONMENT

3.2.1. INDIA'S UPDATED CLIMATE PLEDGES

Introduction

- **"Prakriti Rakshati Rakshita "** (Nature protects if she is protected)
- India's 2035 climate commitments are not just modern policy but an extension of its ancient ethos that views environmental stewardship as a **fundamental duty**.



Evolution of India's Climate Commitments

India's climate journey is characterized by "exceeding expectations." Most of the 2015 (COP21) targets were met nearly a decade ahead of schedule.

Feature	2015 NDC (for 2030)	2022 Updated NDC (for 2030)	2026 Revised NDC (for 2035)
Emissions Intensity	33-35% reduction	45% reduction	47% reduction
Non-Fossil Power	40% capacity	50% capacity	60% capacity
Carbon Sink	2.5–3 billion tones CO ₂	Same as 2015	3.5–4.0 billion tones CO₂

Core Pillars of the 2035 Nationally Determined Contributions (NDCs)

The core pillars of India's updated **Nationally Determined Contributions (NDCs)** for the **2031–2035** period, as approved by the Union Cabinet in March 2026, are summarized into these five key points:

1. Emissions Intensity Reduction (Efficiency Target)

India has committed to reducing the **emissions intensity of its GDP by 47% by 2035**, compared to 2005 levels. This is an increase from the 2030 target of 45%. It signifies a decoupling of economic growth from greenhouse gas emissions, focusing on energy efficiency and low-carbon industrial growth.

2. Non-Fossil Fuel Power Capacity (Energy Transition)

The target for non-fossil fuel-based energy resources in the cumulative electric power installed capacity has been raised to **60% by 2035**. Having already surpassed the 2030 goal of 50% early (reaching **~52.6% in early 2026**), this pillar emphasizes a massive scale-up in solar, wind, nuclear and hydro power.

3. Enhanced Carbon Sink (Sequestration Target)

India aims to create an additional carbon sink of **3.5 to 4.0 billion tonnes of CO₂ equivalent** by 2035. This strategic jump utilizes afforestation, the Green Credit Program, and large-scale land restoration.

4. Adaptation and Resilience (Vulnerability Protection)

A significant shift in the 2035 roadmap is the equal emphasis on **Climate Adaptation**. This pillar focuses on protecting vulnerable sectors through:

- **Mangrove restoration** (MISHTI scheme).
- **Climate-resilient agriculture** and water security (Jal Jeevan Mission).
- **Disaster-resilient infrastructure** to combat extreme weather events like cloudbursts and cyclones.

5. LiFE – Lifestyle for Environment (Behavioral Shift)

The NDCs officially integrate the **LiFE movement** as a core pillar. The **LiFE movement** is a core pillar aimed at making climate action a mass movement. It promotes "mindful utilization" over "mindless consumption," championing circular economy principles and global behavioral change.

New Frameworks in India's 2035 NDC

1. **Indian Carbon Market (ICM):** Operationalized under the **Carbon Credit Trading Scheme (CCTS)**, it transitions from voluntary to compliance-based trading. It mandates 490 "Obligated Entities" across nine high-emission sectors (like steel and cement) to meet GHG intensity targets or purchase credits.
2. **Green Credit Program (GCP):** A first-of-its-kind market-based mechanism that incentivizes pro-planet actions beyond carbon. It creates a "land bank" for voluntary afforestation and water conservation, rewarding verified environmental restoration with tradeable credits.
3. **Whole-of-Economy Integration:** Climate goals are now embedded into industrial policy through **Production Linked Incentive (PLI)** schemes for Green Hydrogen, Advanced Chemistry Cells (ACC), and solar modules, aligning the "Viksit Bharat 2047" vision with net-zero pathways.
4. **Disaster-Resilient Infrastructure Framework:** Under **CDRI** leadership, India has formalized a framework to "climate-proof" infrastructure, particularly in Himalayan and coastal regions, ensuring resilience against extreme events like GLOFs and cyclones.
5. **Triple-Link Adaptation Model:** A new domestic architecture linking **Agriculture, Water and Health**. It integrates missions like Per Drop More Crop with the National Mission on Sustainable Agriculture and health-heat action plans to create a unified resilience shield for vulnerable communities.

Significance of India's 2035 Nationally Determined Contributions (NDCs)

1. **Global Leadership & Continuity:** India is among the first major economies to submit its **NDC 3.0**, reaffirming its commitment to the Paris Agreement at a time when several developed nations are scaling back climate policies.
2. **Credible Net-Zero Pathway:** The 2035 targets (47% intensity reduction) provide a mid-term bridge that validates India's long-term **2070 Net-Zero** goal, proving the roadmap is backed by concrete decadal milestones.
3. **Strategic Energy Independence:** By targeting **60% non-fossil capacity**, India reduces its reliance on volatile global fossil fuel markets, enhancing national energy security and insulating the economy from geopolitical shocks.
4. **Decoupling Economy from Carbon:** Achieving a 47% reduction in emissions intensity demonstrates that India can maintain high GDP growth (aiming for **Viksit Bharat 2047**) while significantly lowering the carbon footprint per unit of growth.
5. **Focus on Climate Justice:** Rooted in the principle of **CBDR-RC**, India's targets highlight the balance between developmental needs and environmental responsibility, putting pressure on developed nations to match this ambition with adequate climate finance.

Challenges to India's 2035 Nationally Determined Contributions (NDCs)

1. **The Finance Gap:** Estimates suggest India requires over **\$2.5 trillion** by 2030 alone to meet its goals. The persistent failure of developed nations to provide the promised **\$100 billion annual climate finance** remains the biggest bottleneck for technology transfer and scaling.
2. **Storage & Grid Stability:** Achieving **60% non-fossil capacity** necessitates massive investments in **Battery Energy Storage Systems (BESS)** and Pumped Hydro. Without cost-effective storage, the grid remains vulnerable to the intermittency of solar and wind power.
3. **Hard-to-Abate Sectors:** While the power sector is decarbonizing, sectors like **Steel, Cement and Heavy-duty Transport** are technologically difficult and expensive to green. These "Hard-to-Abate" industries continue to see rising absolute emissions.
4. **The Coal Dependency:** Despite the shift in capacity, coal still provides nearly **70% of actual power generation**. Retiring coal plants prematurely risks energy shortages and high "Stranded Asset" costs for the banking and power sectors.
5. **Land & Resource Constraints:** Creating a **3.5–4.0 billion tonne carbon sink** requires vast tracts of land, leading to potential conflicts with agricultural needs and tribal rights. Additionally, the transition is heavily reliant on **Critical Minerals** (Lithium, Cobalt) currently dominated by global monopolies.

Way Forward for India's 2035 NDC

1. **Transition from Capacity to Generation:** Shift focus from installing renewables to increasing actual power generation. This requires massive investment in **Battery Energy Storage Systems (BESS)** and Pumped Hydro to manage solar and wind intermittency.
2. **Decarbonizing Hard-to-Abate Sectors:** Accelerate the **National Green Hydrogen Mission** and incentivize low-carbon technologies in steel, cement, and chemical industries through the compliance-based **Indian Carbon Market**.
3. **Strengthening Climate Finance:** Lead the Global South in demanding a **New Collective Quantified Goal (NCQG)** from developed nations while leveraging domestic "Green Bonds" and the **Green Credit Program** to attract private capital.
4. **Nature-Based Solutions & Sink Quality:** Shift focus from quantitative forest cover to **quality of sinks**. This involves restoring degraded land and ensuring afforestation under **Ek Ped Maa Ke Naam** and **MISHTI** supports biodiversity over monocultures.
5. **Sub-National Climate Action:** Decentralize targets by empowering states to implement **State Action Plans on Climate Change (SAPCC)**. Integrating resilience into urban planning is vital for protecting communities from heatwaves and flooding.

Conclusion

India's 2035 NDCs bridge the gap toward **Net-Zero 2070**, cementing its status as a green superpower. By synchronizing industrial growth with radical sustainability, India is pioneering a resilient, low-carbon roadmap for the Global South.

Q. Write a review on India's climate commitments under the Paris Agreement (2015) and mention how these have been further strengthened in COP26 (2021). In this direction, how has the first Nationally Determined Contribution (NDC) intended by India been updated in 2022? 15 Marks

3.2.2. HEAT WAVES AND URBAN HEAT ISLANDS (UHI)

Context:

- Heat waves are prolonged periods of extreme atmospheric heat, while Urban Heat Islands occur when cities trap that heat, creating localized warming significantly higher than in surrounding rural environments.



Heat Waves

A Heat Wave is a period of abnormally high temperatures, more than the normal maximum temperature, that occurs during the summer season.

IMD Criteria for Heat Waves

The India Meteorological Department (IMD) classifies heat waves based on two primary metrics: **Departure from Normal** and **Actual Maximum Temperature**.

1. Based on Departure from Normal

- Heat Wave:** When the departure from normal temperature is **4.5°C to 6.4°C**.
- Severe Heat Wave:** When the departure from normal is **> 6.4°C**.

2. Based on Actual Maximum Temperature

- Heat Wave:** When the actual maximum temperature is **≥ 45°C**.
- Severe Heat Wave:** When the actual maximum temperature is **≥ 47°C**.

3. Basic Thresholds for Declaration

For a heat wave to be officially declared, the maximum temperature must reach at least:

- Plains:** 40°C
- Hilly Regions:** 30°C
- Coastal Regions:** 37°C

Note: A heat wave is declared if at least two stations in a Meteorological subdivision reach these levels for at least two consecutive days.

Core Causes of Heat Waves

- Anticyclonic Systems (High-Pressure):** Sinking air from high-pressure systems compresses and warms (adiabatic heating). This creates a "cap" that traps hot air near the ground, acting like a lid.
- Jet Stream Shifts (Heat Domes):** Stationary loops in the jet stream can lock high-pressure systems over a region for extended periods, creating "Blocking Patterns" or "Heat Domes."
- Warm Air Advection:** The horizontal movement of hot, dry air masses. In India, this is exemplified by the '**Loo**'—hot winds blowing from the Northwest deserts into the plains.
- Low Soil Moisture:** Lack of water prevents evaporative cooling. Instead of evaporating moisture, solar energy directly heats the ground and air, intensifying the heat.
- Climate Change:** Global warming raises the "baseline" temperature, making heat waves more frequent, intense, and long-lasting due to increased atmospheric energy.
- Oceanic Influences (El Niño):** Warming in the Pacific Ocean alters global circulation, often leading to suppressed monsoons and higher temperatures in South Asia.

Urban Heat Island (UHI) Effect

The **Urban Heat Island (UHI)** effect refers to the phenomenon where urban areas experience significantly higher temperatures than their surrounding rural or semi-urban hinterlands.

Causes of Urban Heat Island (UHI)

- **Low Albedo (Heat Absorption):** Dark surfaces like asphalt roads and concrete buildings absorb more solar radiation compared to reflective natural surfaces.
- **Thermal Storage:** Dense materials (bricks, concrete) have high thermal mass; they store heat during the day and release it slowly at night, preventing evening cooling.
- **Lack of Evapotranspiration:** Cities replace trees and water bodies with non-porous surfaces. This removes the natural cooling effect provided by plants and soil moisture.
- **Urban Geometry (Urban Canyons):** Tall buildings trap long-wave radiation between them and block wind flow, hindering the dispersal of heat.
- **Anthropogenic Heat:** Waste heat generated from air conditioners, vehicle exhausts, and industrial activities adds directly to the local temperature.

Key Differences: Heat Waves vs. Urban Heat Islands (UHI)

Feature	Heat Wave	Urban Heat Island (UHI)
Nature	A regional meteorological event characterized by a temporary spike in temperature.	A structural/spatial phenomenon where a city is consistently warmer than its surroundings.
Scale	Macro-scale: Covers large regions, states, or even multiple countries.	Micro-scale: Limited to specific urban built-up areas.
Primary Cause	Atmospheric factors: High-pressure systems, jet stream shifts, and hot air advection.	Land-use factors: Concrete surfaces, low albedo, and lack of vegetation.
Duration	Temporary: Lasts for a few days to a few weeks.	Persistent: Exists year-round, though intensity varies by season.
Diurnal Cycle	Peaks during the afternoon when solar radiation is strongest.	Most intense at night when buildings release stored daytime heat.

Impacts of Heat Waves and Urban Heat Islands

1. Public Health & Social Impacts

- **Heat-Related Illnesses:** Increase in cases of heat exhaustion, heat stroke, and dehydration. Prolonged exposure can be fatal, especially for the elderly, children, and outdoor workers.
- **Secondary Health Risks:** Heat exacerbates pre-existing conditions like cardiovascular and respiratory diseases. UHIs prevent nighttime cooling, which is essential for the human body to recover from daytime heat stress.
- **Labor Productivity:** Significant loss in "working hours," particularly in sectors like construction and agriculture. High temperatures reduce cognitive function and physical endurance.
- **Social Inequality:** Vulnerable populations living in informal settlements (slums) with poor ventilation and no access to cooling technologies suffer the most.

2. Environmental & Air Quality Impacts

- **Ground-Level Ozone Formation:** High temperatures and sunlight trigger chemical reactions between Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOCs), creating harmful surface-level ozone (smog).
- **Water Scarcity:** Rapid evaporation of surface water bodies and increased demand for groundwater leads to localized water crises.
- **Loss of Biodiversity:** Heat stress affects urban flora and fauna; city-dwelling birds and small mammals often suffer from dehydration and habitat loss.

3. Economic & Infrastructure Impacts

- **Energy Crisis:** A massive surge in demand for air conditioning leads to "Peak Load" pressure on the electrical grid, often resulting in transformer failures and blackouts.
- **Infrastructure Degradation:** Extreme heat can cause thermal expansion of railway tracks (leading to buckling) and softening of asphalt on roads, increasing maintenance costs.
- **Agricultural Loss:** While UHI is local, regional heat waves shrivel cereal crops (like wheat), leading to lower yields and food price inflation.

Government Initiatives

1. National-Level Frameworks

- **Heat Action Plans (HAPs):**
 - **Implementing Agency:** National Disaster Management Authority (NDMA) in collaboration with over 23 states and 100+ cities.
 - **Focus:** Tailored local strategies including early warning systems (via IMD), public awareness, and "cooling centers."
- **India Cooling Action Plan (ICAP):**
 - **Vision:** A 20-year roadmap (up to 2038) to reduce cooling demand by **20-25%** and refrigeration demand by **25-30%**.
- **National Action Plan on Climate Change (NAPCC):** Specifically, the **National Mission on Sustainable Habitat** encourages heat-resilient urban planning and energy efficiency in the construction sector.

2. Urban & Structural Initiatives

- **Cool Roof Policies:**
 - **Telangana:** The first state to launch a mandatory **Cool Roof Policy (2023–2028)**, targeting 300 sq. km of reflective roofing to reduce indoor temperatures by 2–4°C.
 - **Tamil Nadu:** Recently mandated minimum passive cooling standards for all new buildings and scaled cool roofs across government schools.
- **Nature-Based Solutions (NbS):**
 - **Miyawaki Forests:** Several municipal corporations (e.g., Mumbai, Chennai) are planting dense urban forests to lower localized UHI effects.
 - **Amrit Sarovar / Ama Pokhari:** Schemes focused on rejuvenating urban water bodies (Blue Infrastructure) to provide evaporative cooling.
- **PMAY (Pradhan Mantri Awas Yojana):** Modern affordable housing projects are increasingly integrating thermally efficient materials (e.g., Autoclaved Aerated Concrete blocks) to reduce heat gain.

3. Monitoring & Early Warning Systems

- **IMD's Seasonal Outlooks:** The India Meteorological Department now issues color-coded alerts (Yellow, Orange, Red) and impact-based forecasts specifically for heat waves.
- **SACHET Portal:** A national disaster alert portal by NDMA that provides real-time, geo-targeted heat alerts directly to citizens' smartphones.
- **SATARK App:** Used in states like Odisha to provide block-level preparedness advisories.

Mitigation Strategies

1. Structural & Technical Mitigation (Long-term)

- **Cool Roofs & Pavements:**
 - **White Roofs:** Painting rooftops with solar-reflective white paint to increase **albedo**.
 - **Cool Pavements:** Using porous materials or reflective coatings on roads and parking lots to prevent heat absorption.
- **Green Infrastructure:**
 - **Urban Forestry:** Planting native trees and creating "Miyawaki" forests to provide shade and cooling via **evapotranspiration**.
 - **Vertical Gardens & Green Roofs:** Covering building facades and roofs with vegetation to act as natural insulation.
- **Blue Infrastructure:**
 - Restoring urban wetlands, ponds, and lakes. Water bodies act as "heat sinks," absorbing thermal energy and providing localized cooling through evaporation.
- **Passive Cooling Architecture:**
 - Designing buildings with natural ventilation (wind catchers), high ceilings, and shading devices (chajjas) to reduce the need for mechanical air conditioning.

2. Policy & Planning (Medium-term)

- **Heat Action Plans (HAPs):**
 - Developing city-specific protocols that include early warning systems, mapping "heat hotspots," and coordinating response teams.
- **Zoning & Land Use:**
 - Creating "**Ventilation Corridors**"—open paths between buildings that allow prevailing winds to flush out trapped heat from "Urban Canyons."
- **Labor Regulation:**
 - Enforcing mandatory "rest breaks" and shifting working hours (e.g., 11 AM to 4 PM) for outdoor workers in construction and agriculture.

3. Emergency & Behavioral Response (Short-term)

- **Public Cooling Centers:**
 - Setting up air-conditioned or well-ventilated public spaces (libraries, community centers) for vulnerable populations during peak heat hours.
- **Early Warning Systems (EWS):**
 - Using SMS alerts, radio, and TV to broadcast color-coded heat alerts (Yellow/Orange/Red) based on IMD forecasts.
- **Health Preparedness:**

- Equipping public hospitals with "Heat Stroke Rooms," dedicated ice packs, and IV fluids to handle sudden surges in patients.

Conclusion

Heat waves and Urban Heat Islands represent a dual threat to climate resilience. Combating them requires a shift from emergency response to sustainable urban design, prioritizing green-blue infrastructure and heat-resilient policies to ensure public safety.

Q. Bring out the causes for the formation of heat islands in the urban habitat of the world. 5 Marks

3.3. INTERNAL SECURITY

3.3.1. NAXALISM IN INDIA

Context:

The Union Home Minister has set a target of **March 31, 2026**, to completely eliminate Naxalism from India. According to MHA (2025), "Most Affected Districts" have declined from **36 in 2014 to just 3 in 2025** (Bijapur, Sukma, and Narayanpur in Chhattisgarh). Total affected districts dropped from 126 to 11.



What is Naxalism?

Naxalism, or **Left-Wing Extremism (LWE)**, is an armed insurgency inspired by **Maoist ideology** (specifically the "Protracted People's War").

- **Objective:** To overthrow the Indian State through armed rebellion and establish a "People's Government."
- **Methodology:** Guerrilla warfare, creation of "liberated zones," and mobilization of marginalized sections (tribals and landless laborers) against "class enemies" (landlords and the State).

Background of Naxalism in India

- **Naxalbari Uprising (1967):** It began in Naxalbari village, West Bengal, led by **Charu Majumdar, Kanu Sanyal, and Jangal Santhal**. It was a peasant revolt against exploitative landlords (*Jotedars*).
- **Ideological Split:** The movement led to a split in the CPI(M), forming the **CPI (Marxist-Leninist)** in 1969.
- **Formation of CPI (Maoist):** In 2004, the merger of the **People's War Group (PWG)** and the **Maoist Communist Centre of India (MCCI)** created the "CPI (Maoist)," which is currently the dominant insurgent group.

Phases of Naxalism in India

Phase I: The Naxalbari Period (1967 – 1975)

- **Focus:** Romanticized "Peasant Revolution."
- **Characteristics:** Started in Naxalbari (West Bengal). It was primarily an ideological movement against feudalism and land-lords (*Jotedars*).
- **Outcome:** Highly fragmented. It was largely suppressed by 1972 following **Operation Steeplechase** and the death of Charu Majumdar.

Phase II: Fragmentation & Survival (1975 – 2004)

- **Focus:** Regional Consolidation.
- **Characteristics:** The movement split into many factions. Two dominant groups emerged:
 - **People's War Group (PWG)** in Andhra Pradesh (Telangana region).
 - **Maoist Communist Centre (MCC)** in Bihar and Jharkhand.
- **Outcome:** Shifted its base from plains to deep **forested terrains**, focusing on tribal (Adivasi) mobilization against the State.

Phase III: Peak & The "Red Corridor" (2004 – 2014)

- **Focus:** Militarization and Expansion.
- **Characteristics:** In 2004, the PWG and MCC merged to form the **CPI (Maoist)**. This unified the movement under a single command.
- **The "Red Corridor":** Influenced a vast stretch from Nepal to Andhra Pradesh, affecting over 180 districts.
- **Outcome:** Escalation of violence, including the 2010 Dantewada ambush. The government declared it the "single biggest internal security challenge."

Phase IV: Decline & Consolidation (2014 – Present)

- **Focus:** Shrinking Footprint & Elimination.
- **Characteristics:** Implementation of the **SAMADHAN** strategy. A heavy focus on "Security-cum-Development."
- **Current Status:** As of **March 2026**, the movement is restricted to just a few pockets in South Chhattisgarh. The government is currently in the final stages of the mission to achieve a "Naxal-Free India" by the end of this year.

Causes of Naxalism in India

1. **Land Alienation:** Failure of "Land to the Tiller" reforms led to land concentration among elites, leaving tribals as exploited, landless laborers.
2. **The Mining-Development Paradox:** Massive displacement of Adivasis for mineral extraction without equitable compensation or rehabilitation fueled "anti-state" resentment.
3. **Forest Rights Violation:** Slow implementation of the **Forest Rights Act (2006)** and criminalization of traditional livelihoods (Minor Forest Produce) alienated forest-dwellers.
4. **Governance Deficit:** A "vacuum" of state services (schools, healthcare) allowed Maoists to establish parallel systems like **Jan Adalats** (People's Courts).
5. **Socio-Economic Neglect:** Acute poverty, malnutrition, and unemployment in the "Red Corridor" created a fertile recruiting ground for armed insurgency.
6. **Exploitation by Middlemen:** The predatory *Thekedar* (contractor) and moneylender system, including (bonded labor), forced many to seek "instant justice" from Naxals.
7. **Infrastructural Isolation:** Lack of roads and connectivity in regions like **Bastar** provided Naxals a strategic haven while keeping the State at a distance.

Government Initiatives to Combat Naxalism in India

The government follows a **Multi-Pronged Strategy**:

1. Security Measures

- **SAMADHAN Doctrine (2017):**
 - **S-** Smart Leadership

- **A-** Aggressive Strategy
- **M-** Motivation and Training
- **A-** Actionable Intelligence
- **D-** Dashboard-based KPIs
- **H-** Harnessing Technology (Drones, GIS)
- **A-** Action Plan for each Theatre
- **N-** No Access to Financing (Financial Choking via NIA/ED)
- **Specialized Forces:** Deployment of **CoBRA** (Commando Battalion for Resolute Action) of the CRPF, along with state-specific units like **Greyhounds** (AP/Telangana) and the **District Reserve Guard (DRG)** in Chhattisgarh.
- **Security Related Expenditure (SRE) Scheme:** Provides 100% central reimbursement for operational expenses, insurance for SFs, and community policing.
- **Fortified Police Stations:** Over **656 Fortified Police Stations** have been constructed in LWE areas (as of Feb 2026) to withstand heavy insurgent attacks.
- **Choking Naxal Finance:** Dedicated verticals in the **NIA (National Investigation Agency)** and **ED (Enforcement Directorate)** to seize assets and disrupt the extortion networks.

2. Development-Led Initiatives

- **Special Central Assistance (SCA):** Funds provided to the "Most Affected Districts" to fill critical gaps in public infrastructure (e.g., small bridges, primary health centers).
- **Infrastructure Connectivity:**
 - **Roads:** Under the **Road Requirement Plan (RRP)** and **RCPLWE**, over 15,000 km of roads have been completed.
 - **Telecom:** The **LWE Mobile Tower Project** has commissioned over 9,200 towers (4G saturation) to eliminate "shadow zones."
- **Education & Skill Development:**
 - **Eklavya Model Residential Schools (EMRS):** 179 functional schools provide quality education to tribal students.
 - **ITI/SDC:** Setting up Industrial Training Institutes and Skill Development Centres in each affected district.
- **Financial Inclusion:** Opening of nearly 6,000 Post Offices and 1,800+ Bank branches/ATMs in formerly unbanked LWE zones.

3. Rights and Entitlements

- **Forest Rights Act (2006):** Prioritizing the settlement of individual and community forest rights to reduce tribal alienation.
- **Niyad Nellanar Scheme (Chhattisgarh):** A 2024-25 flagship initiative meaning "Your Good Village," aimed at providing 25+ essential government services to villages in the core Bastar region.

4. Surrender and Rehabilitation Policy

- **Financial Incentives:** Central government provides an immediate grant of **₹5 Lakh** for higher-ranked cadres and **₹2.5 Lakh** for others who surrender.
- **Mainstreaming:** Includes vocational training, monthly stipends for 3 years, and land/housing support to prevent re-entry into insurgency.

5. Public Perception Management

- **Civic Action Programme (CAP):** CAPFs conduct medical camps, distribute essential items, and organize sports (e.g., the **Bastar Olympics 2025-26**) to build trust with local populations.
- **Tribal Youth Exchange Programme:** Organized by NYKS to expose tribal youth to the developmental progress in other parts of India.

Challenges in Combating Naxalism

1. Geographical & Tactical Challenges

- **Difficult Terrain:** The core "liberated zones" (like **Abujmad** in Chhattisgarh) consist of 4,000 sq. km of unsurveyed, dense hilly forests, making aerial surveillance and troop movement difficult.
- **Asymmetric Warfare:** Naxals use "hit-and-run" guerrilla tactics and IEDs (Improvised Explosive Devices), which negate the numerical superiority of security forces.
- **Safe Havens at Inter-State Junctions:** Insurgents exploit the "tri-junctions" of state borders (e.g., Chhattisgarh-Odisha-Telangana) to escape from one state's jurisdiction into another.

2. Intelligence & Operational Gaps

- **Human Intelligence (HUMINT) Deficit:** Local villagers often refuse to provide information due to fear of brutal retaliation by Naxal **Jan Adalats** (People's Courts).
- **Technology vs. Canopy:** Dense forest cover often renders high-end drones and satellite imagery less effective for real-time tracking of small guerrilla squads.
- **IED Proliferation:** The high cost of human life due to pressure-cooker bombs and sophisticated landmines remains the biggest hurdle for ground patrols.

3. Governance & Developmental Hurdles

- **The "Trust Deficit":** Decades of neglect and perceived state high-handedness make it difficult for administrative machinery to win "hearts and minds."
- **Delayed Infrastructure:** Road construction in Maoist strongholds is slow because contractors are targeted, and equipment is frequently burnt by insurgents.
- **Ineffective Local Bodies:** In many affected areas, the **PESA Act** and **5th Schedule** are not implemented in spirit, leaving a power vacuum that Naxals fill.

4. Ideological & Structural Challenges

- **Urban Naxalism/Overground Network:** The existence of support structures in cities—providing legal aid, recruitment, and propaganda—makes it a "invisible" multi-front war.
- **Extortion Economy:** Naxals run a multi-crore "taxation" racket, taxing mining companies, PWD contractors, and tendu leaf collectors, ensuring they remain well-funded despite demonetization or financial choking.
- **Radicalization of Youth:** Exploiting local grievances (like unemployment and displacement) to recruit the next generation of "People's Liberation Guerrilla Army" (PLGA) cadres.

5. Legal & Human Rights Constraints

- **Collateral Damage:** Any civilian casualty during an operation is used by Naxal propaganda to further alienate the masses from the State.
- **Legal Delays:** The slow judicial process in convicting high-ranking Maoist leaders often allows them to continue directing operations from behind bars or while on bail

Way Forward

1. Transition to "Governance-Led" Consolidation

- **From 'Clear-Hold' to 'Develop':** Shift focus from kinetic military operations to the "**Develop**" phase. Ensure that the administrative vacuum created by the retreat of Maoists is immediately filled by civilian officials and not just security camps.
- **Universal Service Delivery:** Scale up the **Niyad Nellanar (Your Good Village)** model across all former "Most Affected Districts" to ensure 100% saturation of health, education, and electricity.

2. Institutionalizing Tribal Rights

- **PESA & Forest Rights:** Ensure the **PESA Act (1996)** and **Forest Rights Act (2006)** are implemented in letter and spirit to empower Gram Sabhas. This addresses the root cause of "alienation" by giving tribals control over minor forest produce and local land decisions.
- **Land Record Digitization:** Accelerate the digitizing of land records in the Red Corridor to prevent future land-grabbing and exploitation by middlemen.

3. Strategic "Post-Insurgency" Security

- **De-mining Operations:** Launch a massive, tech-driven **joint de-mining exercise** (using NSG and CRPF) to clear the thousands of hidden IEDs that pose a long-term threat to civilian life and developmental activity.
- **Strengthening Local Police:** Gradually withdraw CAPF battalions as the threat recedes, handing over internal security to state police forces (like the **DRG** or **Greyhounds**) who have better local intelligence and language skills.

4. Countering "Urban Maoism" & Ideology

- **Narrative Building:** Use the success stories of surrendered cadres (acting as "Peace Ambassadors") and events like the **Bastar Olympics** to build a counter-narrative against the Maoist ideology of violence.
- **Financial Intelligence:** Continue using the **NIA** and **ED** to choke the remnants of the "extortion economy" and urban support networks that provide logistical cover.

5. Economic Diversification

- **Sustainable Livelihoods:** Promote minor forest produce-based industries, eco-tourism (e.g., in the Bastar circuit), and dairy cooperatives to provide stable income alternatives for the youth.
- **Infrastructure Sustainability:** Ensure the "3-C Connectivity" (Roads, Mobile, Banks) is maintained and protected from any residual extremist elements.

Conclusion

The March 2026 milestone marks the transition from armed conflict to **integrated development**. Future success lies in transforming the "Red Corridor" into a **vibrant socio-economic zone** through tribal empowerment.

Q. *Naxalism is a social, economic and developmental issue manifesting as a violent internal security threat. In this context, discuss the emerging issues and a multilayered strategy to tackle the menace of Naxalism. 15 Marks*

3.4. SCIENCE & TECHNOLOGY

3.4.1. ARTEMIS II MISSION

Context

Artemis II is the **first crewed mission** of NASA's Artemis program, marking the return of humans to the lunar vicinity after a gap of over **50 years** (since Apollo 17 in 1972).

About Artemis II Mission

- **Launch Date: April 1, 2026** (Successfully launched from Kennedy Space Center, Florida).
- **Nature of Mission: A crewed lunar flyby** (The crew does not land on the Moon).
- **Duration: Approximately 10 days.**
- **Spacecraft: Orion** Multi-Purpose Crew Vehicle, powered by the **European Service Module (ESM)**.
- **Launch Vehicle: Space Launch System (SLS)**—the most powerful operational rocket in history, producing 8.8 million pounds of thrust.



The Historical "Firsts" of the Crew

The four-member crew represents a shift toward inclusivity and international cooperation in deep space:

- **Reid Wiseman (Commander):** NASA veteran.
- **Victor Glover (Pilot):** First **person of color** to leave Low Earth Orbit (LEO).
- **Christina Koch (Mission Specialist):** First **woman** to travel to the Moon's vicinity.
- **Jeremy Hansen (Mission Specialist):** First **non-American** (Canadian Space Agency) to fly to the Moon.

Mission	Status/ Date	Spacecraft & Launcher	Key Objective
Artemis I	Completed (Nov-Dec 2022)	SLS Block 1 & Orion (Uncrewed)	System Validation: Tested the SLS rocket and Orion's heat shield during a high-speed re-entry from lunar orbit.
Artemis II	Ongoing (Launched April 1, 2026)	SLS Block 1 & Orion (Crewed)	Human Validation: 10-day lunar flyby to test Life Support Systems (ECLSS) and communication in deep space.
Artemis III	Scheduled (Mid-2027)	SLS, Orion & SpaceX Starship HLS	Crewed mission in Low Earth Orbit to test the Starship HLS and Blue Moon landers, and new Axiom space suits. (No lunar landing).
Artemis IV	Scheduled (Early 2028)	SLS Block 1B & Orion	First Lunar Landing of the program. Crew will land at the Lunar South Pole.

Artemis V	Scheduled (Late 2028)	SLS Block 1B & Blue Origin Lander	Second lunar landing; beginning of the Lunar Base Camp construction.
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Key Objectives of the Artemis Program

Artemis II serves as a bridge between the uncrewed Artemis I and the landing mission, Artemis III.

- **Human-System Integration:** Validating the **Environmental Control and Life Support System (ECLSS)** in Orion to ensure it can regulate oxygen, remove CO₂, and maintain temperature for a four-person crew over 10 days.
- **Manual Maneuvering & Proximity Operations:** Performing a "**Prox Ops**" demonstration where the pilot manually maneuvers Orion near the ICPS (the rocket's upper stage) to test manual handling and docking sensors.
- **Deep Space Navigation & Communication:** Testing the high-speed **Optical (Laser) Communications** and the Deep Space Network to ensure continuous, high-bandwidth data and video links at 400,000 km from Earth.
- **Radiation & Environment Assessment:** Monitoring the crew's exposure to high-energy solar and cosmic radiation once they leave the protection of Earth's Van Allen belts, providing data for long-duration stays.
- **Re-entry and Recovery Validation:** Testing the high-speed re-entry (approx. 40,000 km/h) into Earth's atmosphere and the precision splashdown/recovery procedures in the Pacific Ocean with humans on board.

Significance of the Artemis Program

1. **Transition to Sustainable Habitation:** Unlike the "flags and footprints" approach of Apollo, Artemis focuses on **long-term presence**. It prioritizes **In-Situ Resource Utilization (ISRU)**, specifically extracting water ice from the Lunar South Pole for life support and rocket fuel (LH₂/LOX).
2. **"Moon to Mars" Proving Ground:** The Moon serves as a critical testbed for deep-space technologies needed for Mars missions in the 2030s, including **nuclear thermal propulsion**, advanced radiation shielding, and closed-loop life support systems.
3. **Space Geopolitics & Rules-Based Order:** Through the **Artemis Accords** (which India signed), the mission establishes a U.S.-led international framework for transparent, peaceful exploration. This acts as a strategic counterweight to the China-Russia **International Lunar Research Station (ILRS)**.
4. **The Cislunar Economy:** Artemis is catalyzing a "**New Space**" economy by partnering with private entities (e.g., SpaceX, Blue Origin). This fosters commercial lunar mining, satellite refueling hubs, and the economic integration of Low Earth Orbit (LEO) with lunar space.
5. **Inclusivity & Science Diplomacy:** Artemis II breaks historical barriers by including the first woman, person of color, and non-U.S. citizen (Canadian) on a lunar mission. This reflects a shift from Cold War nationalistic competition to modern, inclusive **global science diplomacy**.

6. **Strategic Value for India:** India's participation aligns with **ISRO's Vision 2040** (landing an Indian on the Moon). It provides critical technical data for the **Gaganyaan** mission and the development of the **Bharatiya Antariksha Station**, while enhancing NASA-ISRO tech transfers.

Critical Challenges of the Artemis Program

- **Technical Reliability & Safety:** Artemis I revealed significant **heat shield charring** and erosion issues. Ensuring the Orion capsule can protect a human crew from re-entry temperatures of **2,760°C** remains a primary engineering hurdle.
- **Cost Sustainability:** Each SLS launch costs approximately **\$2 billion**, leading to a "fiscal sustainability" debate. Unlike private reusable rockets (like SpaceX Starship), the SLS is expendable, making long-term mission frequency economically taxing.
- **Deep-Space Radiation:** Beyond Earth's **Van Allen belts**, astronauts face high-energy Galactic Cosmic Rays (GCRs) and Solar Particle Events (SPEs). Developing lightweight yet effective shielding for multi-week missions is a persistent biological challenge.
- **Lunar Dust (Regolith) Toxicity:** Lunar dust is sharp, abrasive, and statically charged. It can cause "**Lunar Hay Fever**" in humans and mechanically degrade spacesuits, seals, and scientific instruments over long durations.
- **Geopolitical Fragmentation:** The emergence of two competing blocs—the **Artemis Accords** (led by the US/India) and the **ILRS** (led by China/Russia)—risks a "Cold War 2.0" in space, potentially leading to territorial disputes over "safety zones" and resource-rich sites.
- **Landing Complexity (South Pole):** The Lunar South Pole features extreme topography with deep craters and **Permanently Shadowed Regions (PSRs)**. Landing in these areas requires unprecedented precision and the ability to operate in near-total darkness and cryogenic temperatures.

Way Forward for the Artemis Program

- **Transition to Reusability:** To ensure fiscal sustainability, NASA and its partners must transition from the expendable SLS model to **fully reusable heavy-lift vehicles** (like SpaceX's Starship). This will significantly lower the cost per kilogram of payload to the lunar surface.
- **Strengthening Space Diplomacy:** With the rise of competing blocs (Artemis vs. ILRS), a **universal legal framework** under the UN Office for Outer Space Affairs (UNOOSA) is needed. This would prevent "resource colonization" and ensure "Safety Zones" are used for science, not territorial claims.
- **Developing In-Situ Resource Utilization (ISRU):** The focus must shift from "carrying supplies" to "living off the land." Perfecting technologies to extract **Oxygen and Hydrogen from Lunar Regolith** is the only way to make the Moon a viable "pit-stop" for Mars.
- **Public-Private Partnership (PPP) Models:** Expanding the role of private players—not just for transport but for lunar communication (e.g., Nokia's 4G lunar network) and mining—will drive innovation and reduce the burden on national exchequers.
- **India's Strategic Autonomy:** India should leverage the **Artemis Accords** to fast-track its "Vision 2040." This involves securing a seat for an **ISRO astronaut** on a future lunar mission and seeking tech-transfers for heavy-lift rocketry and human-rated life support systems.
- **Planetary Defense and Science:** Utilizing the Moon's "Far Side" (radio-quiet zone) for deep-space telescopes can revolutionize our understanding of the early universe, turning the Moon into a global hub for **High-Energy Astrophysics**.

Conclusion

Artemis represents a paradigm shift from exploration to sustainable habitation. For India, it catalyzes **Vision 2040**, fostering global cooperation and a cislunar economy while securing strategic leadership in deep-space governance.

***Q.** Examine how the Artemis Program, particularly Artemis II, reflects emerging trends in global space geopolitics and international cooperation. 15 Marks*

3.4.2. INDIA'S NUCLEAR ENERGY PROGRAM

Context

India is currently undergoing a paradigm shift in its nuclear energy policy, moving from a state-monopoly "strategic" sector to a "commercial-participation" model. The goal is to scale capacity from **8.8 GW to 100 GW by 2047**, aligned with the **Viksit Bharat** and **Net-Zero 2070** targets.



Why Nuclear is Critical for India?

1. Reliable Baseload Power

Nuclear provides **24/7 constant power**, unlike intermittent solar or wind. In 2024, renewables made up 50% of capacity but only 22% of actual generation. Nuclear ensures grid stability without the prohibitive costs of large-scale battery storage.

2. Land-Use Efficiency

As a land-stressed nation, India benefits from nuclear's compact footprint it is **10 times more land-efficient** than solar or wind farms. Expanding nuclear saves vast tracts of agricultural and forest land required for 100 GW of solar.

3. Shield Against West Asia Volatility

The **"Twin Threat"** of supply disruptions and price shocks in the Middle East jeopardizes India's energy security. Nuclear reduces the **"Risk Premium"** on the economy by cutting long-term reliance on fossil fuel imports from geopolitically unstable regions.

4. Tapping Thorium Reserves

India holds **25% of global Thorium**. Success in the AHWR and HALEU tracks allows India to move from being a "resource-taker" to an "energy-giver," providing centuries of sovereign, self-reliant power.

5. Decarbonizing "Hard-to-Abate" Industry

Heavy industries like **Steel, Cement, and Petrochemicals** require high-grade heat that renewables cannot easily provide. **Small Modular Reactors (SMRs)** offer a localized, carbon-free heat source essential for achieving **Net-Zero 2070**.

6. Strategic Autonomy & Export Potential

The **SHANTI Act (2025)** transitions India from a "technology follower" to a **global exporter**. Our indigenous 220 MW and 700 MW PHWR models are now positioned as cost-competitive solutions for the Global South, enhancing India's diplomatic and technological "Soft Power."

The SHANTI Act (2025): A Legislative Milestone

Key Provisions & Structural Changes

- **Repeal of Legacy Laws:** It replaces the **Atomic Energy Act (1962)** and the **Civil Liability for Nuclear Damage Act (CLNDA, 2010)**, modernizing a decades-old framework.
- **Private & Foreign Participation:** For the first time, private companies (domestic and foreign) are permitted to **build, own and operate** nuclear power plants.
- **Statutory Status for AERB:** The **Atomic Energy Regulatory Board (AERB)**, previously a subordinate body under the Department of Atomic Energy (DAE), is now a statutory, autonomous regulator.
- **Liability Framework Reform:** It revises the "right to recourse" against suppliers, a major historical bottleneck that deterred foreign players like Westinghouse and EDF.

India's Traditional Three-Stage Nuclear Power Programme

Formulated by **Dr. Homi Bhabha** in the 1950s, this program was designed to utilize India's vast **Thorium** reserves, given its limited Uranium.

Stage	Technology / Reactor Type	Fuel Cycle	Objective & Status
Stage I	PHWR (Pressurised Heavy Water Reactor)	Natural Uranium (Fuel) + Heavy Water (Moderator/Coolant)	Objective: Generate electricity and produce Plutonium-239 as a byproduct. Status: Mature; 15+ indigenous 220MW/700MW units operational.
Stage II	PFBR (Prototype Fast Breeder Reactor)	Plutonium-239 (Mixed Oxide Fuel) + Uranium-238	Objective: "Breed" more fuel than consumed. Converts U-238 to more Plutonium. Eventually, uses a Thorium blanket to create U-233. Status: Kalpakkam PFBR is the lead project.
Stage III	AHWR (Advanced Heavy Water Reactor)	Thorium-232 + Uranium-233	Objective: Utilize Thorium as the primary fuel source for sustainable, centuries-long energy security. Status: Under R&D; requires successful completion of Stage II.

Why the Three Stages?

- **Resource Constraint:** India has only **2%** of global Uranium but **25%** of global Thorium.
- **The Thorium Challenge:** Thorium is not "fissile" (cannot start a reaction alone); it is "fertile." It must be converted into **Uranium-233** in a reactor first.
- **The Sequence:** Stage I builds the inventory of Plutonium. Stage II uses that Plutonium to "cook" Thorium into U-233. Stage III finally burns the U-233 with Thorium for power.

Current Technological Landscape & New Strategies

To reach the 100 GW target, India is diversifying beyond the traditional three-stage plan:

1. Small Modular Reactors (SMRs): The "Plug-and-Play" Future

The 2025-26 Budget allocated **₹20,000 crore** specifically for SMR R&D.

- **Design Variety:** India is developing five indigenous models (5 MW, 55 MW, and 200 MW).
- **Industrial Integration:** Targeted at "Hard-to-Abate" sectors Steel, Cement, Petrochemicals, and Data Centers.
- **Rapid Deployment:** Using modular construction (factory-built components), the "pour-to-power" timeline is targeted at **40 months**.
- **The 220 MW Workhorse:** The proven indigenous 220 MW PHWR is being redesigned as a modular unit for private sector fabrication.

2. Scaling High-Capacity Reactors (The GW Giants)

While SMRs handle industry, massive 1000 MW+ reactors are needed for the national grid.

- **Fleet Mode Operation:** Bulk approval for 10 reactors (700 MW PHWRs) to streamline supply chains and reduce costs to **\$2 million per MW**.
- **Foreign Technology Indigenization:**
 - **Jaitapur (French EDF):** 6 reactors of 1,650 MW (EPR design).
 - **Kovvada/Mithi Virdi (US Designs):** Westinghouse-Toshiba and GE-Hitachi models.
 - **Challenge:** These "unproven" designs currently cost **\$5 million per MW**; the strategy is to "Indianize" the supply chain to slash costs by 60%.

3. Breakthroughs in Fuel Technology

- **HALEU (High Assay Low Enriched Uranium):** Using HALEU as a driver fuel for Thorium. This allows India to use its Thorium reserves *without* waiting for the full commercialization of Stage-2 Fast Breeder Reactors.
- **Molten-Salt Reactors (MSR):** A shift toward liquid-fueled reactors which are inherently safer (cannot melt down) and more efficient at utilizing Thorium.

Challenges in the India's Nuclear Energy Program

1. High Capital Outlay & Financing

- **The Cost Barrier:** Adding 90 GW requires approximately **\$200 billion (₹18 lakh crore)**.
- **The Risk Factor:** Nuclear projects have long gestation periods (10–15 years) and high upfront costs. Attracting private and foreign investment requires a transparent **financing model** and clear **tariff structures** to ensure a Return on Investment (ROI).

2. Technology Indigenization & Cost Parity

- **Foreign vs. Local:** Imported designs (French EPR, US AP1000) currently cost ~\$5 million/MW, whereas India's indigenous 700 MW PHWR costs ~\$2 million/MW.
- **The "China Benchmarking":** To be competitive, India must "Indianize" supply chains for foreign reactors to bring costs down to the \$2 million/MW level, as demonstrated by China's recent 33-reactor rollout.

3. Regulatory & Statutory Hurdles

- **Notification of Rules:** The SHANTI Act is a framework; its success depends on the rapid notification of rules regarding **fuel ownership**, **waste management** and **decommissioning**.
- **Land & Exclusion Zones:** Current regulations for large "nuclear parks" (multiple reactors) must be modified to allow **Small Modular Reactors (SMRs)** to sit within industrial clusters or "Exclusion Zones" of private factories.

4. Supply Chain & Human Capital

- **Manufacturing Depth:** Moving to "Fleet Mode" requires a massive scale-up of domestic fabrication capacity for specialized reactor components, pressure vessels and thorium-cladding.
- **Skill Gap:** A 10x increase in capacity requires a parallel 10x increase in specialized nuclear engineers, safety auditors and technicians.

5. Public Perception & Liability Concerns

- **Social Acceptance:** Despite the repeal of the 2010 CLNDA, concerns regarding nuclear safety and "Right to Recourse" persist.
- **Transparency:** An **autonomous regulator (AERB)** must prove its independence to maintain public trust, especially with private players now operating plants.

6. Fuel Security & Enrichment

- **Uranium Import Dependence:** While India has Thorium, its Stage-1 and Stage-2 reactors still rely on Uranium. Managing the geopolitics of the **Nuclear Suppliers Group (NSG)** and securing long-term fuel ties remains a priority.
- **HALEU Production:** Scaling up **High Assay Low Enriched Uranium (HALEU)** production is technically demanding and essential for the new Thorium-centric strategy.

Way Forward

1. Rapid Notification of Rules

The government must quickly notify supportive regulations under the SHANTI Act. This includes transparent guidelines on **nuclear fuel ownership, waste management, insurance liability**, and a clear **dispute settlement mechanism** to build investor confidence.

2. Accelerated SMR Deployment

Focus on the indigenous **220 MW PHWR** as a "modular workhorse." By reducing the "pour-to-power" time to **40 months** and modifying **Exclusion Zone** regulations, India can integrate Small Modular Reactors (SMRs) directly into heavy industrial clusters (Steel, Cement, Data Centers).

3. Aggressive Indigenization of Foreign Designs

To reach the cost-benchmark of **\$2 million per MW**, India must "Indianize" the supply chains for imported reactors (EDF, Westinghouse). Learning from the Chinese model, building a robust domestic supporting industry is essential to make high-capacity plants economically viable.

4. Early Exploitation of Thorium

Prioritize R&D in **Thorium cladding** with **HALEU** (High Assay Low Enriched Uranium). This provides an alternative to the long-gestation Breeder Reactor route, allowing India to utilize its massive Thorium reserves much earlier in the 2047 timeline.

5. Innovative Financing Models

Given the **\$200 billion (₹18 lakh crore)** requirement, the state must move beyond budgetary support. Developing Public-Private Partnership (PPP) models, Green Bonds, and long-term Power Purchase Agreements (PPAs) is critical to attracting both domestic and foreign private capital.

6. Strengthening Regulatory Autonomy

Empower the **Atomic Energy Regulatory Board (AERB)** with true statutory independence. A transparent, autonomous regulator is vital to maintaining high safety standards and public trust, especially as private players enter the "build, own, and operate" space.

Conclusion

The SHANTI Act (2025) pivots India from state-led to market-driven nuclear energy. By leveraging private capital and indigenous SMRs, India can achieve its 100 GW target and Net-Zero 2070 goals.

Q. With growing energy needs should India keep on expanding its nuclear energy programme? Discuss the facts and fears associated with nuclear energy. 15 Marks

3.4.3. QUANTUM TECHNOLOGY

What is Quantum Technology?

Quantum technology is a class of technology that works by using the principles of **quantum mechanics**, the physics of subatomic particles (atoms, electrons, photons). While classical technology (computers/mobiles) relies on "bits" (0 or 1), quantum technology uses **qubits**.



Key Quantum Principles

- **Superposition:** In classical computing, a bit is either **0 or 1** (like a standard light switch). In the quantum world, a **qubit** (quantum bit) can exist in a state of 0, 1, or **both simultaneously**.
- **Entanglement:** A phenomenon where two particles become so linked that the state of one instantly influences the other, regardless of distance. This is the backbone of ultra-secure communication.
- **Interference:** Quantum states can be described as waves. Like waves in the ocean, they can exhibit **constructive interference** (adding up to a higher peak) or **destructive interference** (canceling each other out).

The National Quantum Mission (NQM)

Launched in **April 2023** (Operational 2024–2031), this ₹6,000 crore mission aims to make India a global leader in the "Second Quantum Revolution."

The Four Verticals (T-Hubs)

India has adopted a **Hub-Spoke-Spike model** focusing on four domains:

1. **Quantum Computing:** Developing intermediate-scale computers with **50–1000 physical qubits**.
2. **Quantum Communication:** Establishing a pan-India secure network (QKD) over **2,000 km** (e.g., satellite-based communication between ground stations).
3. **Quantum Sensing & Metrology:** Creating high-sensitivity magnetometers and **atomic clocks** for precision timing and navigation (reducing dependence on foreign GPS).
4. **Quantum Materials & Devices:** Synthesizing superconductors and topological materials to build quantum hardware.

Sector-Wise Applications of Quantum Technology

1. Agriculture

- **Precision Farming:** Utilizing quantum sensors to analyze soil health, moisture levels, and crop growth patterns in real-time.
- **Weather Forecasting:** Simulating complex atmospheric turbulence to provide hyper-local alerts for rain, floods, and droughts.

2. Medicine & Healthcare

- **Drug Discovery:** Simulating molecular and atomic interactions to develop targeted drugs for complex diseases like Alzheimer's and Cancer.
- **Genomics:** Rapid sequencing and analysis of massive genomic datasets to enable personalized medicine and gene therapies.
- **Medical Imaging:** Using quantum SQUIDs (Superconducting Quantum Interference Devices) for high-resolution, non-invasive brain and heart imaging.

3. Finance

- **Unhackable Encryption:** Implementing **Quantum Key Distribution (QKD)** to secure banking transactions and sensitive financial data against cyber-attacks.
- **High-Frequency Trading:** Processing vast amounts of market data simultaneously to execute trades with minimal latency.

4. Defense & Security

- **Submarine Detection:** Using quantum gravimeters to detect underwater vessels by measuring minute changes in gravity, bypassing traditional sonar.
- **Secure Communication:** Establishing ultra-secure "Quantum Channels" for military commands that are immune to eavesdropping.
- **GPS-Independent Navigation:** Developing high-precision atomic clocks and quantum compasses that work even when satellite signals are jammed.

5. Environment & Sustainability

- **Battery Technology:** Simulating new chemical structures to develop high-capacity, fast-charging solid-state batteries for Electric Vehicles (EVs).
- **Grid Management:** Optimizing the distribution of renewable energy across smart grids to minimize transmission losses.

Government Initiatives for Quantum Technology

1. **National Quantum Mission (NQM):** Flagship scheme (₹6,003 crore) establishing four **Thematic Hubs (T-Hubs)** in major IITs/IISc to lead research in computing, communication, sensing, and materials.
2. **Quantum Safe Ecosystem Task Force:** A DST-led initiative focused on transitioning India to **Post-Quantum Cryptography (PQC)** to secure banking and defense data against future quantum threats.
3. **Military Quantum Framework:** A CDS-led policy for **civil-military fusion**, prioritizing quantum applications in stealth submarine detection, secure battlefield comms, and GPS-independent navigation.

4. **MeitY-AWS Quantum Lab (QCAL):** A public-private partnership providing cloud-based quantum access, allowing startups to develop solutions for agriculture and healthcare without high hardware costs.
5. **I-HUB Quantum Technology Foundation:** Based at IISER Pune, this mission focuses on **startup incubation** and human resource development through specialized "Chanakya Fellowships" for quantum engineers.

Challenges for Quantum Technology

1. **Environmental Sensitivity (Decoherence):** Qubits are extremely fragile; minor external "noise" like heat or vibration causes them to lose their quantum state, making the development of stable, **fault-tolerant** systems a massive technical hurdle.
2. **Cryogenic Constraints:** Most quantum processors require temperatures near **absolute zero** (~0.015 K). Maintaining these conditions via dilution refrigerators is energy-intensive, expensive, and difficult to scale for widespread industrial use.
3. **The "Q-Day" Security Threat:** The impending "Q-Day" when quantum computers can break current RSA/AES encryption—forces an urgent but costly transition to **Post-Quantum Cryptography (PQC)** to prevent "Store Now, Decrypt Later" (SNDL) attacks.
4. **Supply Chain Dependency:** India faces a critical lack of domestic manufacturing for specialized hardware (e.g., high-purity diamonds, lasers). Reliance on imports from a few nations hinders the goal of **Atmanirbhar Bharat** in deep tech.
5. **Human Capital Shortage:** There is a significant "Quantum Talent Gap" between theoretical physics and practical engineering. India needs specialized **Quantum Engineers** to bridge the divide between laboratory research and commercial application.
6. **Governance & Ethical Gaps:** The absence of a global regulatory framework creates risks of a **"Quantum Divide"** between nations and raises ethical concerns regarding the dual-use nature of quantum tech in developing advanced weaponry.

Way Forward

- **Bridging the Lab-to-Market Gap:** Strengthening public-private partnerships (PPPs) and incentivizing deep-tech startups to convert theoretical research from **T-Hubs** into commercial hardware and software solutions.
- **Developing Indigenous Supply Chains:** Reducing dependency on imports by investing in the domestic fabrication of critical components like **cryogenic systems**, specialized lasers, and high-purity materials to ensure strategic autonomy.
- **Human Capital Development:** Integrating quantum science into university curricula and expanding the **Chanakya Fellowship** programs to create a "Quantum-Ready" workforce of engineers and data scientists.
- **Accelerating Quantum-Safe Migration:** Proactively transitioning critical national infrastructure (banking, power grids, and Aadhaar) to **Post-Quantum Cryptography (PQC)** to neutralize the "Store Now, Decrypt Later" security threat.

- **International Collaboration & Ethics:** Engaging in global "Quantum Diplomacy" to set international standards for the ethical use of quantum tech while securing India's place in global supply chains through initiatives like the **iCET** (Initiative on Critical and Emerging Technology).

Conclusion

Quantum technology is a paradigm shift for India's **Viksit Bharat 2047** vision. Success hinges on bridging the "lab-to-market" gap, securing digital infrastructure, and fostering domestic hardware manufacturing to ensure technological sovereignty and national security.

Q. "The National Quantum Mission (NQM) is not merely a scientific pursuit but a strategic necessity for India's technological sovereignty." Critically analyze the statement in light of the 'Second Quantum Revolution'. 15 Marks

3.5. DISASTER MANAGEMENT

3.5.1. DISASTER MANAGEMENT IN INDIA

Introduction

India has transitioned from a **reactive** to a **proactive, mitigation-centric** disaster management model. Guided by the **DM Act 2005** and the **Sendai Framework**, it integrates technology and institutional decentralization to build a **climate-resilient** nation against increasing geophysical and hydrological hazards.



Institutional and Legal Framework

1. Statutory Foundation: The DM Act, 2005

- **Mandate:** Defines "disaster" and provides for the setup of specialized bodies at National, State, and District levels.
- **Shift:** Officially moved India from a **relief-centric** (Post-disaster) to a **pro-active mitigation** (Pre-disaster) approach.

2. Three-Tier Institutional Structure

Level	Authority	Chairperson	Key Responsibility
National	NDMA	Prime Minister	Formulating national policies, plans, and guidelines.
State	SDMA	Chief Minister	Coordinating state-level implementation and funding.
District	DDMA	District Magistrate/Collector	Frontline execution; preparing the District Disaster Management Plan.

3. Executive & Operational Arms

- **NEC (National Executive Committee):** Chaired by the **Union Home Secretary**; assists NDMA in monitoring policy implementation.
- **NDRF (National Disaster Response Force):** A specialized multi-disciplinary force for **proactive deployment** during emergencies.

- **NIDM (National Institute of Disaster Management):** The nodal agency for **capacity building**, research, and human resource development.

4. Financial Framework (16th Finance Commission Updates)

- **Risk Financing:** Creation of the **NDRM (National Disaster Risk Management Fund)**, split into:
 - **Response Fund (NDRF/SDRF):** For immediate relief.
 - **Mitigation Fund (NDMF/SDMF):** For long-term risk reduction (e.g., building embankments).
- **16th FC Shift:** Funding is now increasingly linked to a **Disaster Risk Index (DRI)** rather than just historical expenditure.

5. Nodal Ministries for Specific Hazards

- **Natural Disasters:** Ministry of Home Affairs (MHA).
- **Drought:** Ministry of Agriculture.
- **Chemical/Industrial:** Ministry of Environment (MoEFCC).
- **Biological:** Ministry of Health (MoHFW).
- **Rail Accidents:** Ministry of Railways.

The 16th Finance Commission (2026-31) & Risk Financing

1. The Shift to Risk-Based Allocation

- **Disaster Risk Index (DRI):** For the first time, funds are allocated based on a state-specific risk profile rather than just past spending.
- **The Formula:** Allocation now accounts for **Hazard** (frequency/intensity), **Exposure** (population/assets in danger), and **Vulnerability** (socio-economic capacity).
- **Objective:** To ensure that states with high climate vulnerability (e.g., Odisha, Himachal Pradesh) receive proportionate support compared to larger, less-exposed states.

2. Structure of the Disaster Management Fund

Following the 15th FC's precedent, the 16 FC maintains the division of the **National Disaster Risk Management Fund (NDRMF)** and **State Disaster Risk Management Fund (SDRMF)** into two functional components:

1. **Response Fund (80%):**
 - **Response & Relief (70%):** For immediate post-disaster assistance.
 - **Recovery & Reconstruction (30%):** For building back after the event.
2. **Mitigation Fund (20%):** Reserved strictly for **pre-disaster** structural and non-structural measures (e.g., sea walls, early warning systems).

Major Disaster Profiles & Mitigation Strategies

A. Hydrological: Floods & Urban Flooding

- **Vulnerability:** 12% of India's landmass is flood-prone.
- **2026 Context:** Recent cloudbursts in Kolkata and flash floods in Uttarakhand (August 2025) highlight the increasing frequency of "Compound Disasters."
- **Mitigation:**
 - **Sponge City Concept:** Increasing permeable surfaces to absorb rainwater.
 - **Bhuvan Portal:** Using ISRO's satellite data for real-time inundation mapping.

B. Geophysical: Earthquakes & Landslides

- **Vulnerability:** 59% of land is prone to earthquakes (Zone V - Himalayan Belt).
- **Mitigation:**
 - **Seismic Micro-zonation:** Detailed mapping of urban areas (e.g., Delhi, Guwahati).
 - **Koti Banal Architecture:** Reviving indigenous earthquake-resistant building techniques in the Himalayas.

C. Climatological: Heatwaves & Lightning

- **The Challenge:** Lightning is now the leading cause of natural hazard fatalities in India (36% of deaths).
- **Mitigation:**
 - **Sachet Portal / CAP:** A Common Alert Protocol for geo-targeted SMS alerts.
 - **Heat Action Plans (HAPs):** Implementing "Cool Roof" policies and "Green Corridors" to tackle Urban Heat Islands.

Global Frameworks: Sendai to CDRI

1. Sendai Framework for DRR (2015–2030)

The cornerstone of global disaster policy, Sendai shifted the focus from **managing disasters** to **managing disaster risk**.

- **The 4 Priorities:**
 - Understanding disaster risk.
 - Strengthening disaster risk governance.
 - Investing in resilience (structural and non-structural).
 - Enhancing preparedness for effective response and **"Build Back Better"** in recovery.
- **The 7 Global Targets:** Aims for substantial reductions in global mortality, number of affected people, economic losses, and damage to critical infrastructure by 2030.

2. Sustainable Development Goals (SDG) Integration

Disaster resilience is embedded in the 2030 Agenda:

- **SDG 1 & 11:** Protecting the poor from climate-related extremes and making cities resilient.
- **SDG 13:** Urgent action to combat climate change and its impacts.

3. Paris Agreement (COP21)

Recognizes "Loss and Damage" associated with climate change. India's **National Action Plan on Climate Change (NAPCC)** aligns disaster mitigation with global carbon reduction and adaptation goals.

4. CDRI (Coalition for Disaster Resilient Infrastructure)

Launched by India at the UN Climate Action Summit (2019), this is a global partnership of governments and UN agencies.

- **Focus:** Ensuring that essential infrastructure (Power, Telecom, Transport, Health) can withstand climate shocks.
- **Flagship Initiative: IRIS (Infrastructure for Resilient Island States),** focusing on the specific vulnerabilities of Small Island Developing States (SIDS).

Challenges in the Disaster Management in India

1. Institutional & Coordination Gaps

- **The "Last Mile" Deficit:** While the **NDMA** and **SDMAs** are well-funded, the **DDMAs** (District level) often lack dedicated staff and technical expertise to execute complex plans.
- **Data Silos:** Lack of real-time data sharing between central agencies (IMD, CWC, ISRO) and local first responders leads to delayed "Actionable Intelligence."

2. Financial Challenges (Post-16th FC)

- **Funding Paradox:** The **16th Finance Commission's** shift to a "total population" metric for risk exposure penalizes states like Odisha that have managed population growth but face high climate frequency.
- **Underutilization of Mitigation Funds:** States often prioritize **Response/Relief** over the **20% Mitigation Fund**, treating disaster management as an emergency expense rather than a long-term investment.

3. Emerging Climate Hazards

- **The "Silent Killers":** **Heatwaves** and **Lightning** now cause more annual deaths than cyclones, yet national classification and compensation mechanisms remain inconsistent.
- **Urban Flooding:** Rapid, unplanned urbanization and the destruction of "Sponge" ecosystems (wetlands) have turned cities like Bangalore and Chennai into high-risk zones.

4. Infrastructure & Technical Gaps

- **Standardization:** Lack of uniform **Building Bye-laws** and strict enforcement of **BIS Seismic Codes** makes urban infrastructure highly vulnerable to earthquakes.
- **Maintenance:** Ageing dams and embankments (e.g., Mullaperiyar concerns) pose a significant risk of **Dam Break Floods**.

5. Socio-Economic Constraints

- **Vulnerability of the Poor:** Disasters disproportionately impact marginalized communities living in "high-risk" zones (slums, floodplains) who lack the insurance or resources to "Build Back Better."
- **Erosion of Indigenous Knowledge:** Reliance on concrete-heavy engineering often ignores traditional, eco-sensitive resilience practices (e.g., Himalayan traditional architecture).

Way Forward

1. Mainstreaming DRR in Development

Mandate **Disaster Risk Audits** for all infrastructure (Highways, Smart Cities). Shift the focus from "Development at any cost" to **"Resilient Infrastructure"** (CDRI standards), ensuring schools, hospitals, and grids survive extreme climate shocks.

2. Strengthening Local Governance & Community Leadership

Empower **DDMAs** with technical expertise and financial autonomy. Scalable community initiatives like **"Aapda Mitra"** utilize local knowledge to manage the critical **"Golden Hour"** before professional help arrives.

3. Leveraging "Impact-Based" Early Warning Systems (EWS)

Transition from "Weather alerts" to "**Actionable Intelligence**" (e.g., Sachet Portal). Use AI, ML, and ISRO data to provide hyper-local, geo-targeted warnings that tell vulnerable populations exactly what to do, not just what is coming.

4. Nature-Based Solutions (NbS) & Blue-Green Infrastructure

Adopt "**Sponge City**" concepts by restoring wetlands and mangroves. Prioritize **Nature-Based Solutions** (bio-shields) over "Grey Infrastructure" (concrete walls) to provide cost-effective, sustainable protection against floods and cyclones.

5. Closing the Risk Financing Gap

Expand **Disaster Risk Insurance** for public and private assets to lower the fiscal burden on the state. Strictly utilize the **16th Finance Commission's Mitigation Fund (SDMF)** to break the cycle of "Disaster-Response-Repeat."

Conclusion

India's transition to a **risk-informed, technology-driven** disaster management model, supported by the **16th Finance Commission**, is vital for **sustainable development**. Success lies in bridging the "last-mile" gap through **community resilience**.

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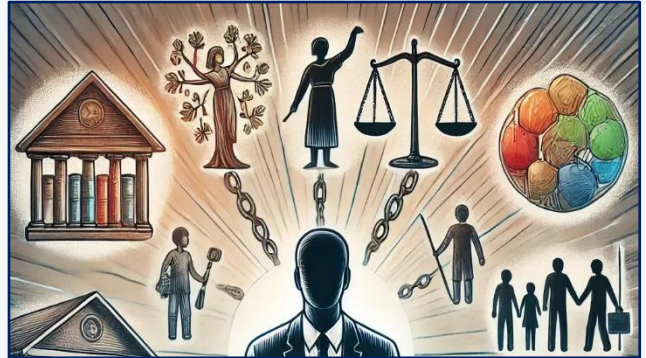
GENERAL STUDIES 4

4.1. ETHICS

4.1.1. THE CRISIS OF MORAL LEGITIMACY IN MODERN POLITICS

The Classical Foundation: Ethics as the Bedrock

- **Aristotelian Perspective:** Politics is not merely a tool for "bare life" (survival) but a medium for the **"Good Life"** (*Eudaimonia*).
- **The Telos of the Polis:** The purpose of the state is to enable human flourishing. When political authority is decoupled from this ethical goal, it ceases to be legitimate and becomes a mere **system of domination**.
- **Indian Context:** In India, we didn't just call it "ethics"; we called it **Dharma** (Righteousness).
 - **Chanakya (Kautilya):** He said, *"In the happiness of his subjects lies the king's happiness."* This means the king's power is not a gift for him; it is a duty to others.
 - **Ashoka:** His pillars weren't just showing off his power; they were "Dhamma" instructions to remind the people and his officers to act with kindness and honesty.



The Devaluation of Moral Authority

1. How Ethics is Removed ("Ethical Stripping")

Think of ethics as the "brakes" on a car. "Ethical stripping" is when those brakes are removed so the car (political power) can go as fast as it wants without stopping for anyone.

- **Ignoring the Experts:** When someone points out a moral mistake, they are called "unrealistic" or "naive." It's like saying, "You don't understand how the real world works," just to avoid a difficult conversation about right and wrong.
- **Turning Serious Issues into Jokes (Meme-ification):** Instead of answering a tough question about a scandal, a leader might use a joke or a viral video to distract people. If we are laughing at a meme, we aren't asking for accountability.
- **The "Hiding Behind Religion" Shield:** Leaders sometimes use holy words or religious symbols to make themselves look untouchable. If they act like they are chosen by a higher power, then anyone who criticizes them looks like they are attacking the religion itself.

2. What Replaces Ethics? (The "Quick-Fix" Method)

When we throw away real morals, we don't just get "nothing." We get a new, lower set of rules called **Expediency** (doing whatever is convenient).

- **Us vs. Them (The Good vs. Evil Trap):** Politics stops being about debating different ideas and starts being a war. Leaders say, *"I might be bad, but the other side is 'Evil.' So, you must support me no matter what."* This justifies doing bad things because you're "fighting the enemy."
- **The Fake "Power to the People" Move:** Many leaders claim they are fighting for the common man against the "elites." But while they use this language, they often secretly help the richest and most powerful people get even stronger. It's a "talk one way, act another" strategy.

The Path to Restoration

1. **Reviving Constitutional Morality:** It isn't enough to follow the letter of the law; we must follow its spirit of fairness and liberty. This means leaders should act according to the values of the Constitution, even when it is not "politically convenient" to do so.
2. **John Rawls's "Veil of Ignorance":** A call to design policy from a position of neutrality, ensuring fairness regardless of one's social status.
3. **Rebuilding the Moral Imagination:** We must stop seeing political opponents as "enemies" and start seeing them as fellow humans with shared dignity. This allows for empathy and prevents the dehumanization that often leads to social conflict and war.
4. **Encouraging Deliberative Democracy:** Society needs to value slow, deep discussions over the "spectacle" of viral outrage and social media shouting matches. Restoring the public sphere means prioritizing truth and evidence-based debate over "meme-ified" politics.
5. **Returning to Education for Character:** Education should focus on teaching students *how* to think and empathize rather than just *what* to memorize. By fostering critical thought and moral courage, we create a citizenry that demands ethical behavior from its leaders.

War: The Ultimate Ethical Failure

1. **Moral Dehumanization:** Before physical violence begins, the "other" is mentally stripped of human dignity. By labeling people as "targets" or "statistics" rather than individuals, mass destruction is rationalized as a permissible necessity.
2. **Technological Detachment:** Modern warfare (drones/screens) creates a "psychological distance" that destroys **Moral Proximity**. As Jean Baudrillard argued, when the enemy becomes a mere data point, killing becomes a clinical, bloodless task.
3. **Sanitization of Language:** "Antiseptic" political language is used to mask human agony. Terms like **"Collateral Damage"** or **"Strategic Necessity"** replace the reality of civilian death, allowing states to evade the ethical weight of their actions.
4. **Erosion of Empathy:** War fails when we lose the capacity to recognize the shared humanity of the opponent. Unlike classical combat which allowed for "ethical interruptions" (mutual respect), modern war turns the enemy into a faceless abstraction.
5. **Expediency over Justice:** Wars justified by lofty ideals (e.g., "liberty" or "peace") often collapse into cycles of violence and imperial control. When political calculation replaces moral clarity, the result is never stability, but a cascade of further chaos.

Need for Reintegrating Ethics into Politics

1. **Restoring Legitimacy:** Ethics transforms power from "organized domination" into legitimate authority. When the state serves the "Good Life," citizens obey out of a sense of justice rather than fear.
2. **Curbing "Expediency":** It acts as a check on "win-at-all-costs" tactics and "Us vs. Them" narratives. This prevents the concentration of power and wealth often hidden behind fake populist rhetoric.

3. **Humanizing Conflict:** Ethics restores "Moral Proximity" in an era of detached, technological warfare. It ensures that "strategic necessity" never justifies the dehumanization or destruction of human life.
4. **Replacing Spectacle with Substance:** Reintegrating ethics shifts public life away from viral outrage and "memes" toward truth and deliberation. It turns the public sphere into a place for reasoned policy instead of digital distraction.
5. **Enabling Human Flourishing:** Following the Aristotelian *Te/os*, ethics ensures the state exists for more than just "bare survival." It provides the foundation for a society where human potential can be fully realized.

Conclusion

Modern politics must shift from a "win-at-all-costs" mindset to its classical ethical roots. To survive, the state must prioritize human flourishing over mere domination, ensuring power remains a tool for justice, not its own justification.

Q. Politics without ethics degenerates into mere exercise of power and domination. In the light of this statement, examine the growing disconnect between morality and political practice in contemporary democracies. Discuss with special reference to India. 15 Marks



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