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GST Reform and Unfinished Business in Tobacco Control

Context

- India marks the 8th anniversary of the Goods and Services Tax (GST) on July 1, 2025.
- GST, launched in 2017 under the motto 'One Nation, One Tax,' unified India's complex indirect tax system.
- While GST improved economic efficiency and administrative ease, its tobacco taxation framework shows significant shortcomings.

Goods and Services Tax (GST): Key Achievements

- Replaced multiple indirect taxes such as VAT, service tax, and excise duties, streamlining tax collection.
- Created a common national market, improving ease of doing business and interstate trade.
- Digitisation efforts (e.g., e-way bill) enhanced transparency and reduced tax evasion.
- Improved logistics efficiency, cutting transportation times by up to 20%, lowering costs.
- Gross GST collections for 2024-25 reached ₹22.08 lakh crore, a 9.4% growth from the previous year.
- GST remains a crucial pillar of India's fiscal system.

Fault Lines in GST's Structure

1. Tobacco Taxation and Public Health

- Tobacco use causes over 3,500 deaths daily in India and costs the economy ₹2,340 billion annually (~1.4% of GDP in 2017).
- GST has not significantly increased tobacco taxes, undermining efforts to reduce consumption.
- Pre-GST (2009–2017), regular excise and VAT hikes led to a 17% drop in tobacco use.
- Post-GST, tobacco taxes have stagnated, making tobacco products more affordable.
- Average GST revenue from tobacco over the past 5 years is ₹551 billion, far lower than related health and economic costs.
- Tax burden on tobacco is below WHO's recommended 75% of retail price:
 - 22% on bidis
 - 54% on cigarettes
 - 65% on smokeless tobacco

2. Structural Flaws: The Ad Valorem Trap

- GST relies heavily on ad valorem taxes (based on product value), which can be manipulated to keep tobacco prices low.
- Fixed specific excise taxes (levied per product unit) are more effective in reducing tobacco use.
- Since GST's start, the share of specific excise duties in tobacco taxation dropped significantly:
 - Cigarettes: from 54% to 8%
 - Bidis: from 17% to 1%
 - Smokeless tobacco: from 59% to 11%
- Bidis, the most consumed smoked tobacco product and equally harmful, are under-taxed and exempt from GST compensation cess.
- This disproportionately benefits economically disadvantaged consumers and worsens health inequity.

The Way Forward

1. Dual Strategy for Reform

- Need to align public health priorities with fiscal policy in tobacco taxation.
- Increase GST rates on tobacco to the statutory maximum of 40%.
- Significantly raise specific excise duties alongside GST increases.
- A mixed tax system (ad valorem + specific) is proven globally to reduce consumption and increase revenue.

2. Addressing Illicit Trade Concerns

- Tobacco industry claims that higher taxes increase illicit trade lack evidence.
- Studies show illicit cigarettes account for only 2.7% to 6.6% of India's market, far lower than the industry's 25% claim.
- Regulatory enforcement and border controls are more effective at controlling illicit trade than pricing.
- India has ratified the WHO Protocol to Eliminate Illicit Trade in Tobacco Products and must focus on its strict implementation.

Conclusion

- GST reform discussions must prioritize public health, especially tobacco taxation.
- The 139th Parliamentary Standing Committee (2022) emphasized the affordability of tobacco products in India and urged higher taxes.
- The GST's 8th anniversary is an opportunity to strengthen GST not just as an economic tool, but also as a social responsibility instrument.

In a Perilous World, India Must Read the Tea Leaves Well

Context

- India's traditionally balanced and nuanced foreign policy is facing a severe crisis.
- Rising tensions such as the China-Pakistan alliance and Israel-Iran conflict challenge India's diplomatic assumptions.
- There is a need to analyze the crisis, critique recent policy choices, and propose strategic recalibrations.

Multiple Dimensions of the Current Crisis in India's Foreign Policy

1. Breakdown of Strategic Equilibrium

- India's policy aimed to balance diverse global relationships.
- Trump's return to U.S. politics with an unpredictable "Make America Great Again" stance complicates Indo-U.S. ties.
- Trump's claim of mediating India-Pakistan ceasefire—denied by India but supported by Pakistan's military—creates diplomatic tensions with the U.S.

2. Strategic Ambiguity in West Asia Failing

- India's equidistant policy between Israel and Iran is collapsing amid escalating Israel-Iran conflict.
- U.S. use of advanced weaponry (GBU-57 bunker buster) against Iran marks dangerous normalization of nuclear discourse.
- India's vague, neutral stance reduces its diplomatic relevance and risks alienating both Israel and Iran.

3. Neutrality Viewed as Liability

- India's non-alignment policy is increasingly seen as indecision or weakness.
- India's limited global support during India-Pakistan conflict reveals the limits of neutrality.
- Despite Global South leadership aspirations, India has few reliable allies in crises.

The China Factor

1. China-Pakistan Nexus as a Growing Threat

- Deepening military-strategic ties, including advanced Chinese weapons supplied to Pakistan.
- This partnership aims to contain India's regional influence, posing a complex security challenge.

2. China's Strategic Vision

- China's National Security white paper emphasizes intertwined development and security, focusing on technology and supply chain security.
- India must carefully study China's evolving strategic doctrines beyond obvious military threats.

The Way Forward

1. Lessons from Global Military Strategy

- India needs a thorough review of its defense preparedness, inspired by the Russia-Ukraine war and UK defense audits.
- Prioritize ammunition reserves, cyber and electronic warfare, AI, drone defense, and loitering munitions.
- Move away from reactive to proactive strategies in hybrid warfare environments.

2. Recalibrating India's Foreign Policy

- Move beyond moralistic restraint calls to actively shape regional security narratives.
- Deepen security partnerships with Western, Asian, and African countries via mutual defense, intelligence sharing, and tech cooperation.
- Enhance credible hard power and diplomatic presence in key regions like West Asia and Indo-Pacific.

Conclusion

- India's reliance on neutrality and non-alignment has made it strategically vulnerable and sidelined.
- Facing an aggressive China-Pakistan axis, an unpredictable U.S., and shifting regional dynamics, India must adopt strategic realism.
- A clear understanding of global power shifts and recalibrated defense and diplomacy are vital for India's sovereignty and global stature.

Reserved Faculty Posts are Still Vacant and Out of Reach

Context

- India's constitutional commitment to social justice is both a legal and ethical duty to address historical injustices.
- Reservation quotas exist (SC-15%, ST-7.5%, OBC-27%, and others 10%) to ensure representation in higher education.
- Representation in faculty positions affects not only access to education but also knowledge production and dissemination.
- Despite these policies, premier institutions consistently fail to fill reserved faculty posts.

Alarming Data on Vacant Posts

- As of April 2021, in 45 central universities:
 - 2,389 SC faculty positions vacant
 - 1,199 ST faculty positions vacant
 - 4,251 OBC faculty positions vacant

- Targeted recruitment drives at institutions like JNU and Delhi University have shown limited success.
- UGC 2023 report: Nearly 30% of reserved teaching posts remain unfilled, especially at senior levels (associate professor, professor).
- In contrast, lower-level reserved posts in sectors like railways and banking are routinely filled.

Systemic Barriers to Inclusion

1. Institutional Autonomy and Accountability Gaps

- Central universities have significant autonomy.
- UGC mandates reservation but enforcement is weak and inconsistent.
- Selection committees and VCs often lack urgency in fulfilling reservation mandates.
- Lack of oversight enables institutions to bypass constitutional requirements.

2. The 13-Point Roster System

- Introduced in 2018, replaced the earlier 200-point system.
- Instead of calculating reservation at institutional level, it applies at department level.
- Smaller departments fail to meet thresholds for reserved posts, especially for ST and SC categories.
- The system has faced legal challenges and protests for reducing representation.

3. Discretionary Rejection and Institutional Bias

- Qualified SC, ST, OBC candidates often rejected on vague grounds like "not found suitable."
- Ambedkar University Faculty Association study (2022): 60%+ of reserved vacancies due to arbitrary rejections.
- Creates exclusionary culture discouraging marginalized candidates.

Recommendations for a More Inclusive Academia

- Strengthen Enforcement Mechanisms
 - UGC should conduct regular audits and publish compliance reports.
 - Institutions must face penalties for reservation non-compliance.
- Reform the Roster System
 - Revise the 13-point roster to better align with constitutional equality.
 - Supreme Court hearings and proactive legislative/regulatory action are crucial.
- Institutionalize Fair and Transparent Recruitment
 - Diversify selection committees.
 - Implement clear, objective evaluation criteria.
 - Train administrators on social justice principles to shift institutional culture.
- Political Will and Ethical Commitment
 - Social justice must move beyond rhetoric into actionable policy.
 - Leadership must demonstrate genuine commitment to pluralism and equity.

Conclusion

- The persistent underrepresentation of marginalized groups in university faculties is a moral and democratic crisis.
- Universities are spaces of social transformation and must reflect societal diversity.
- Governance must be rooted in justice, equity, and inclusion.
- Only through reforms, accountability, and visionary leadership can India fulfill its promise of social justice and create an inclusive knowledge society.

Democratizing AI in the Era of Big Tech Supremacy

Introduction

The rapid advancement of Artificial Intelligence (AI) has resulted in an overwhelming dominance by major technology corporations, raising widespread concerns. This concentration of control over AI infrastructure, data, and system architecture risks limiting equitable technological progress, funneling power and resources into the hands of a few. To ensure AI benefits society broadly, it is vital to foster inclusive and decentralized AI frameworks.

Concerns Around Big Tech's Dominance

- **High Costs of Computation:** Developing cutting-edge AI models (such as Gemini Ultra, which costs around \$200 million) is prohibitively expensive for smaller entities. Consequently, startups and researchers often depend on computational credits from Big Tech, reinforcing their gatekeeping role.
- **Emphasis on Large Models:** Big Tech promotes the idea that larger AI models are inherently better, marginalizing smaller competitors. They maintain control over the entire ecosystem, recovering their investments through proprietary platforms.
- **Comprehensive Ecosystems:** These firms offer end-to-end solutions including cloud services, development tools, and algorithms, which create vendor lock-in and make it costly for developers to switch platforms.
- **Data Monopolization:** Big Tech companies accumulate enormous datasets, providing them with unmatched advantages in AI training. Even public data initiatives tend to be commercially influenced, favoring these giants.
- **Marginalization of Academia:** Corporate research now surpasses universities in AI innovation and citation impact, shifting focus toward profit-driven advancements and reducing the diversity of research perspectives that address societal needs.

India's Specific Challenges

- **Dependence on Foreign Cloud Services:** Indian startups and researchers heavily rely on platforms like AWS, Google Cloud, and Azure.
- **Data Access Disparities:** Despite generating vast amounts of data, Indian companies struggle to access well-organized, usable datasets.
- **Limited Computational Resources:** India's current infrastructure, including efforts under the National Supercomputing Mission, lags behind global AI standards.
- **Fragmented Policy Landscape:** The absence of coherent frameworks for data sharing and AI governance allows Big Tech to operate with minimal constraints.
- **Talent Drain:** Many skilled Indian AI professionals migrate to foreign corporations, depleting the domestic innovation ecosystem.
- **Lack of AI Hardware Self-Reliance:** India's concentration on software has not translated into a strong AI hardware manufacturing base, limiting its AI development capabilities.

India's Initiatives and Responses

- **Building Indigenous Capacity:** Projects like MeghRaj and the National Supercomputing Mission aim to establish sovereign computing resources.
- **Promoting Open and Secure Data Access:** Initiatives such as NDAP and DEPA seek to democratize data availability while protecting privacy and security.
- **Leveraging Digital Public Goods:** India's achievements with Aadhaar, UPI, and ONDC demonstrate the country's potential to create inclusive technological infrastructure that can be extended to AI-based public services.

- **Supporting Local AI Startups:** Through schemes like MeitY's Startup Hub and SAMRIDH, the government encourages growth in the AI startup ecosystem.
- **AI for Public Good:** The AI for All policy links artificial intelligence with improvements in public health, education, and agriculture.

Strategic Recommendations for Inclusive AI

- **Focus on Purpose-Driven AI:** Develop AI models that are efficient, localized, and tailored to India's unique needs, rather than relying on massive, generic models.
- **Invest in Public Infrastructure:** Establish national platforms for data processing, storage, and AI training that are accessible to academia and startups.
- **Ensure Open Data Access:** Enforce regulations to prevent monopolistic control over public datasets.
- **Encourage Federated and Decentralized AI:** Support distributed AI development to reduce dependency on centralized cloud providers.
- **Revitalize Academic Leadership:** Increase funding for AI research in universities and promote interdisciplinary collaboration.
- **Regulate Data and Digital Markets:** Implement data portability, interoperability, and anti-monopoly regulations to curb dominant market behaviors.
- **Engage in Global Partnerships:** Collaborate internationally on open-source AI initiatives and ethical standards, participating in alliances like the Global Development Compact.
- **Empower Grassroots Innovators:** Provide mentorship, training, and financial support to innovators across India, promoting ethical AI aligned with societal values.

Conclusion

True democratization of AI requires India to rethink its approach, moving away from a dependence on Big Tech toward building human-centered, inclusive, and open-source AI ecosystems. Rebalancing control in AI development will foster innovation that aligns with the country's development objectives. Achieving this vision demands a combination of clear policy direction, strong infrastructure, capacity building at the grassroots, and international cooperation.

Bridging the Infrastructure and Governance Gap for a Sustainable Urban Future

Introduction

India's urban population is expected to rise dramatically from 400 million to 800 million over the next three decades. This rapid growth offers vast opportunities for economic advancement and enhanced global standing, but simultaneously exerts tremendous pressure on infrastructure, financial resources, and institutional frameworks. According to a World Bank study, India requires an estimated ₹70 lakh crore by 2036 to address its urban infrastructure shortfall—an amount far exceeding current investment capacities.

Financial Roadblocks in Urban Infrastructure

- **Severe Investment Deficit:** In 2018, annual investments amounted to just ₹1.3 lakh crore, which is only about 25% of the required ₹4.6 lakh crore. Nearly half of the anticipated ₹70 lakh crore needed in the future is for essential services, with the remainder aimed at urban transport infrastructure.
- **Fragile Finances of Municipal Bodies:** Since 2002, municipal financing has stagnated at roughly 1% of GDP. Urban Local Bodies (ULBs), which are accountable for 45% of urban investments, continue to be financially weak due to limited revenue generation from

their own sources. Although transfers from state and central governments have increased from 37% to 44%, municipal fiscal health remains unstable.

- **Inefficient Revenue Collection:** Property tax collection is notably low, amounting to only 0.15% of GDP. Recovery of costs for services such as water supply and sanitation ranges between 20% and 50%, indicating significant inefficiencies.
- **Funds Remaining Unused:** Even when resources are allocated, utilization remains subpar—for example, Hyderabad and Chennai used only 50% of their capital budgets in 2018-19. Flagship initiatives like AMRUT and the Smart Cities Mission reported fund utilization rates of merely 80% and 70%, respectively.
- **Shrinking Public-Private Partnerships (PPPs):** Investments via PPPs have plummeted from ₹8,353 crore in 2012 to just ₹467 crore in 2018. The absence of project-specific revenue streams and viability gap funding has discouraged private sector involvement.

Structural and Governance Challenges

- **Weak Urban Governance Framework:** ULBs are constrained by limited administrative autonomy, fragmented responsibilities, and deficiencies in planning and executing projects. Mayoral and local leadership roles largely remain ceremonial without substantial power.
- **Overlapping Institutional Roles:** Confusion and delays arise due to overlapping functions between municipal bodies and state parastatals, which hamper efficiency and coordination.
- **Climate Vulnerabilities in Cities:** Urban centers are increasingly vulnerable to extreme weather events such as floods, heatwaves, and rising sea levels. Climate resilience has not been sufficiently incorporated into infrastructure planning, placing investments at long-term risk.
- **Ineffective Land Use and Missed Value Capture:** Land use often fails to align with infrastructure goals, encouraging sprawl and inefficiency. Opportunities to capture value from metro and rail-based developments remain largely untapped.

Unlocking the Potential of Urban India

- **Urbanization as an Economic Engine:** Cities contribute over 60% of India's GDP and have the potential to increase this share. Well-managed urban ecosystems can stimulate innovation, manufacturing, and the services sector.
- **Digital Public Infrastructure (DPI) as a Catalyst:** DPI can modernize urban services and reduce operational costs. Examples include smart utility meters that improve revenue collection, integrated transport systems that enhance mobility, and data-driven governance that enables responsive city management.
- **Leveraging Land to Fund Urban Growth:** Transit-Oriented Development (TOD) and coordinated metro-urban planning can help cities finance their growth sustainably while enhancing quality of life.

Policy Recommendations Across Different Timeframes

- **Short-Term Measures:** Enhance revenue through modernizing property tax systems using geospatial technologies and implementing user charges for water, waste, and sanitation services. Improve the execution of projects within ULBs and link the release of state and central funds to measurable performance indicators.
- **Medium-Term Measures:** Revitalize PPPs by providing viability gap funding and risk-sharing mechanisms. Establish dedicated project preparation units at state and municipal levels to ensure projects are environmentally, socially, and financially sustainable. Encourage urban innovation through "innovation labs" and promote collaboration between academic institutions and private industry.

- **Long-Term Structural Reforms:** Empower ULBs both financially and administratively by strengthening State Finance Commissions and enabling access to municipal bond markets. Integrate city planning by aligning transport, housing, and land-use policies, embedding climate resilience across all urban development plans. Invest in building institutional capacity through specialized training in finance, technology, and urban planning.

Conclusion

India stands at a critical juncture with its rapid urban transformation. Effective management of this growth could become a significant driver of economic prosperity and social inclusion. However, without urgent reforms in financial management, governance, and institutional frameworks, urban centers risk becoming congested, unequal, and vulnerable to climate impacts. Immediate planning, investment, and reform are essential to ensure that India's future cities are resilient, inclusive, and competitive on a global scale.

Integrating Compassion, Prioritizing Palliative Care

Context

In India, millions suffer needless physical and emotional pain, especially during the final phases of life, due to the limited availability of palliative care. Despite its critical role in easing pain and improving quality of life for patients with chronic or terminal illnesses, palliative care remains severely underfunded and underutilized. As non-communicable diseases surge and the healthcare system faces mounting pressure, integrating palliative care into mainstream health policy and practice has become both essential and urgent.

Importance of Palliative Care

Palliative care is a specialized medical discipline that attends to the physical, emotional, social, and spiritual needs of patients confronting serious illnesses. Unlike treatments aimed at curing diseases, palliative care emphasizes enhancing patient comfort, alleviating suffering, and preserving dignity throughout the illness trajectory, including at life's end. The World Health Organization (WHO) estimates that approximately 40 million people globally require palliative care annually, with 78% living in low- and middle-income countries. However, only 14% of those in need receive such care. In India, where 7 to 10 million people need palliative services each year, access is available to only about 1-2%, underscoring significant systemic deficiencies.

Challenges Within India's Healthcare System

- **Implementation Issues:** The rising prevalence of non-communicable diseases such as cancer, diabetes, and chronic respiratory illnesses intensifies the demand for palliative care. However, India's healthcare infrastructure struggles to meet these needs. Although the 2017 National Health Policy recognized palliative care's importance, its execution remains inconsistent, particularly in rural and poorer areas.
- **Shortage of Trained Personnel:** India has a doctor-to-population ratio of 1:834, surpassing the WHO recommendation of 1:1000. Yet, very few healthcare professionals receive specialized training in palliative care. Most doctors have limited education on pain management or end-of-life care, leading to variable quality and availability of services.
- **Financial and Infrastructure Limitations:** Insufficient funding and infrastructure gaps hinder the expansion of palliative care programs. While some integration exists in primary health care, palliative care is largely missing from tertiary health facilities.

- **Lack of Public Awareness:** Misconceptions persist, with many patients seeking palliative care only during the terminal stages, when interventions often have limited effectiveness.
- Strategies for Overcoming Challenges**
- **Enhancing Medical Education and Allied Health Roles:** Addressing systemic gaps requires a fundamental change in medical training. Incorporating palliative care into the MBBS curriculum would prepare future doctors with necessary clinical skills and empathy for end-of-life care. Initiatives by institutions like the Indian Council of Medical Research and AIIMS show promising progress. Moreover, task-shifting—delegating responsibilities to trained non-physician health workers—is a practical solution given India's extensive nursing and allied health workforce. Targeted training and empowerment of these professionals can vastly improve community-based holistic care.
 - **Policy and Financial Reforms:** Long-term commitment through policy reforms is crucial to build palliative care infrastructure and training programs. Expanding insurance schemes such as Ayushman Bharat to cover palliative services will make them more affordable. Allocating dedicated funds to establish palliative units in both public and private sectors is vital. Collaborations with NGOs and private institutions can broaden reach and enhance service quality. India can adapt global best practices—like the US hospice care model backed by insurance and funding—to develop cost-effective, dignified care tailored to local socioeconomic realities.
 - **Raising Public Awareness:** Many people remain unaware that palliative care is not solely for end-of-life situations but also encompasses pain relief, psychological support, and improved quality of life throughout serious illnesses. Public education campaigns are needed to dispel myths, encourage earlier care-seeking, and build community support networks for patients and caregivers.

Conclusion

Integrating palliative care into India's healthcare system is imperative from moral, medical, and social perspectives. A comprehensive strategy involving policy reform, curriculum changes, task-shifting, infrastructure investment, and public education is essential to ensure equitable access to palliative care. These efforts will improve patient outcomes and ease the financial and emotional burdens on families and the health system alike.

Reframing Global Development Finance

Context

India's relationship with the Global South has undergone a significant transformation over the last decade. The nation has not only increased its financial commitments but also diversified the methods through which it supports development cooperation. However, evolving global financial dynamics—marked by a deepening debt crisis in the Global South and a contraction in traditional aid—call for a strategic reassessment of India's approach. Within this changing landscape, Triangular Cooperation (TrC) has emerged as an effective mechanism to enhance and reshape India's development partnerships.

Growing Trends in India's Development Cooperation and Evolving Financial Context

- **Growth in Development Cooperation**
India's partnership with Global South countries has expanded both in breadth and volume. From 2010-11 to 2023-24, India nearly doubled its development assistance, increasing outflows from \$3 billion to \$7 billion. These funds have been deployed through various channels including capacity building, technology transfer, and duty-free

access to Indian markets. Central to this engagement has been the Lines of Credit (LoCs) extended under the Indian Development and Economic Assistance Scheme (IDEAS). Through LoCs, India has supported infrastructure and development projects abroad at concessional rates—borrowing from international markets and lending at softer terms, subsidized by the state. While this model has served well historically, it is now facing significant challenges amid global fiscal uncertainty and rising debt burdens.

- **Changing Financial Realities and Debt Challenges**

The budget for 2025-26 indicates a reconsideration of this approach. The Finance Ministry has raised doubts about the long-term sustainability of LoCs. At international forums such as the G-20, India has expressed concern over the soaring sovereign debt levels across the Global South, signaling a more cautious stance on financial commitments. This caution is warranted given the increasingly volatile global financial environment, which makes borrowing from capital markets less predictable and heightens the risk of repayment defaults by recipient countries. Moreover, Official Development Assistance (ODA), a traditional source of development finance, is shrinking sharply—from \$214 billion in 2023 to a projected \$97 billion, a nearly 45% decline.

India's Proposal for a Balanced Engagement Framework and Rise of Triangular Cooperation

- **Towards a Balanced Modalities Framework:** In response to these challenges, India advocates for a more balanced and nuanced approach. At the third Voice of Global South Summit (VoGS) in 2024, Prime Minister Narendra Modi introduced the concept of a Global Development Compact (GDC). This integrated framework harmonizes five key modalities: capacity building, technology transfer, market access, grants, and concessional finance. This marks a strategic move away from overdependence on LoCs towards a diversified development model emphasizing long-term sustainability, shared growth, and risk mitigation. Additionally, India is concentrating on forming broader, deeper partnerships, especially those that can effectively operate in third countries.
- **Emergence of Triangular Cooperation (TrC):** Among the new frameworks gaining traction is Triangular Cooperation, which involves collaboration between a traditional donor from the Global North, a leading partner from the Global South (such as India), and a recipient developing country. This model facilitates the co-creation of development solutions that are context-specific, cost-efficient, and mutually advantageous. TrC leverages pooled resources, shared expertise, and best practices. Although comprehensive data is still forthcoming, early estimates value TrC projects between \$670 million and \$1.1 billion. Countries including Brazil, Indonesia, Japan, and Germany have already established successful TrC portfolios across regions like Southeast Asia, Africa, and Latin America.

India's Strategic Deployment of Triangular Cooperation

India has proactively adopted TrC as a key tool to broaden its development diplomacy. A landmark event in 2022 was the signing of a Joint Declaration of Intent with Germany to implement TrC projects in Africa, Asia, and Latin America. Current projects are underway in nations such as Cameroon, Ghana, Malawi, and Peru, focusing on sectors like energy, education, and healthcare. These initiatives demonstrate how investments in infrastructure can drive positive social outcomes—improved energy grids, for example, enhance digital connectivity, enabling better access to online education and healthcare services.

Conclusion

While Lines of Credit have traditionally formed the foundation of India's development cooperation, shifting financial realities, rising sovereign debt concerns, and a changing aid environment require a strategic overhaul. The Global Development Compact and the adoption

of Triangular Cooperation represent progressive pathways forward. By leveraging its diplomatic influence, technical expertise, and collaborative spirit, India is poised to co-create a resilient, equitable development architecture—one that balances ambition with pragmatism and partnership with sustainability.

Asia's Escalating Climate Crisis

Introduction

Asia, which houses more than half of the world's population and is the largest continental landmass, is confronting an accelerating climate emergency. The World Meteorological Organisation (WMO) released its report titled "State of the Climate in Asia 2024," which presents a stark outlook—Asia is warming at a rate twice as fast as the global average. The region is experiencing unprecedented heatwaves, rising sea levels, glacial melt, and extreme weather phenomena, all of which have significant humanitarian and economic repercussions.

Key Findings of the WMO Report

- **Record Temperatures in 2024:** Asia experienced its hottest year ever recorded, with several countries suffering extended periods of extreme heat. Heatwaves in the ocean have also expanded, adversely affecting marine biodiversity and threatening food security.
- **Warming Rate Twice the Global Average:** While the worldwide temperature is rising by approximately 0.13°C per decade, Asia's landmass is warming at a rate of 0.24°C per decade. This faster increase is particularly visible over land due to its lower heat capacity compared to oceans.
- **Glacial Retreat and Hazards:** Out of 24 glaciers monitored in the Himalayas and Tian Shan mountains, 23 have lost mass, heightening the risk of disasters such as glacial lake outburst floods (GLOFs) and landslides. This puts the water supply for millions in South and Central Asia at risk.
- **Rising Sea Levels:** Sea levels are climbing more rapidly in Asia than the global average, threatening heavily populated coastal areas. This phenomenon also disrupts marine currents, fish migration patterns, and coastal ecosystems.
- **Increase in Extreme Weather:** The report highlights a marked rise in climate-related disasters, including floods in Pakistan and Kazakhstan, typhoons in Southeast Asia, landslides in Kerala's Wayanad district, heatwaves across China and Central Asia, and unusually heavy rainfall in the Gulf countries like UAE, Bahrain, Oman, and Iran.

Root Causes Behind Asia's Climate Vulnerability

- **Fossil Fuel Dependence:** Large Asian economies such as China, India, and Indonesia continue to rely heavily on coal and oil, leading to record emissions of carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O).
- **High Population Density:** The continent's dense population contributes to increased consumption, urban sprawl, and larger carbon footprints. Megacities like Delhi, Beijing, and Jakarta face the creation of urban heat islands.
- **Geographic Factors:** Asia's diverse geography—comprising mountains, floodplains, coasts, deserts, and islands—makes it vulnerable to a variety of climatic threats. Its extensive coastline is directly threatened by ocean warming and rising sea levels.
- **Unsustainable Land Use Practices:** Rapid deforestation, conversion of land for agriculture and infrastructure, loss of wetlands, and groundwater depletion all reduce the region's resilience to climate impacts.

Social, Economic, and Ecological Consequences

- **Impact on Human Health and Livelihoods:** Prolonged heatwaves have led to more cases of heatstroke, water shortages, and reduced agricultural yields. Vulnerable groups such as farmers, daily wage workers, and urban poor are especially at risk.
- **Water Security Concerns:** Melting glaciers threaten the water flow of important rivers such as the Indus, Ganga, Brahmaputra, and Amu Darya, jeopardizing drinking water supplies and irrigation systems.
- **Economic Damage:** Climate-related disasters caused billions of dollars in damages during 2023–24, with insurance companies facing increasing claims and some areas becoming difficult to insure.
- **Disruptions in Agriculture:** Irregular rainfall and flooding are damaging crops and altering traditional planting seasons. Ocean warming is also causing fish stocks to shift, affecting fishing communities.
- **Biodiversity Loss:** Species inhabiting coral reefs, the Himalayas, and tropical forests face existential threats from temperature changes and habitat degradation.

Current Measures for Mitigation and Adaptation

- **Paris Agreement and NDCs:** Asian countries are signatories of the Paris Agreement aimed at limiting global warming to 1.5°C above pre-industrial levels, though most are currently not on track to meet their targets.
- **Early Warning Systems (EWS):** The WMO emphasizes the need for enhanced multi-hazard early warning systems. India's Heat Action Plans and Bangladesh's coastal cyclone shelters are examples of such efforts.
- **Transition to Green Energy:** While renewable energy sources like solar, wind, and hydro are expanding in countries like India and China, fossil fuels remain the primary energy sources. The International Solar Alliance (ISA) supports scaling up solar energy use in developing Asian countries.
- **Regional Cooperation:** There is a call for stronger collaboration through regional groups like SAARC and ASEAN to improve disaster management, share resources, and mobilize climate finance.
- **Community-Based Adaptation:** Local communities are adopting grassroots measures such as rainwater harvesting in arid zones, mangrove reforestation along coasts, and cultivating climate-resilient crop varieties in drought-prone regions.

Way Forward

- **Speed Up Decarbonization:** There is a need for a rapid transition from coal and oil to renewable energy sources, supported by investments in energy storage, green hydrogen, and electrification of transport.
- **Strengthen Climate Governance:** Climate institutions should be empowered and emission regulations strictly enforced across industries, vehicles, and agriculture.
- **Invest in Resilient Infrastructure:** Urban development must focus on flood-resistant housing, cool roof technologies, and climate-proof transportation infrastructure.
- **Protect and Restore Ecosystems:** National climate strategies should include afforestation, wetland restoration, and biodiversity conservation.
- **Ensure Inclusive Climate Action:** Vulnerable groups—tribal populations, coastal residents, women, and children—must be protected through social safety nets, education, and climate-resilient employment opportunities.
- **Enhance Climate Financing:** Developed nations should fulfill their pledge to provide \$100 billion annually in climate finance. Expanding climate risk insurance and disaster recovery funds is essential for Asian countries.

Conclusion

The WMO's "State of the Climate in Asia 2024" report serves as a critical warning for the continent. With Asia warming faster than any other region, it faces the brunt of the global climate emergency. The future of Asia's climate depends on urgent, bold, and coordinated efforts involving governments, civil society, businesses, and individuals. With the right investments, innovations, and partnerships, Asia can both reduce climate risks and become a leader in climate resilience worldwide.

Urban Renaissance: Unlocking the Potential of India's Top 15 Cities for a \$30 Trillion Economy by 2047

Context:

- India aims to become a \$30 trillion economy by 2047.
- Urban centers must drive innovation, create jobs, and boost economic growth.
- The top 15 cities face systemic challenges: pollution, poor planning, weak governance, and infrastructure gaps.
- Key reforms are needed to unlock their full potential during the "urban decade."

The Role of India's Top 15 Cities:

- Cities like Mumbai, Delhi, Bengaluru, Chennai, and Hyderabad contribute about 30% of India's GDP.
- These cities could add 1.5% more annual GDP growth.
- They face issues such as pollution, traffic jams, slums, water shortages, and poor digital infrastructure.

Environmental and Health Challenges:

1. Air Pollution Crisis:

- India has 42 out of the 50 most polluted cities globally.
- Main pollution sources: vehicle emissions, construction dust, biomass burning.
- Solutions: electrify public transport, enforce dust control in construction.
- Union Budget 2025-26 introduced ₹1 lakh crore Urban Challenge Fund to incentivize cities based on performance.

2. Solid Waste Management:

- Cities generate 1.5 lakh tonnes of waste daily; only 25% processed.
- Annually, India produces 62 million tonnes of municipal solid waste; 30% processed.
- Reforms: invest in sanitation equipment, train staff, promote performance-based accountability, transition to circular economy.
- Potential to unlock \$73.5 trillion by 2030 through waste reforms.
- Indore's bio-CNG and waste segregation are model examples.

3. Urban Water Crisis:

- Nearly half of India's rivers are polluted; 40% of population predicted to face water scarcity by 2030 (NITI Aayog).
- Cities lose 40-50% of piped water due to leaks.
- Indore's water-sensitive urban planning includes sealing sewage leaks with GIS tech, rainwater harvesting, and reuse of treated water.

4. Housing Deficit and Informal Settlements:

- Affordable housing shortfall: 10 million homes now; 31 million by 2030 (CII).
- Growth of informal settlements lacking sanitation and infrastructure.
- Solutions: increase Floor Space Index (FSI) and Floor Area Ratio (FAR) to promote vertical growth.

- Density incentives recommended by G20 India and OECD report.
- 5. **Urban Mobility and Congestion:**
 - Average commuter loses 1.5–2 hours daily in traffic.
 - Causes: overpopulation, poor public transport, weak enforcement.
 - Solutions: invest in public transport, use AI and IoT for traffic management, implement congestion pricing, encourage smart driving and citizen discipline.
- 6. **Digital Infrastructure Gaps:**
 - India's internet speed (~100 Mbps) is far behind Seoul and Singapore (1 Gbps+).
 - Upgrading digital infrastructure is key to attracting global companies and innovation centers.
 - Needs: expand broadband, 4G/5G coverage, reduce spectrum costs, build fibre-optic networks, deploy 5G nationwide.
- 7. **Governance and Financing Reforms:**
 - Urban planners shortage: 1 per 100,000 people vs. global norm of 1 per 5,000–10,000.
 - Most cities lack robust master plans.
 - Strengthen decentralized governance through full implementation of 74th Constitutional Amendment.
 - Increase property tax collection (currently <0.2% of GDP).
 - Use digitized land records, land value capture (LVC), and municipal bonds after governance reforms.
- 8. **Reimagining Cities as Cultural-Economic Hubs:**
 - Promote walkable heritage zones and integrated urban experiences.
 - Foster partnerships between government (policy and infrastructure) and private sector (innovation and delivery).
 - Aim for cities to become global business and cultural magnets like Dubai and Singapore.

Conclusion:

- India's top 15 cities must lead economic, cultural, and technological transformation by 2047.
- Focused investments in infrastructure, governance, environment, and digital access are critical.
- These cities can drive India's emergence as a \$30 trillion economy and global powerhouse.

Industrial Safety in India

Introduction

- India is experiencing a troubling pattern of industrial accidents indicating systemic failures in workplace safety and regulatory enforcement.
- Recent tragedies include a blast at Sigachi Industries (Sangareddy, Telangana) and a fire at a fireworks unit (Virudhunagar, Tamil Nadu), causing over 48 deaths and many injuries.
- These incidents reflect a broader crisis, with hundreds of similar accidents over the past decade, many unreported or ignored (NDMA and IndustriAll data).

Core Issues Behind Industrial Accidents

- **Regulatory Failures:**
 - Poor enforcement of Factories Act (1948) and Explosives Act (1884).

- Infrequent inspections and low penalties for violations.
 - Lack of independent safety audits.
- **Technological Gaps:**
 - Absence of critical safety devices like heat sensors, fire alarms, pressure release valves.
 - Use of outdated machinery and poorly maintained infrastructure.
- **Management Negligence:**
 - Safety seen as a cost, not an investment.
 - Ignoring Standard Operating Procedures (SOPs) for hazardous materials.
- **Poor Working Conditions:**
 - Overcrowded, cramped factory spaces.
 - Lack of worker training, protective equipment, and emergency protocols.
- **Underreporting and Lack of Accountability:**
 - Many accidents go unreported, especially in small or unlicensed units.
 - Inquiry committees often fail to produce punitive actions or reforms.

Institutional and Legal Framework: Strengths and Gaps

- **Existing Laws:**
 - Factories Act (1948) – safety for hazardous processes.
 - Environment Protection Act (1986) – chemical usage regulation.
 - NDMA Guidelines on Chemical Accidents (2015) – risk mitigation framework.
 - Explosives Rules (2008) – govern storage and handling of fireworks and chemicals.
- **Enforcement Challenges:**
 - Insufficient Labour Inspectorate manpower.
 - Political interference and corruption in licensing and inspections.
 - Poor data collection and accident tracking.
- **Roles of NDMA and MoEFCC:**
 - NDMA issues guidelines but lacks enforcement powers.
 - Overlapping mandates between MoEFCC and state pollution control boards cause bureaucratic confusion.

Case Studies: Lessons Not Learned

- **Bhopal Gas Tragedy (1984):**
 - Over 3,000 died instantly; 20,000+ eventually.
 - Poor safety protocols and maintenance at Union Carbide plant.
 - Led to the Environment Protection Act but weak compliance persists.
- **Visakhapatnam LG Polymers Leak (2020):**
 - Styrene gas leak caused 11 deaths and 1,000+ affected.
 - Resulted from improper restart post-lockdown and lack of real-time monitoring.
- Both cases highlight regulatory apathy, poor risk assessment, and lack of accountability.

Impact on Economic and Social Dimensions

- **Human Cost:**
 - Loss of lives, injuries, long-term disabilities.
 - Psychological and financial trauma for families.
- **Loss of Livelihood:**
 - Many injured are daily wage workers without insurance or social security.
 - Post-accident factory closures cause mass unemployment.
- **Damage to Industrial Image:**
 - Hurts India's goal to become a global manufacturing hub.

- Deters FDI and investor confidence in sectors like pharma, chemicals, electronics.
- **Environmental Degradation:**
 - Toxic leaks pollute groundwater and air.
 - Lack of mechanisms for environmental restoration after disasters.

International Best Practices for Industrial Safety

- **United States:**
 - OSHA conducts regular audits.
 - Mandatory accident reporting and public disclosure.
- **Germany:**
 - TÜV performs safety inspections on industrial equipment.
 - Strong worker unions and whistleblower protections.
- **Japan:**
 - Focus on Kaizen (continuous safety improvement).
 - Regular simulation drills and active employee engagement.
- India can emulate these practices to strengthen its Occupational Health and Safety (OHS) framework.

Way Forward

- **Strengthen Regulatory Mechanisms:**
 - Modernize Factories Act, Chemical Accidents Rules, and NDMA guidelines.
 - Create a centralized Industrial Safety Authority with nationwide oversight.
- **Mandatory Safety Audits:**
 - Independent third-party audits for hazardous industries.
 - Deploy real-time monitoring using IoT and AI sensors.
- **Legal Reforms:**
 - Increase penalties for negligence and non-compliance.
 - Establish fast-track courts for industrial accident cases.
- **Improve Worker Conditions:**
 - Compulsory safety training.
 - Mandatory insurance, PPE kits, and regular health checks.
- **Public Disclosure and Transparency:**
 - Maintain a national, publicly accessible database of industrial accidents.
 - Protect whistleblowers reporting safety violations.
- **Community Preparedness and Corporate Social Responsibility (CSR):**
 - Disaster preparedness training for local communities.
 - Include industrial safety in CSR obligations under the Companies Act.

Conclusion

- India's ambition to become a manufacturing superpower depends on robust industrial safety standards.
- Tragedies like those in Sangareddy and Virudhunagar are preventable with proactive governance, technological upgrades, and corporate responsibility.
- Worker safety and dignity are not only legal and economic necessities but moral imperatives that India must urgently address.

Transforming Indian Healthcare – Achievements and Milestones (2014–2025)

Context

Between 2014 and 2025, India's healthcare landscape underwent a remarkable transformation driven by focused policies, political will, increased investments, and technological advancements. These efforts aim to create a healthcare system that is affordable, accessible, equitable, and of high quality, aligned with the UN Sustainable Development Goal 3 (SDG-3) and national initiatives like Ayushman Bharat and the National Health Mission (NHM).

Healthcare in 2014 – Key Challenges

- **Infrastructure gaps:** Severe shortage of primary health centres (PHCs), community health centres (CHCs), and diagnostic services.
- **Human resources shortage:** Insufficient doctors, nurses, and allied health professionals.
- **Service quality:** Limited and uneven access; affordability remained low.
- **High Out-of-Pocket Expenditure (OOPE):** Major obstacle to universal health access.

Vision Shift: From Illness to Wellness

- A shift from focusing solely on curative care to emphasizing preventive and promotive health.
- National Health Mission (NHM) acts as the policy backbone driving systemic reforms.

Key Pillars of Healthcare Transformation

1. Strengthening Primary Healthcare

- **Ayushman Arogya Mandirs:** Over 177,000 centres established delivering comprehensive primary care, including maternal-child health, NCD screening, and mental health services.

2. Telemedicine Expansion

- **eSanjeevani:** Enabled remote medical consultations.
- **Tele-MANAS:** Specialized tele-mental health support.

3. Maternal and Child Health Progress

- **Maternal Mortality Rate (MMR):** Declined by 86%, nearly twice the global average reduction.
- **Infant Mortality Rate (IMR):** Reduced by 73%, outperforming the global decline of 58%.

4. Addressing Non-Communicable Diseases (NCDs)

- **Mass screening at Ayushman Arogya Mandirs** for hypertension (28 crore), diabetes (27 crore), and oral cancer (27 crore).
- **Focus on cancer screenings:** breast, cervical, and oral cancers.

5. Universal Immunisation & Public Health

- **Mission Indradhanush:** Vaccinated 5.46 crore children and 1.32 crore pregnant women.
- **U-WIN Portal:** Digitized vaccine tracking with 42.75 crore doses administered by May 2025.
- **Diseases eliminated:** Polio (2014), Maternal & Neonatal Tetanus (2015), Trachoma (2024).
- **Malaria cases and deaths reduced by over 80% (2015–2023).**
- **Kala Azar elimination achieved in 2023.**
- **Tuberculosis incidence reduced by 17.7% and mortality by 21%, with missing TB cases dropping from 15 lakh (2015) to 1.2 lakh (2024).**

6. Healthcare Financing & Affordability

- **Government health expenditure rose from 1.13% to 1.84% of GDP (2014–2022).**
- **OOPE reduced from 62.6% to 39.4% during the same period.**
- **Free Drugs and Diagnostics Initiative:** Implemented in 36 States/UTs; Tele-radiology services in 12 States/UTs.
- **PM National Dialysis Programme:** Benefited over 28 lakh kidney patients, saving ₹8,725 crore in OOPE.

7. Emergency Healthcare Access

- Expansion of National Ambulance Services (NAS) and Mobile Medical Units (MMUs) to reach underserved and remote areas.

8. Infrastructure & Human Resource Development

- PM Ayushman Bharat Health Infrastructure Mission (PM-ABHIM): Launched in 2021 to enhance long-term health infrastructure.
- Achievements under PM-ABHIM include:
 - 18,802 Ayushman Arogya Mandirs
 - 602 Critical Care Hospital Blocks
 - 730 District Integrated Public Health Laboratories
- Human resources strengthened by adding 5.23 lakh health workers, including 1.18 lakh Community Health Officers (CHOs), who serve as key links between community health workers and doctors.

Conclusion – Path to Universal Healthcare

India's healthcare evolution from 2014 to 2025 marks a significant shift from treating illness to promoting wellness, supported by innovative policy frameworks, digital health technologies, and enhanced financing. This progress lays a robust foundation to achieve Universal Health Coverage (UHC) and meet the health-related Sustainable Development Goals (SDGs) by 2030.

The New Battle Challenge of China-Pakistan Collusion

Context

Operation Sindoor (May 7–10) has revealed a concerning evolution in regional security—a new level of battlefield cooperation between China and Pakistan. Confirmed by Lieutenant-General Rahul R. Singh, Deputy Chief of Army Staff, this development marks a shift from a traditional strategic partnership to active operational collaboration. Understanding this shift is crucial for India's military planning, diplomatic posture, and long-term security.

Nature of China-Pakistan Collusion

Strategic Shift: From Tacit Support to Tactical Partnership

- Historically, China's involvement in India-Pakistan conflicts (1965, 1971, 1999) was mostly limited to diplomatic backing.
- Operation Sindoor exposed a deeper role: China provided direct operational support including intelligence, surveillance, reconnaissance (ISR), and tactical interoperability with Pakistan's forces.
- This approach is a form of sophisticated grey-zone warfare—supporting Pakistan without provoking direct conflict with India.
- Following the April 22 Pahalgam terrorist attack, China's diplomatic stance clearly aligned with Pakistan.

Digital and Informational Collusion: Narrative Control

- Chinese state media and digital influencers echoed Pakistani propaganda, inflating Indian military losses.
- Coordinated social media campaigns with Pakistan's ISPR aimed to delegitimise India's response, obscure the terrorist origins of the conflict, and frame India as the aggressor.

Strategic and Operational Implications for India

Deterrence and a New Strategic Normal

- China's covert support to Pakistan complicates India's strategic deterrence calculus by allowing Beijing to challenge India's red lines without direct engagement.

- India now operates under a new norm where conventional strikes against Pakistan occur amid nuclear deterrence risks.
- Meanwhile, China and Pakistan are developing a new normal of joint battlefield operations.

Boost to China's Arms Industry and Two Live Borders for India

- Pakistan's post-conflict acquisition of Chinese J-35 stealth fighters, KJ-500 AEW&C aircraft, and HQ-19 missile systems reflects deepening military ties.
- China effectively showcased its weapon systems in real combat, gaining validation against Western platforms and boosting its global arms market position.
- India now confronts two active fronts: the northern border with China remains tense despite partial disengagement, and the western Line of Control faces renewed hostilities, demanding simultaneous troop deployments and ISR focus on both fronts.

Strategic Recommendations and the Way Forward

1. Recalibrate Diplomacy with China

- India should impose costs on China for its military enabling of Pakistan, aligning diplomatic consequences with Beijing's actions.
- Just as India rules out terror and talks with Pakistan, China's support must affect bilateral relations.

2. Expand Conventional Capabilities

- Defence spending, which fell from 17.1% to 13% of central government expenditure over a decade, needs urgent review.
- Investments should focus on ISR, drones, cyber warfare, and network-centric operations.

3. Avoid Predictability in Military Responses

- Diversify punitive options beyond straightforward kinetic retaliation.
- Explore economic sanctions, covert actions, and treaty-based measures (e.g., reconsidering the Indus Waters Treaty) discreetly.

4. Institutional and Strategic Integration

- The convergence of threats across domains demands improved inter-agency coordination, military modernization, and doctrinal evolution.
- Operation Sindoor should be analyzed as a blueprint for future warfare tactics.

Conclusion

Operation Sindoor and the demonstrated China-Pakistan collusion represent a pivotal strategic turning point for India. This is no longer a hypothetical threat but a present reality. India must respond with a balanced approach combining military strength, diplomatic clarity, and innovative strategic thinking. The decisions made today will shape India's ability to maintain regional stability or risk remaining on the back foot against a deeply integrated adversarial alliance.

Rising Seas, Shifting Lives, and the Test of Democratic Values

Context

As climate change intensifies, India's coastal regions are grappling not only with environmental destruction but also deep socio-economic disruptions.

Rising sea levels, saltwater intrusion, and unchecked industrial development are displacing coastal populations, pushing them into insecure and informal urban labour markets.

This situation raises urgent legal, environmental, and human rights concerns, and calls for a rights-based policy framework to ensure protection and rehabilitation of affected communities as part of India's climate adaptation strategy.

Climate Change and Coastal Displacement in India

Transforming the Coastline

- India's eastern and western coastal belts are being reshaped by:
 - Sea level rise
 - Saltwater intrusion
 - Unregulated and climate-insensitive development
- Agricultural and fishing communities, traditionally dependent on coastal ecosystems, are being uprooted and forced to migrate.

Examples of Inadequate Resettlement

- Satabhaya (Odisha): Entire village disappeared due to sea encroachment; residents relocated to government colonies lacking livelihood support.
- Displacement patterns are also visible in:
 - Honnavar (Karnataka)
 - Nagapattinam (Tamil Nadu)
 - Kutch (Gujarat)
 - Parts of Kerala
- Resettled populations are often absorbed into low-paid, insecure urban labour without legal protections or government support.

Ecological Loss Driven by Development Projects

Projects Worsening Coastal Fragility

- Infrastructure schemes (e.g. Sagarmala) involving ports, aquaculture farms, and energy facilities have:
 - Destroyed natural coastal barriers like mangroves and sand dunes
 - Increased the vulnerability of coastlines to climate impacts
- Environmental approvals typically ignore cumulative and long-term climate risks, reinforcing a destructive development paradigm.

Urban Labour Absorption and Exploitation

- Migrants relocate to cities such as Mumbai, Chennai, Hyderabad, and Bhubaneswar, taking up work in:
 - Construction
 - Domestic work
 - Other informal sectors
- They often experience:
 - Debt bondage
 - Gender-based abuse
 - Exclusion from legal and social protections

Legal and Policy Gaps

Lack of Dedicated Legal Framework

- While Article 21 of the Indian Constitution protects the right to life and dignity, there is no specific legislation to address displacement caused by slow-onset climate change.
- Existing legal tools like:
 - Disaster Management Act, 2005
 - Environment Protection Act, 1986
 - Coastal Regulation Zone (CRZ) Notifications...deal with emergency relief or conservation, not rehabilitation or labour integration.

Flaws in Coastal and Climate Policies

- CRZ Notification, 2019:

- Intended for sustainable coastal governance
- Criticised for promoting tourism and industry at the expense of traditional fishing communities
- Zoning changes allowed large-scale commercial expansion without community consultation
- National and State Action Plans on Climate Change:
 - Recognise coastal vulnerability
 - Do not provide targeted rehabilitation policies for displaced people

Labour Codes and Migration Oversight

Gaps in Labour Protection

- New Labour Codes do not:
 - Address climate-induced internal migration
 - Provide safeguards for migrants in informal sectors like construction or domestic work

Judicial Recognition Yet Policy Inaction

- Supreme Court decisions like:
 - M.C. Mehta v. Union of India (1987)
 - Indian Council for Enviro-Legal Action v. Union of India (1996)
...linked environmental protection to fundamental rights
- However, these judicial principles have not been codified into legally binding protections for climate migrants

Managed Retreat without Safeguards

- Authorities increasingly justify displacement through “managed retreat” (planned relocation due to environmental hazards)
- But without inclusive planning and rights-based frameworks, such policies undermine the dignity and autonomy of the displaced

Towards a Rights-Based Climate Displacement Framework

Incorporating Climate Migrants into National Policy

- Climate-affected migrants should be officially recognised in:
 - Urban planning
 - Social security
 - Employment schemes

Ensuring Access to Essential Rights

- Policies must guarantee core entitlements such as:
 - Decent work
 - Affordable housing
 - Healthcare
 - Education
- Special attention needed for urban informal workers, where climate migrants are concentrated

Reforming Labour Laws

- Labour legislation should:
 - Recognise climate migrants as a vulnerable category
 - Extend explicit protections to workers in informal sectors

Revisiting Coastal Zone Governance

- Coastal policies must shift from commercial exploitation to:
 - Ecological conservation
 - Recognition of traditional community rights

- Inclusive stakeholder consultation

Global Commitments

- Addressing climate displacement is essential for India's obligations under:
 - Sustainable Development Goal 8.7 – eliminate forced labour, promote decent employment
 - Paris Climate Agreement and associated climate justice commitments

Conclusion: A Test of Democratic and Constitutional Values

Responding to climate-induced displacement is not only a policy necessity—it is a constitutional duty and ethical responsibility. Ensuring the dignity, participation, and protection of displaced communities reflects the true test of India's democratic values in the era of climate crisis.

Employment Linked Incentive (ELI) Scheme, 2025

Introduction

- The Union Cabinet approved the Employment Linked Incentive (ELI) Scheme in 2025 to address jobless growth.
- While India's GDP growth is strong, employment growth—especially in the formal sector—has lagged.
- The ELI scheme provides financial incentives to employers and first-time employees to promote formal job creation.

Context and Rationale

- Jobless Growth Issue:
 - Economic growth has not led to proportional formal employment creation.
- Unemployment Trends:
 - CMIE reported a rise in unemployment from 5.1% (April 2025) to 5.6% (May 2025).
 - PLFS shows youth unemployment (ages 15–29) at 16.03%.
 - Female Labour Force Participation Rate (FLFPR) is around 25%, far below the global average of 47% (World Bank, 2024).
- Informal Sector Dominance:
 - Over 80% of India's workforce is in the informal sector with limited protections or benefits.

Key Features of the ELI Scheme

- Implementation Period: August 1, 2025 – July 31, 2027
- Budget: ₹99,446 crore
- Target Beneficiaries: 1.92 crore first-time employees
- Employee Benefits:
 - Wage support up to ₹15,000 in two instalments (after 6 and 12 months)
 - Financial literacy training mandatory to receive the second instalment
- Employer Benefits:
 - 10% of employee's EPF wage reimbursed (maximum ₹3,000/month for two years)

Intended Objectives

- Stimulate job creation, particularly in labour-intensive sectors like manufacturing
- Bring more workers into the formal economy and under social security coverage
- Reduce entry barriers for first-time job seekers
- Encourage higher female participation in the workforce by lowering hiring costs

Strengths and Opportunities

- **Incentives to Employers:**
 - Helps reduce hiring costs, especially beneficial for MSMEs
- **Support for Youth:**
 - Targets first-time workers who face barriers due to lack of experience
- **Financial Literacy Requirement:**
 - Encourages responsible savings and financial inclusion
- **Complement to Existing Schemes:**
 - Aligns with initiatives like PMKVY (Skill India) and Make in India

Challenges and Concerns

- **Limited Financial Motivation:**
 - ₹1,500–₹3,000 incentive may not be enough in high-cost or capital-intensive sectors
- **Employability Issues:**
 - India Skills Report 2024 shows only 46.2% of graduates are employable
 - Without parallel skilling efforts, scheme effectiveness may decline
- **Short Duration:**
 - Two years may not be sufficient for lasting change or behavioral shifts
- **Risk of Misuse:**
 - Potential for ghost beneficiaries, inflated wage claims, or fake employee records

International Comparisons

- **USA:** Work Opportunity Tax Credit (WOTC) offers tax benefits for hiring disadvantaged groups
- **Germany:** Apprenticeship subsidies are linked to confirmed job placements
- **Bangladesh:** Employment Generation Program for the Poorest (EGPP) combines wage subsidies with public works

Way Forward

- **Extend Scheme Duration:**
 - Consider expanding it to five years for deeper impact
- **Include Informal and Gig Workers:**
 - Adapt incentives for platform-based and contract employment
- **Integrate with Skilling Platforms:**
 - Align with Skill India Digital Platform (SIDP) and mandate employer-led training
- **Focus on Marginalised Groups:**
 - Provide additional incentives for hiring women, SC/ST, and differently-abled individuals
 - Link with the Maternity Benefit Act and child care support
- **Strengthen Monitoring:**
 - Use Aadhaar-linked tracking and EPFO/ESIC portals
 - Enable real-time dashboards and third-party compliance audits
- **Widen Sectoral Coverage:**
 - Extend support to sectors like textiles, logistics, electronics, tourism, and healthcare

Conclusion

- The ELI Scheme has the potential to bridge the gap between economic growth and employment.
- Its success will depend on long-term integration with broader employment, skilling, and social protection strategies.

- If well-executed, it could play a critical role in making India's growth more inclusive and sustainable.

The Election Commission of India (ECI) Does Not Have Unfettered Power

Context

Ahead of the Assembly elections scheduled for November, the Election Commission of India (ECI) has ordered a Special Intensive Revision (SIR) of electoral rolls across Bihar. Opposition parties claim this is a politically motivated attempt to disenfranchise voters by questioning their citizenship status. The ECI, however, defends the move, citing its legal authority.

With the matter now before the Supreme Court, the key issue is no longer political intent but the legality and constitutional scope of the ECI's actions.

Legal Framework: Voting Rights and Disqualifications

Constitutional Right to Vote

- Article 326 guarantees universal adult suffrage to every Indian citizen aged 18 and above, unless disqualified by law.

Disqualifications (Representation of the People Act, 1951)

- RPA, 1951 specify the following disqualifications:
 - Being of unsound mind (as declared by a court).
 - Disqualification under Section 11A of the RPA, 1951.

Conditions for Registration as a Voter

- Section 19 (RPA, 1950):
 - Must be 18 years or older.
 - Must be ordinarily resident in the constituency.
- Section 20 clarifies "ordinary residence":
 - Merely owning property doesn't qualify.
 - A person temporarily away from home is still considered ordinarily resident.

Scope of ECI's Constitutional Powers

Article 324: The Commission's Mandate

- Empowers the ECI to supervise the preparation of electoral rolls and conduct of elections.
- The Supreme Court has described this as a "reservoir of power", vital to upholding the basic structure of free and fair elections.

Judicial Checks on ECI's Powers

- In *Mohinder Singh Gill v. Chief Election Commissioner* (1978):
 - The Court ruled that ECI must comply with existing laws.
 - It can act independently only in areas not governed by statute, and solely to advance electoral fairness.

Electoral Roll Revision: What the Law Says

Section 21 of the RPA, 1950 – Four Types of Revisions

1. Before general elections (Lok Sabha or State Assemblies).
2. Prior to by-elections.
3. Annual revision on ECI's direction (using January 1 as qualifying date).
4. Special revision for a specific constituency or part of it, based on recorded reasons.

Key Legal Constraints

- January 1 must be used as the qualifying date for revisions under the first three types.

- Only special revisions (point 4) can occur anytime — and only for part of a constituency, not an entire state.

Legal Issues in Bihar's Special Intensive Revision (SIR)

Concerns Raised

- The ECI's order of June 24 set July 1, 2025 as the qualifying date—contrary to legal requirements.
- The term "Special Intensive Revision" is not defined in the RPA, 1950.
- Applying a special revision statewide exceeds the authority granted under Section 21(3).

Citizenship and Voter Registration

Rule 8 of the Registration of Electors Rules

- Applicants must furnish information "to the best of their ability".
- Electoral officers cannot reject applications solely for lack of formal citizenship documents.
- ECI is legally obligated to follow this guideline and protect genuine voters during the revision process.

Conclusion

- While the ECI has statutory authority under Section 21 of the RPA to revise electoral rolls, Section 21(3) limits special revisions to a specific constituency or part thereof—not an entire state.
- The powers under Article 324 are broad but not absolute. They must be exercised within the framework of existing laws and guided by constitutional principles, including natural justice.
- The current dispute emphasizes the importance of judicial oversight in preserving the integrity of the electoral process.

What the 'Neutral Clean-Up' of Bihar's Poll Rolls Really Is

Context

India's electoral system is undergoing a quiet but significant shift — one that redefines citizenship, belonging, and democratic participation through documentation and verification. This transformation is most visible in Bihar, where a Special Intensive Revision (SIR) of electoral rolls by the Election Commission of India (ECI) is underway.

While framed as a routine update for electoral integrity, the exercise risks disenfranchising millions, especially from marginalized communities. Critics argue it threatens constitutional values of equality, justice, and fraternity.

Why the 'Routine' Revision Is Unsettling

- **Mass Verification Drive:** Nearly 4.74 crore voters (60% of Bihar's electorate) are now required to furnish fresh documents to validate their eligibility.
- **Raised Documentation Threshold:** Unlike earlier processes based on self-declaration, voters must now produce hard-to-obtain documents like birth certificates, land records, or school-leaving certificates.
- **Ground Reality Ignored:** Bihar has poor civil documentation infrastructure, particularly in rural and marginalized areas, making compliance difficult.
- **Shift in Burden:** The responsibility of proving citizenship now falls entirely on the individual, even though the state failed to ensure accessible documentation systems.

Disproportionate Impact on Vulnerable Groups

- **Migrant Workers (20% of Bihar's population):**
 - Often absent during the 30-day verification window.

- Lack required documents despite having Aadhaar, MGNREGA, or Voter ID cards — many of which are now being rejected.
- **Marginalized Communities:**
 - Poor, Dalits, and Muslims are likely to be the most affected.
 - Raises fears of exclusionary targeting under the guise of procedural reform.

Legality vs. Legitimacy of the Revision

- **Legal Justification by ECI:**
 - Claims the revision aims to remove duplicates and include new voters — tasks within its mandate under Section 21 of the RPA, 1950.
- **Concerns Raised:**
 - Speed, scale, and method of execution are impractical and risk undermining accuracy and inclusion.
 - Inconsistency: The voter ID (issued by the ECI itself) is not accepted as valid proof, raising questions of credibility.

Broader Democratic Concerns

A Shift Towards Citizenship Policing

- **Expanded ECI Powers:** Electoral officers are now empowered to refer individuals to foreigners' tribunals, previously outside ECI's scope.
- **Judicial Encroachment:** This blurs the line between electoral management and citizenship verification, a domain constitutionally assigned to courts and designated authorities.
- **Supreme Court Caution:** The Court has earlier warned against shifting the burden of proof onto registered voters.

National Precedent in the Making

- Similar voter roll revisions are reportedly planned in Assam, Kerala, Tamil Nadu, West Bengal, and Puducherry.
- If standardized, this document-intensive model could become the norm, transforming Indian electoral practice from inclusion to exclusion.

Critics' View: Electoral Gerrymandering by Other Means

- This is not about redrawing constituency boundaries, but redrawing the voter base.
- Described as subtle gerrymandering, it risks altering demographic representation by excluding certain communities.
- Particularly impacts Muslims, whose political participation is already under pressure.

Conclusion

The Bihar electoral revision is currently being challenged in court on grounds of violating:

- The right to vote,
- Equality before the law, and
- Human dignity.

If left unchecked, this process could:

- Disenfranchise lakhs of voters,
- Distort electoral outcomes, and
- Severely erode trust in democratic institutions.

What's truly at stake is not just the technical accuracy of the electoral rolls — but the core principle of inclusive democracy in India.

RDI Scheme: Laying the Foundation for a Research-Driven India

Introduction

The Union Cabinet's approval of the Research Development and Innovation (RDI) Scheme is a landmark step in India's ambition to become a knowledge-based economy by 2047. The initiative is part of the broader national vision to foster technological self-reliance, boost innovation, and drive sustainable economic growth through science and research.

The R&D Landscape in India: Current Challenges

- **Low Investment:** India spends just 0.65% of GDP on R&D — far behind the USA (2.7%), China (2.4%), and South Korea/Israel (4–5%).
- **Weak Private Sector Role:** Corporates contribute only 35% of total R&D spending in India, compared to 70–75% in advanced economies.
- **Innovation Lag:**
 - Ranked 40th in the Global Innovation Index 2023
 - Low patent filings and scientific output per capita compared to OECD nations

The RDI Scheme: Key Highlights

- **Implemented by:** Anusandhan National Research Foundation (NRF)
- **Total Funding:** ₹1 lakh crore over 5 years
- **Focus:** Mobilizing private R&D in critical sectors
- **Structure:**
 - Tier 1: SPV to manage funds and policy
 - Tier 2: Independent fund managers to offer low or zero-interest loans to private entities

Priority Areas ("Sunrise Sectors")

- Green energy
- Artificial Intelligence
- Quantum computing
- Semiconductors
- Space and defence tech
- Precision agriculture

Core Objectives of the Scheme

- **Boost Private R&D:** Use financial incentives to unlock corporate innovation
- **Advance Cutting-Edge Technologies:** Target sectors shaping the future economy
- **Strengthen Industry-Academia Collaboration:** Foster joint R&D ecosystems
- **Drive IP Creation and Commercialization:** Link research outputs to markets

Why the RDI Scheme is Crucial

1. Enhances Economic Competitiveness

- Innovation fuels productivity, GDP growth, and high-value job creation.
- Nations investing in R&D shift faster to advanced manufacturing and digital services.

2. Supports National Security & Tech Sovereignty

- Reduces import dependency in strategic areas like defence, space, and cybertech.
- Enhances self-sufficiency in emerging technologies.

3. Elevates India's Global Role

- Helps India tackle global challenges — climate resilience, public health, food security — through homegrown innovation.

4. Empowers Startups and MSMEs

- Offers critical support to early-stage innovators and small firms, often constrained by capital and risk exposure.

Key Bottlenecks in India's R&D Ecosystem

Problem Area	Key Issues
Human Capital	Less than 200 researchers per million vs. over 1,300 in developed nations

Brain Drain	High outflow of talent due to limited domestic opportunities
Weak Linkages	Poor synergy between academia and industry
Risk Aversion	R&D seen as high-risk, low-return by businesses
IP Ecosystem Gaps	Delays in patent processing, weak enforcement, limited commercialization

Global Models India Can Learn From

Country	Model	Lessons for India
USA	NSF, DARPA	Fund basic research plus focus on market translation
China	State-led R&D, large PPPs	Strategic targeting of emerging technologies
Germany	Fraunhofer Institutes	Industry-academic applied research hubs
South Korea	SME-centric innovation model	R&D tax rebates and grants for small innovators

Strategic Roadmap: Way Forward

1. Strengthen Education & Skills

- Boost STEM education from school level
- Upgrade technical education with design thinking and innovation culture
- Encourage PhD, postdoc research via scholarships and industry fellowships

2. Build Innovation Infrastructure

- Set up Centers of Excellence in key areas
- Create cluster-based innovation zones near universities
- Improve access to testing labs, incubators, and prototyping facilities

3. Bridge Academia-Industry Divide

- Mandate public-private R&D collaboration
- Create shared platforms for joint basic and applied research

4. Support Startups and MSMEs

- Allocate funds for early-stage innovations
- Offer IP support, mentorship, and market readiness tools

5. Institutional & Policy Reforms

- Launch a National R&D Mission under NITI Aayog or DST
- Provide R&D tax incentives and grants
- Develop a National R&D Rating System to assess institutional performance

Conclusion

The RDI Scheme represents a shift in India's approach to research and innovation — recognizing that R&D must be a national mission involving industry, academia, and government. With the right execution, India can build a globally competitive innovation ecosystem that not only powers economic growth but also secures the country's strategic autonomy.

10 Years of Digital India: A Decade of Digital Transformation

Introduction

Launched on 1st July 2015, the Digital India Mission aimed to transform the country into a digitally empowered society and a knowledge-based economy. Over the past decade, it has significantly bridged the digital divide, expanded digital governance, and democratized access to services, information, and financial tools.

Vision and Genesis of Digital India

- Launched by: Ministry of Electronics and Information Technology (MeitY)
- Core Objective: Deliver digital infrastructure as a utility to every citizen, provide services on demand, and empower citizens digitally.
- Nine Foundational Pillars:

- Broadband highways
- Universal mobile connectivity
- Public internet access
- e-Governance
- e-Kranti (electronic delivery of services)
- Information for all
- Electronics manufacturing
- IT for jobs
- Early harvest programmes

Key Achievements Over a Decade

1. Digital Connectivity

- Internet Users: Grew from 250 million (2014) to over 970 million (2022)
- BharatNet: 4.2 million km of fibre optic cable laid; full village coverage pending
- 5G Network: Over 4.8 lakh 5G base stations operational as of 2024

2. Digital Payments and Financial Inclusion

- Unified Payments Interface (UPI):
 - Transactions increased from 92 crore (2017-18) to 8,375 crore worth ₹139 lakh crore (2022-23)
 - Facilitates over 100 billion real-time transactions annually
- Financial Inclusion: Enabled by Jan Dhan accounts and mobile wallets
- Direct Benefit Transfer (DBT):
 - ₹44 lakh crore transferred to beneficiaries
 - ₹3.48 lakh crore saved by eliminating leakages in subsidy schemes

3. Digital Governance

- Over 1,500 public services digitized through platforms like UMANG, DigiLocker, Aarogya Setu, and eSanjeevani
- DigiLocker has issued 6.7 billion+ documents
- DBT-enabled schemes like PM-KISAN, LPG subsidy, and MGNREGA made more transparent and efficient

4. Sectoral Digital Transformation

Sector	Transformation Highlights
Education	Platforms like DIKSHA , SWAYAM offered free digital learning
Healthcare	Over 14 crore teleconsultations through eSanjeevani
Agriculture	eNAM , Digital Agriculture Mission improved market access & planning
Transport	FASTag , DigiYatra , e-Challan, and Sarathi streamlined travel systems
Industry	Boost to MSMEs , start-ups , and e-commerce platforms
Rural Areas	Common Services Centres (CSCs) delivered services to remote populations
Entertainment	OTT, gaming apps, and regional content saw rapid expansion

5. Digital Empowerment

- Digital Literacy: Over 6 crore trained under PMGDISHA
- Women Empowerment: Initiatives like Nai Manzil and mobile banking promoted inclusion, though access gaps remain

Challenges and Gaps

1. Rural-Urban Divide

- Internet Access (NSS 2021):
 - 66% of urban households have internet
 - Only 24% of rural households are similarly connected

- **Device Ownership:**
 - Nearly 50% of rural women do not own mobile phones
- 2. **Infrastructure Deficits**
 - Only 57% of schools have functional computers
 - Only 53% have internet access
- 3. **Connectivity Issues**
 - BharatNet rollout delayed; many tribal and remote areas still lack reliable access
- 4. **Cybersecurity Concerns**
 - Rise in UPI frauds, phishing, ransomware
 - Low cyber awareness among first-time digital users
- 5. **Data Privacy and Protection**
 - Digital Personal Data Protection Act (2023) passed, but concerns persist:
 - Ambiguities in consent mechanisms
 - Potential for government overreach
 - Weak enforcement of data rights

Way Forward: Accelerating Inclusive Digitalization

1. **Bridging the Digital Divide**
 - **Rural Access:**
 - Fast-track BharatNet
 - Encourage public Wi-Fi and subsidize telecom expansion
 - **Women's Access:**
 - Introduce mobile ownership schemes for rural women
2. **Strengthening Digital Education**
 - Ensure digital classrooms and high-speed internet in all schools
 - Train educators in digital pedagogy and blended learning
3. **Cybersecurity and Data Protection**
 - Launch localised cyber awareness drives
 - Set up District Cyber Cells
 - Ensure independent oversight of DPDP Act implementation
4. **Leverage Emerging Technologies**
 - Encourage AI, Blockchain, IoT through regulatory sandboxes
 - Use AI for governance and welfare targeting
5. **Capacity Building and Job Creation**
 - Expand Skill India Digital for youth training in tech domains
 - Support tech startups in Tier 2 and Tier 3 cities with funding and incubation

Conclusion

Over the past decade, Digital India has transformed how citizens interact with the state, improving transparency, inclusion, and efficiency. Yet, the journey toward digital equity and empowerment is ongoing. The next phase must prioritize inclusive growth, data rights, and technological dignity, ensuring that no citizen is left behind in the digital age.

India's Critical Minerals Diplomacy: Strategic Engagement Through Mini-lateral 'Clubs'

Context

India is actively deepening its participation in global mini-lateral platforms such as the Quad (India, Japan, Australia, and the US) and the Minerals Security Partnership (MSP). These

partnerships mark a crucial shift in India's critical minerals strategy—especially in the context of the global green energy transition and India's dependence on Chinese mineral supply chains. A notable move came recently when Quad foreign ministers launched the Critical Minerals Initiative, aimed at diversifying and securing mineral inputs vital to clean technologies.

Why Critical Minerals Matter

- **Definition:** Critical minerals are essential for a nation's economic growth and security but have fragile and geopolitically sensitive supply chains.
- **Key Uses:** Minerals like lithium, cobalt, and rare earth elements are indispensable for:
 - Electric Vehicles (EVs)
 - Solar panels
 - Semiconductors
 - Battery storage systems
- **Risks for India:** Heavy reliance on China (e.g., rare earth magnets) leaves India vulnerable to geopolitical disruptions and supply shocks.

India's Domestic Challenges in the Critical Minerals Sector

- **Underdeveloped Ecosystem:**
 - Reserves remain underexplored.
 - India entered late into the global critical mineral race.
 - Domestic firms lack both capital and advanced extraction technologies.
- **Political Risk Abroad:**
 - Investment hesitancy due to political instability in mineral-rich countries (e.g., in Africa, Latin America).
- **Bilateral Agreements – Limited Gains:**
 - Argentina and Zambia: Agreements focus on exploration and mining.
 - UAE, UK, US: Focus on downstream areas like processing and recycling.
 - Without secured upstream access, India risks developing stranded processing infrastructure.

Mini-lateral Groupings: Strategic Opportunity for India

- **Advantages of Mini-lateral Clubs (e.g., Quad, MSP):**
 - Pool resources (technical, financial, diplomatic).
 - Enable blended finance, credit guarantees, and shared infrastructure.
 - Promote co-development of resilient and diverse supply chains.
- **Leveraging Partners' Strengths:**
 - Australia and Japan: Leaders in mineral exploration, refining, and technology.
 - Collaboration mitigates risk, enhances R&D, and accelerates clean-tech capabilities.

Safeguards and Strategic Risks for India

- **Avoiding Unequal Value Chains:**
 - Risk: India becoming only a processing/transit hub, while high-value activities remain in developed countries.
 - India must push for:
 - Technology transfer
 - IPR-sharing
 - R&D investment commitments
- **Guarding Against Global Protectionism:**
 - Future political shifts (e.g., Trump-era isolationism) could disrupt access.
 - India should ensure:
 - Transparent trade rules

- Mutual obligations
- Guaranteed access to critical raw materials

Aligning Diplomacy with National and Global Priorities

- Domestic Goals:
 - Make in India and Atmanirbhar Bharat seek:
 - Self-reliance in critical mineral value chains
 - Export-led clean technology industries
- Global Standards:
 - Engagement with mini-laterals promotes adherence to:
 - ESG (Environmental, Social, Governance) norms
 - Supply chain transparency
 - Sustainability targets
- Championing the Global South:
 - India's historic and diaspora ties with Africa and Southeast Asia offer a platform to:
 - Bridge Global North-South interests
 - Advocate for fair resource governance
 - Support scientific and economic sovereignty in the developing world

Conclusion

India's participation in mini-lateral platforms like the Quad and MSP is not just strategic—it's necessary. These alliances help India:

- Secure access to critical minerals
- Reduce dependency on China
- Accelerate green tech development

To succeed, India must:

- Balance foreign partnerships with domestic capacity-building
- Negotiate fair and equitable terms
- Uphold its commitment to inclusive, sustainable growth

The goal should be to emerge as a responsible global green power, not just a mineral transit route, and do so without falling into the orbit of any single geopolitical bloc.

Israel Has Failed to Solve the Persian Puzzle

Context

In June 2025, Israel launched a high-stakes military operation targeting Iran's nuclear infrastructure—an attack internally code-named the 'Red Wedding', referencing the infamous massacre from *Game of Thrones*. This metaphor was more than symbolic; it reflected Israel's intent to deliver a swift, devastating blow to Iran's nuclear and military establishment. However, despite its tactical precision, the operation ultimately failed to achieve its strategic goals, revealing the limits of Israeli power, the resilience of Iran, and the complexities of U.S. involvement under President Trump.

The 'Red Wedding': Symbolism of Surprise and Overreach

- Historical Reference: Like the Red Wedding in *Game of Thrones*, Israel sought a surprise assault to decapitate Iran's command structure and halt its nuclear programme.
- Strategic Goal: Modelled on the 1967 pre-emptive strike against Egypt, Israel hoped this operation would cripple Iran's military capabilities and possibly induce regime collapse.
- Scope: The targets included Iran's key nuclear sites (Natanz, Isfahan), top scientists, and senior Revolutionary Guard commanders.

Operation Success vs. Strategic Failure

- **Tactical Precision:** The airstrikes were a well-coordinated military feat, eliminating high-value targets and damaging key infrastructure.
- **Trigger:** The operation followed years of tension, escalating after the October 2023 Hamas attack, which broadened into a regional conflict involving Hezbollah and Iranian proxies.
- **Unexpected Iranian Resilience:**
 - The IRGC rapidly regrouped.
 - Iran launched retaliatory drone and missile attacks, exploiting weaknesses in Israel's defence systems.
 - Pre-dispersed enriched uranium helped Iran retain its nuclear potential.

The Trump Factor and Limited U.S. Support

- **Brief U.S. Involvement:** President Trump authorized airstrikes on fortified Iranian nuclear sites, including Fordow.
- **Premature Ceasefire:**
 - Trump quickly declared "mission accomplished" and pushed for a ceasefire.
 - This undercut Israel's hopes for a sustained campaign and signaled U.S. reluctance to commit to long-term Middle East conflicts.
- **Impact:** The limited U.S. backing emphasized Israel's military dependence and curtailed its broader strategic aims.

Iran's Response and the Paradox of Deterrence

- **Rebuilding Fast:** Despite damage, Iran's leadership and military apparatus remained intact and began reconstructing its nuclear infrastructure.
- **Nuclear Ambitions Reinforced:**
 - IAEA officials suggested Iran could resume enrichment quickly.
 - The war convinced many Iranians that acquiring nuclear weapons is essential for deterrence.
- **Strategic Paradox:** Rather than deterring Iran, the attack may have strengthened its resolve to cross the nuclear threshold.

Israel's Strategic Dilemma

- **Failure to Dismantle Iran's Capabilities:**
 - No regime change occurred.
 - Iran's nuclear programme remains recoverable.
- **Exposure of Military Limits:**
 - Israel's conventional military dominance struggles against Iran's asymmetric, decentralized defence tactics.
 - Heavy reliance on U.S. military and diplomatic cover is now more apparent than ever.
- **Policy Rethink Needed:** Israel is left at a crossroads, needing to reassess its long-term strategy towards a persistent and adaptive adversary.

Conclusion: A Cautionary Tale of Hubris and Incomplete Victory

- Like in *Game of Thrones*, the 'Red Wedding' did not destroy its target completely. Arya Stark's revenge reminds us that incomplete victories can have long-term consequences. Israel's 2025 strike on Iran, while spectacular in scale, has become a case study in overreach and strategic miscalculation.
- The ideological conflict between Israel and Iran remains unresolved, with Iran possibly closer than ever to acquiring a nuclear weapon.

- What was meant to be a knockout blow now stands as a warning against underestimating a resilient opponent, and against overreliance on military solutions to deeply rooted geopolitical rivalries.

Reframing the Population Debate: From Alarmism to Informed Policy

Evolving Demographic Discourse

Public narratives around population have undergone a significant transformation—from earlier fears of overpopulation and ecological stress to contemporary concerns about declining fertility. This shift reflects changing priorities in the context of aging populations, economic development, and reproductive trends.

Conflicting Narratives and Global Trends

While high-profile voices such as Elon Musk warn of an impending demographic collapse and civilizational decline, global projections offer a more nuanced view. According to the UN's World Population Prospects 2024, the global population is expected to grow from 8.2 billion in 2024 to a peak of 10.3 billion by the 2080s, before entering a phase of gradual decline.

Misinterpretations and Analytical Oversights

Prevailing anxieties around low fertility often rest on flawed interpretations:

- **Projections vs. Predictions:** Population forecasts are contingent on assumptions about future birth and death rates. Their predictive accuracy diminishes over longer timeframes due to increased uncertainty.
- **Population Momentum:** Even when fertility rates fall below the replacement level (2.1), population growth may persist for decades. This is due to the demographic momentum created by a large cohort of individuals still within childbearing age, making demographic transitions non-linear and gradual.

Unpacking the Real Fertility Crisis

Contrary to popular discourse, the more pressing issue is not reluctance to have children, but the systemic barriers preventing individuals from achieving their desired family size. Findings from UNFPA's 2025 report, based on surveys in 14 countries, reveal:

- 20% of respondents felt unable to have as many children as they wished.
- 23% reported delays in starting families.
- 40% ultimately abandoned their plans for more children.

Structural Constraints to Family Formation

The study identified recurring barriers across diverse fertility contexts:

- **Infertility:** 13% (India)
- **Financial pressures:** 38% (India); 58% (South Korea)
- **Inadequate housing:** 22% (India); 31% (South Korea)
- **Lack of quality childcare:** 18%
- **Unemployment and job insecurity:** 21%

South Korea: A Case in Point

South Korea's policy interventions—over \$200 billion spent across two decades—have yielded only modest fertility gains. A 7.3% increase in births observed in early 2025 was linked more to social factors like increased marriages and shifting attitudes than to financial incentives. However, persistent structural issues, particularly related to housing and affordability, continue to suppress fertility.

Towards Rights-Based Fertility Policies

Conventional pronatalist approaches, often rooted in population control paradigms, have disproportionately burdened women, restricting reproductive rights and reinforcing traditional roles. A more effective, rights-based framework would:

- Respect reproductive autonomy while supporting desired family outcomes.
- Avoid coercive or moralistic messaging tied to religion or nationalism.
- Prioritize gender equity, workplace flexibility, and institutional childcare.

The Limits of Target-Driven Pronatalism

Common policy tools—such as one-time cash incentives or baby bonuses—have shown limited efficacy:

- They tend to reinforce outdated gender norms.
- They often exclude men's role in parenting.
- They fail to generate sustained increases in fertility rates.

Reorienting Policy Priorities

Instead of directing women toward motherhood, policy must focus on:

- Promoting equal opportunities in the workforce.
- Eliminating professional penalties for parenthood.
- Creating a supportive social infrastructure that empowers family planning by choice, not pressure.

Yamuna River Rejuvenation: Towards Integrated Urban Water Governance

Context and Policy Shift

The recent alignment between the Delhi state government and the Centre has renewed focus on cleaning the Yamuna River, a key urban waterway burdened by pollution. This initiative complements the broader Namami Gange Programme (NGP) and has potential to become a replicable model for urban river restoration through cooperative federalism.

Namami Gange Programme: A Strategic Pivot

Launched in 2014, the NGP marks a shift from earlier regulatory models of pollution control (under the Ministry of Environment) to a mission-based executive framework led by the Ministry of Jal Shakti. This approach reorients river management toward ecological restoration and integrated planning.

Adoption of the River Basin Approach

The programme adopts a river basin planning model, drawing from expert institutions like the IITs. This aligns with global best practices, particularly the International Commission for the Protection of the Rhine (ICPR), which pioneered integrated river management in Europe post-1950.

Institutional Innovations and Multi-Level Governance

The 2016 River Ganga Authorities Order established a layered institutional framework:

- National Ganga Council (NGC) chaired by the Prime Minister
- Empowered Task Force under the Union Jal Shakti Minister
- Executive Council led by the Director General of the National Mission for Clean Ganga (NMCG)
- State and District Ganga Committees, recognizing subnational roles

Challenges to Subnational Engagement

Despite institutional mechanisms, state-level participation remains limited:

- Legal and financial frameworks at the state level are often insufficient.
- Lack of political and administrative ownership by basin states threatens the long-term success of NGP initiatives.

Delhi's Yamuna Initiative: A Policy Microcosm

The Yamuna's restoration efforts in Delhi highlight core governance challenges:

- Over 80% of the pollution load originates from untreated sewage within the city, underscoring the link between urban governance and water quality.
- The Yamuna's interstate river status makes it a testbed for interjurisdictional cooperation under NGP.

Scalability and Federal Coordination

Delhi's model offers a learning opportunity for developing scalable and federated frameworks. It enables deeper exploration of drivers that can mobilize state-level action and accountability within broader river rejuvenation missions.

Learning from International Experience

Europe's environmental response—spurred by events like the Sandoz chemical spill—led to robust institutions and laws, such as the EU Water Framework Directive. Similarly, India's NGP can evolve by strengthening its intergovernmental mechanisms and fostering institutional partnerships.

Conclusion: Towards Holistic Water Governance

The Yamuna project can serve as a catalyst for more effective subnational engagement, integrated urban water management, and federal cooperation in environmental governance. If leveraged strategically, it could strengthen India's broader framework for sustainable water management and environmental federalism.

India and the Global AI Race: The Urgent Need for a Strategic and Democratic Approach

Context:

As the U.S. and China lead the global AI arms race and the European Union sets regulatory standards, India has declared its ambition to be a key player in global AI governance. However, without a coherent, cabinet-approved national strategy, India's efforts risk becoming fragmented and globally ineffective—especially as global norms and rules for AI are rapidly taking shape.

India's Global AI Ambitions vs. Domestic Strategic Deficit

India's Global Aspirations:

India positions itself as a voice of the Global South in global AI discussions by leveraging:

- Its democratic credentials
- Strong digital infrastructure
- Leadership role in the Global Partnership on AI (GPAI)

Governance Deficit at Home:

While the IndiaAI Mission (with a ₹10,000 crore allocation) is active:

- It lacks formal cabinet approval and a national strategy.
- It functions as a division of a Section 8 company under the Ministry of Electronics and IT (MeitY), headed by a bureaucrat.
- It operates without sufficient political authority or cross-ministerial coordination.

Global Comparison:

Countries like the U.S., China, UK, and EU have formal, well-funded AI strategies with:

- Clear timelines
- Institutional structures
- Political mandates

Structural Challenges in India's AI Ecosystem

1. **Research and Talent Gaps:**
 - Weak R&D base in AI
 - Low global ranking of Indian universities in AI research
 - Poor collaboration between academia and industry
 - Significant brain drain to international AI research hubs
2. **Private Sector Weaknesses:**
 - IT industry mainly focused on services, not innovation
 - Limited investment in core AI research
 - No AI-first national champions
 - Venture capital mostly targets consumer tech, not deep-tech innovation
3. **Democratic and Institutional Deficiencies:**
 - Parliamentary apathy: Less than 1% of parliamentary questions address AI
 - Lack of oversight: No standing committees or bipartisan dialogue on AI
 - Technocratic discourse dominates: Core issues like strategic autonomy, public data governance, energy usage, and national security are largely ignored
 - Undermines public trust and long-term governance stability
4. **Risks to India's Global AI Credibility**
 - Mismatch between global ambition and domestic capacity
 - Global democracies are watching to see if India's domestic governance aligns with its international leadership claims
 - Without reform, India may be sidelined in shaping global AI norms and standards

The Way Forward: Building a Democratic and Strategic AI Framework

1. **Cabinet-Approved National AI Strategy:**
 - Must include an actionable roadmap aligned with economic, industrial, and security policies
 - Presented in Parliament to ensure democratic legitimacy
2. **Empowered Coordinating Authority:**
 - Needs a whole-of-government mandate
 - Backed by institutional structures for coordination and democratic accountability
3. **Strong Parliamentary Oversight:**
 - Establish dedicated parliamentary standing committees on AI
 - Encourage bipartisan engagement to ensure policy continuity
4. **Public Engagement and Transparency:**
 - Launch inclusive public debates on ethical, legal, social, and strategic implications of AI
 - Involve citizens, civil society, and industry

Conclusion: AI as a Strategic National Priority

Artificial Intelligence is more than just a technology—it's a transformative force with far-reaching implications for:

- National security
- Economic growth
- Social equity
- Governance

India's strengths—youthful population, digital backbone, and democratic ethos—position it well. However, to realize its global ambitions and contribute meaningfully to AI governance, India must urgently adopt a coherent, politically anchored, and democratically accountable AI strategy.

India's Gender Gap: A Warning Signal, Not Just a Ranking

Context

India is positioned as a rising global power—economically dynamic, digitally driven, and home to the world's youngest population. Yet, the 2025 Global Gender Gap Report by the World Economic Forum, which ranks India 131 out of 148 countries, reveals a serious contradiction: gender inequality continues to be a fundamental barrier to inclusive progress.

Understanding the Gender Gap: Structural Failures

Key Areas of Concern:

India's lowest scores come from:

- Economic Participation and Opportunity
- Health and Survival

Despite notable progress in educational access, this hasn't translated into improved employment, well-being, or economic autonomy for women.

Persistent Structural Issues:

- Skewed sex ratio at birth reflects deep-rooted son preference.
- Declining healthy life expectancy for women points to chronic underinvestment in women's health—particularly in reproductive and preventive care.

Skewed Health Outcomes: A Crisis in Waiting

Anaemia Crisis:

Over 57% of Indian women (15–49 years) are anaemic, undermining:

- Cognitive development
- Maternal health
- Workforce readiness

Policy Inadequacies:

- Primary and reproductive health services remain underfunded and inaccessible, especially for rural and poor women.
- Structural neglect of women's health erodes the foundation of economic inclusion.

Economic Exclusion and the Invisible Burden

Disparity in Labour Participation:

- India ranks 143rd on the Economic Participation subindex.
- Women earn less than one-third of what men earn.
- Formal workforce participation remains abysmally low.

Missed Opportunity:

A 2015 McKinsey report predicted that closing the gender gap could boost India's GDP by \$770 billion by 2025—a goal now out of reach.

Unpaid Labour and Underrepresentation:

- Women do 7 times more unpaid care work than men (Time Use Survey).
- This vital labour remains unrecognized in national accounting.
- Representation of women in decision-making roles—from corporate boards to legislatures—remains minimal.

Demographic Crossroads: The Urgency of Inclusion

India's demographic landscape is shifting:

- Fertility rates are now below replacement level.
- By 2050, the share of elderly—especially widowed women—will double.
- The dependency ratio will rise, putting more pressure on a shrinking workforce.

What This Means:

- Gender inclusion is not just a moral issue—it is a demographic and economic imperative.
- Without integrating women fully into the workforce, India risks eroding its growth potential.

From Slogans to Systems: The Need for Structural Reform

India has the policies and frameworks—what's missing is real investment and implementation.

Key Actions Needed:

- Strengthen public health systems with a focus on reproductive and preventive care.
- Expand care infrastructure as part of social protection.
- Use gender budgeting and time-use data to inform policymaking.
- Recognize women as economic actors, not just welfare recipients.

Conclusion: A Call for Transformative Action

India's ambition to become a global superpower will remain unrealized if it excludes half its population.

- Gender inequality in health, labour, and care is more than a social challenge—it is a drag on national progress.
- The Global Gender Gap Report (2025) is not just a ranking—it's a wake-up call.

What India Needs Now:

- A whole-of-government approach
- Systemic reform, not tokenism
- Women at the core of economic and demographic strategy

The era of slogans has passed. It's time for real, measurable investment in gender equity.

India's Equality Ranking: The Illusion vs the Inequality Reality

Introduction

India was recently claimed to be the 4th most equal country in the world, a bold assertion based on a selective interpretation of a World Bank report. This claim relies solely on a decline in consumption-based Gini coefficient, while ignoring deeper income and wealth inequalities that remain embedded in the socio-economic fabric of the country.

Understanding the Gini Coefficient

The Gini coefficient is a widely used measure of inequality in distribution:

- Scale: Ranges from 0 (perfect equality) to 100 (perfect inequality)
- Types:
 - Income-based Gini
 - Consumption-based Gini
 - Wealth-based Gini

Why the Type of Gini Matters:

- India's consumption-based Gini may be low, but income and wealth-based Gini scores tell a drastically different story.
- The type of metric used can mask the true depth of inequality.

The Government's Claim vs the World Bank's Caution

- The government claimed India's equality based on falling consumption inequality, with Gini dropping from 28.8 (2011–12) to 25.5 (2022–23).
- However, the World Bank cautioned:
 - The decline may stem from methodological issues.
 - Surveys often underreport the consumption of the rich, leading to artificially low inequality estimates.

- Income and wage inequality remains very high.

Why Consumption Data Masks True Inequality

- Consumption equality $\neq$ income or wealth equality:
 - Wealthy individuals consume less proportionally and invest more, which is underreported.
 - The poor spend most of their earnings, making consumption more visible.
 - Luxury consumption, black money, and asset accumulation are excluded from most surveys.

Income Inequality: A Steep Rise

- According to World Bank:
 - Income-based Gini rose from 52 (2004) to 62 (2023).
 - India ranks 176th out of 216 in income equality.
 - In 2023-24, the top 10% earned 13 times more than the bottom 10%.

Implication:

- India's economic growth has benefited a small elite, leaving most behind.

Wealth Inequality: Even More Alarming

- India's wealth Gini index is ~75, showing extreme concentration of assets.
- As per World Inequality Lab & Oxfam:
 - Top 1% own 40.1% of total wealth.
 - Top 1% earn 22.6% of total income.
 - Bottom 50% own only 6.4% of wealth and earn just 15% of income.

Impact:

- Wealth concentration reinforces educational gaps, unequal opportunity, and intergenerational poverty.

Nutrition and Calorie Inequality

- India ranks 102/185 in per capita calorie intake (UN FAO).
- Indicates hidden hunger and chronic food insecurity.
- Nutrition inequality remains stark, especially among rural and low-income communities.

Labour Market and Wage Disparities

- Significant wage gaps persist across gender, caste, and geography.
 - Casual and informal workers earn the least.
 - Gender wage gap remains around 19-25%.
 - SCs/STs and Muslims are underrepresented in high-paying, formal jobs.
- The gig economy lacks job security, social protection, and fair wages.

Rural-Urban and Regional Inequality

- Urban India commands most of the income and infrastructure.
- Rural consumption growth lags, worsening overall inequality.
- Southern and western states outperform central and eastern regions in health, education, and income.

Structural Drivers of Inequality

- Education gaps and high dropout rates among marginalized groups.
- Healthcare disparities and high out-of-pocket costs.
- Digital divide limits access to information and opportunities.
- Asset concentration in land, real estate, and finance.
- Jobless growth means economic expansion is not translating into jobs.

Global Comparison: Where India Stands

Country	Income Gini (2023)
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India	62
Sweden	28
Germany	31
USA	41
South Africa	63

India is closer to South Africa than to advanced democracies, belying any claim of global equality leadership.

Narrative vs Reality: Government Blind Spots

- The government has selectively cited favourable consumption metrics while ignoring income and wealth inequality.
- Growing mistrust in official statistics and data opacity undermines informed policymaking.
- Honest recognition is key to designing effective reforms.

Way Forward: A Multi-Dimensional Strategy

1. **Strengthen Statistical Infrastructure:** Reform NSSO and PLFS to better reflect informal and high-income data.
2. **Taxation Reform:** Consider progressive taxation, wealth/inheritance taxes. Reduce regressive indirect taxes on the poor.
3. **Redistributive Welfare:** Expand and deepen:
 - a. Direct Benefit Transfers
 - b. Employment guarantees
 - c. Food and health subsidies
 - d. Labour Protections
4. **Formalise informal work with:**
 - a. Social security
 - b. Minimum wage standards
5. **Targeted Inclusion:** Prioritise education, healthcare, and entrepreneurship for:
 - a. SCs/STs
 - b. Minorities
 - c. Women

Conclusion

The claim that India is one of the world's most equal countries is based on a narrow, misleading interpretation of consumption data. In contrast, income and wealth inequality have worsened sharply in recent years.

India's deep inequality is structural, not circumstantial. Addressing it requires transparent data, political resolve, and inclusive policies that go beyond rhetoric.

To unlock its true potential, India must include the millions it has left behind. Equality is not just a statistic—it's a societal foundation

Strengthening Agricultural Research

Introduction

- India's remarkable progress in agriculture owes much to international research bodies like the International Maize and Wheat Improvement Center (CIMMYT) and the International Rice Research Institute (IRRI).
- With the United States scaling back funding under a more transactional foreign policy, the spotlight is now on India to take on a greater financial and leadership role in supporting these organizations.

- This support is not merely financial — it signals India's strategic commitment to global food security, climate-smart agriculture, and soft power diplomacy.

Background

- CIMMYT and IRRI are part of the CGIAR system — a network of international agricultural research centers.
 - CIMMYT specializes in maize and wheat breeding.
 - IRRI focuses on rice research.
- These institutions were instrumental in India's Green Revolution (1960s–70s), helping the country transition from a state of food shortage to surplus.
- The adoption of semi-dwarf wheat and rice varieties, driven by innovations from international centers and Indian scientists like M.S. Swaminathan and reformers like C. Subramaniam, led to significant improvements in productivity.

Recent Developments

- Under former U.S. President Donald Trump, USAID ceased its funding to CIMMYT.
 - Previously, USAID provided \$83 million out of CIMMYT's total \$211 million in grant revenue.
- This reflects a broader trend in U.S. foreign policy that emphasizes domestic priorities over support to multilateral institutions.
- The funding cut jeopardizes global cereal research efforts, particularly in wheat and maize.

Why India Should Step Up Funding

1. Manageable Financial Burden

- India holds over \$700 billion in foreign exchange reserves.
- In 2024, India's contributions were:
 - \$0.8 million to CIMMYT
 - \$18.3 million to IRRI
- Even a small increase in funding could produce major returns through improved yields, climate-resilient crops, and food security.
- This is a high-impact, low-cost investment.

2. Boosting India's Soft Power

- As an emerging leader of the Global South, India's support reinforces its identity as a development partner and responsible global actor.
- Strengthening institutions like CIMMYT and IRRI aligns with foreign policy goals: promoting South-South cooperation, building developmental diplomacy, and balancing North-South power structures.
- Ensuring food security is also essential for political stability and national sovereignty.

3. Long-Term Agricultural and Climate Strategy

- India's population is projected to hit 1.7 billion by 2060.
- Increasing food demand amidst constraints like shrinking land, water stress, and climate change poses a serious challenge.
- Solutions lie in breeding crops that are drought-, heat-, and salinity-tolerant — areas in which CIMMYT and IRRI have global leadership.
- Continued engagement with these institutions gives India access to state-of-the-art innovations.

The Rising Role of Maize in India

- Maize is gaining prominence as:
 - A feed crop for livestock (indirect human consumption through milk, meat, eggs).
 - A biofuel resource — increasingly vital amid India's push for ethanol blending.

- Demand is expected to surge, necessitating research in high-yielding, pest- and climate-resistant maize varieties.
- CIMMYT's expertise in maize improvement is key to avoiding import dependency.

Reviving India's Domestic Agricultural Research System

India's support must extend beyond global institutes — revitalizing its own research framework is equally critical.

1. Funding Challenges and Institutional Fragmentation

- The Indian Council of Agricultural Research (ICAR) oversees 100+ institutions, but funding remains thin and scattered, reducing overall effectiveness.

2. Leadership Vacuum

- The Green Revolution era thrived due to visionary leadership and policy direction.
- Today, there is policy hesitation on issues like genetically modified (GM) crops, biotechnology, and digital agriculture, despite strong scientific backing.

3. Overdependence on Subsidies

- Farmers continue to rely heavily on underpriced inputs such as water, electricity, and fertilisers.
- This leads to inefficiencies (e.g., excessive urea use) and unsustainable practices.
- Redirection of resources into agri-R&D, precision farming, and climate-resilient techniques would offer better long-term solutions.

Bridging Research and Practice: Strengthening Extension Services

- Scientific advancements must reach the farm gate — a weak link in India's agri-chain is extension services.
- Global institutes like CIMMYT and IRRI follow participatory research models, involving farmers directly in testing and feedback loops.
- India can adopt similar practices by:
 - Strengthening Krishi Vigyan Kendras (KVKs)
 - Encouraging farmer-led trials
 - Fostering public-private collaborations in seed and technology dissemination

Strategic Advantages of Supporting CIMMYT and IRRI

- Access to Global Germplasm: Indian scientists gain access to thousands of improved crop lines adapted to diverse agro-climatic conditions.
- Global Collaboration Networks: Opportunities to work on cutting-edge research like CRISPR gene editing, digital phenotyping, and AI-driven agriculture.
- Resilience and Rapid Response: These institutes support global early warning systems and provide strategic responses to pest invasions (e.g., Fall Armyworm) or climate shocks.

Way Forward

India is entering a critical phase in its agricultural journey. Having achieved cereal self-sufficiency, the next step is building sustainable and resilient food systems. This requires:

- A renewed emphasis on science-driven agriculture
- Strategic investment in global research institutions
- A revamped ICAR and modernized national research ecosystem
- Adoption of climate-resilient, precision agriculture practices
- Empowering farmers with technology, tools, and knowledge

Conclusion

Backing CIMMYT and IRRI is more than a financial contribution — it is a strategic affirmation of India's leadership in the global quest for food security. This support aligns with national

interests, advances agricultural innovation, and reflects India's role as a pillar of sustainable development and global cooperation.

Assessing India's Carbon Credit Trading Scheme (CCTS) Targets

Context

The Government of India has set emissions intensity targets for nine major energy-intensive sectors under its newly introduced Carbon Credit Trading Scheme (CCTS).

The sectors include:

- Aluminium
- Cement
- Paper and Pulp
- Chlor-Alkali
- Iron and Steel
- Textile
- Fertiliser
- Petrochemicals
- Petroleum Refineries

However, assessing the ambition of these targets should not focus solely on sector-specific or entity-specific benchmarks. A meaningful evaluation requires a macro-level, economy-wide analysis.

Background: India's Role in Global Carbon Pricing

India is emerging as a leader in global carbon market mechanisms, alongside countries like Brazil and Türkiye.

- In July 2024, India launched the CCTS, a rate-based Emissions Trading System (ETS) targeting emissions intensity reductions rather than absolute emission caps.
- The scheme applies to nine heavy industrial sectors and is structured to reward performance through Credit Certificates for entities that outperform benchmark emissions intensity levels.

Components of CCTS:

1. Compliance Mechanism – For obligated industries with mandatory targets.
2. Offset Mechanism – For voluntary participants seeking to reduce their carbon footprint.

This initiative represents a foundational step toward creating a national carbon market, aiming to reduce emissions through market-based incentives.

Why Aggregate Economy-Level Assessment Is Critical

India's earlier experience with the Perform, Achieve and Trade (PAT) scheme) illustrates that:

- While energy efficiency may vary across individual sectors or companies, overall economy-wide efficiency gains are possible.
- Hence, measuring ambition must be based on aggregate national trends, rather than on individual or sectoral outcomes.

Key Considerations:

- Sector-level targets primarily drive credit allocation and financial transactions, not broader decarbonisation impact.
- Reliance on past performance under PAT is insufficient; the evaluation should align with India's climate commitments, such as:
 - 2030 Nationally Determined Contributions (NDCs)
 - Net-zero emissions by 2070

Evaluating the Ambition of India's Industrial Emissions Targets

Modelling Insights for NDC Alignment:

- To stay on track for its 2030 NDC, India must:
 - Reduce CO₂ emissions intensity of the energy sector (per unit of GDP) by 3.44% annually from 2025 to 2030.
 - Lower the Emissions Intensity of Value Added (EIVA) in manufacturing by at least 2.53% annually during the same period.

CCTS Performance vs. NDC Pathway:

- Under current CCTS targets, the average annual reduction in EIVA across the eight covered industrial sectors is estimated at just 1.68% between 2023–24 and 2026–27.
- This falls short of both:
 - The economy-wide target (3.44%)
 - The manufacturing sector benchmark (2.53%)

Although CCTS currently applies to a limited portion of the manufacturing sector, this figure provides a provisional basis for gauging progress until further comprehensive sectoral modelling becomes available.

Conclusion

The true indicator of ambition in emissions reduction should be the aggregate decline in emissions intensity across the entire economy, rather than isolated gains within specific sectors or entities.

India's industrial decarbonisation efforts — especially through schemes like CCTS — must be evaluated in the context of:

- Long-term national climate goals
- Alignment with India's NDCs and 2070 net-zero trajectory
- Holistic economic transformation towards low-carbon development

Bridging the Skills Gap: India's Employment Challenge and the Road to Workforce Readiness

Context

India, despite being one of the world's largest producers of graduates, faces a persistent paradox: millions of educated youth remain unemployed or underemployed due to a mismatch between academic output and industry requirements. Recent data from the Employees' Provident Fund Organisation (EPFO) and key employment reports underscore the urgent need for skilling, reskilling, and systemic reform to equip India's workforce for a rapidly changing job market.

Understanding the Formal Employment Landscape

EPFO as a Proxy for Formal Employment Trends

- EPFO is a key barometer of formal employment, managing retirement savings for over 70 million workers, making it one of the largest global social security agencies.

Post-COVID Trends (as of March 2025)

- Youth aged 18–25, especially the 18–21 age group, make up 18%–22% of new EPFO subscribers.
- This indicates a positive trend in formalisation of employment and a steady increase in net new enrollments, particularly among first-time job seekers.

India's Youth Unemployment and Employability Crisis

Insights from the India Employment Report 2024

- Published by the International Labour Organization (ILO) and the Institute for Human Development (IHD).

- Youth constitute 83% of India's unemployed population.
- Ironically, the highest unemployment rates are among the educated, especially those with secondary and higher education qualifications.

Economic Survey 2023-24 Findings

- The key issue is unemployability—only 50% of graduates are job-ready.
- There's a significant skills gap, particularly in digital proficiency, professional competencies, and soft skills.
- Technological shifts like AI and automation are further threatening existing job roles, especially in IT-related fields.

Digital Skills Deficit in the Workforce

India Employment Report 2024 – Digital Literacy Gaps

- 75% of individuals struggle to send emails with attachments.
- 60%+ are unable to perform basic file operations.
- 90% lack skills in using spreadsheets and formulas.

This stark skills mismatch threatens India's ability to leverage opportunities in a digital-first economy.

World Economic Forum – Future of Jobs Report 2025

- By 2030, 170 million new jobs are expected to be created (14% of employment).
- 92 million jobs could be displaced (8%), leading to a net job creation of 78 million (7%).
- Without urgent skilling initiatives, India risks missing out on this window of opportunity.

Structural and Policy Reforms Required

1. Strengthening Education-Industry Linkages

- Make industry-academia collaboration mandatory in all higher education institutions.
- Tie institutional accreditation to placement performance and industry engagement.
- Hold educational institutions accountable for employment outcomes of graduates.

2. Curriculum and Pedagogy Overhaul

- Introduce Idea Labs and Tinker Labs as mandatory across schools and colleges to promote innovation.
- Include soft skills, foreign language training, and liberal arts education as essential components of curricula.

3. Preparing Youth for Global Workforce

- Develop training programs aligned with international job markets, particularly in ageing economies in the West.
- Example: The India-EU Link4Skills project, run by the International Institute of Migration and Development, as a model for cross-border skilling and placement.

4. Reforming Education Governance

- Establish an Indian Education Services (IES) cadre on the lines of the IAS to bring top talent into education policy and administration.
- Enable industry experts to teach part-time or full-time in academic institutions to bridge the gap between classroom theory and practical application.

The Way Forward: Moving from Degree to Deployment

India's demographic dividend can quickly become a burden unless the youth are made employment-ready through:

- Stronger education-to-employment pipelines
- Scalable digital and vocational training
- A focus on future-ready job skills
- Greater accountability in public and private education systems
- Global skilling partnerships to tap into international labour demands

Conclusion

Addressing India's employment crisis is not just about creating jobs — it is about ensuring that graduates have the skills, mindset, and adaptability to succeed in the 21st-century job market. This calls for coordinated action across government, academia, and industry to transform India from a degree-rich but skill-poor nation into a workforce-ready global powerhouse.

Secularism in India: Implied Since Inception, Declared in 1976

Context: Between the Sacred and the Secular

Friedrich Nietzsche's famous proclamation of "God is dead" serves less as a theological claim and more as a symbol of society's transition from religious dominance to secular governance. This transition is especially significant in India, where ancient religious traditions coexist with a modern constitutional framework based on secular ideals.

Yet, secularism remains one of India's most hotly debated concepts — caught between its civilizational heritage, constitutional intent, and rising majoritarian politics.

Nehru's Vision: Morality Over Dogma

- Jawaharlal Nehru, one of the primary architects of modern India, was a vocal critic of organised religion. In his autobiography, he associated religion with dogma, intolerance, and superstition.
- Unlike many contemporary political leaders who use religion for electoral mobilisation, Nehru believed that religion had no place in state affairs.
- His approach to secularism was rooted in rationalism and ethics, drawing inspiration from Enlightenment ideals, but without promoting atheism.

The Uniqueness of Indian Secularism

Not French Laïcité, Nor American Non-Establishment

- The Supreme Court of India has clarified that Indian secularism is neither a replication of France's strict separation (laïcité) nor America's church-state divide.
- India instead pursues a pluralistic model, where all religions are respected and the state remains equidistant.

Religious Autonomy and State Neutrality

- True secularism in India means protecting the autonomy of all faiths, including Hinduism.
- History shows that state religion leads to religious erosion — whether in the case of Islam's decline under political rulers in medieval India or Christianity's politicisation in Europe.
- Thinkers like John Locke and Roger Williams had argued that state authority should concern itself with civil order, not spiritual salvation.
- Thus, secularism is not anti-religion, but pro-religious freedom — enabling diversity of belief to thrive.

India's Indigenous Roots of Secularism

Ashokan Dhamma: An Ancient Ethical Framework

- Emperor Ashoka's edicts, over 2,000 years old, provide a foundational Indian model of religious tolerance and civic ethics:
 - Rock Edict 7: Advocates equal respect for all religions.
 - Rock Edict 12: Warns against exalting one's own religion while denigrating others.
- His Dhamma was not a theology but a moral code promoting compassion and coexistence — akin to modern constitutional morality.

- Scholars like Rajeev Bhargava argue that Ashokan ideals inform India's distinctive form of secularism.

Constitutional Secularism: Not Born in 1976

- It's a misconception that secularism entered Indian constitutionalism only through the 42nd Amendment (1976).
- Key pre-independence and pre-1976 milestones:
 - 1928 Motilal Nehru Report and 1931 Karachi Resolution advocated for a secular state.
 - Even the 1944 Hindu Mahasabha draft constitution supported the idea of no state religion.
- In the Constituent Assembly, when H.V. Kamath proposed invoking God in the Preamble, the motion was democratically rejected.
- Though the term "*secular*" was added later, the Constitution's structure, rights, and spirit already reflected secular ideals.

Comparative Constitutionalism: Secularism Beyond Borders

- Countries like the UK, Ireland, and Greece reference religion in their constitutional texts but maintain religious freedom and equality.
- Even Pakistan and Sri Lanka, despite endorsing state religions, constitutionally protect minority rights and religious freedom.
- India's constitutional approach aligns with global democratic norms, while remaining rooted in its own civilizational values.

The Way Forward: Balancing Identity with Ethics

- The pressing question is not whether India should be secular, but what form of secularism it should uphold.
- Rejecting Nehruvian secularism doesn't justify drifting into religious majoritarianism or theocracy.
- The choice is not between Western models and cultural nationalism, but between ethical governance and sectarian statecraft.
- Even the BJP, while critical of Nehru's model, has previously endorsed "positive secularism" — suggesting room for dialogue.
- The real danger lies in dismantling constitutional ideals in favour of majoritarian politics, which risks betraying both modern democratic principles and ancient Indian traditions of tolerance.

Conclusion: A Silent Yet Living Spirit

Nietzsche's declaration may have declared God dead, but the human need for meaning, identity, and transcendence continues to shape political life. India's Constitution never denied religion; it simply confined it within ethical and legal frameworks.

The absence of the word "secular" in 1950 was not a rejection, but a silent affirmation of pluralism and freedom of conscience.

India's secularism is not a borrowed Western concept — it is a deep-rooted legacy of civilisational wisdom and constitutional foresight, which must be preserved and evolved.

Women in STEM: Bridging the Gap Between Education and Employment

Context: A Growing Disparity in STEM Careers

On World Youth Skills Day 2025, India confronts a paradox: although 43% of STEM graduates are women—the highest globally—only 27% are employed in STEM roles.

While female labour force participation has improved to 41.7% (PLFS 2023-24), rural women remain more active due to limited formal job opportunities in urban areas. Globally, women make up just 31.5% of researchers (UNESCO, 2021), underlining the global education-to-employment gap for women in science and technology.

Bridging this divide isn't just a matter of equity—it's an economic imperative. McKinsey estimates that closing the gender gap could add \$700 billion to India's GDP by 2025. The World Bank notes that raising female labour participation to 50% could contribute an additional 1% GDP growth annually.

Government Action: Skilling, Empowerment, and Policy Support

STEM Skilling Through NEP and ITI Revamps

- The New Education Policy (NEP) 2020 emphasizes integrating STEM education with skills training and life skills, improving access and retention.
- The Ministry of Education is enhancing Industrial Training Institutes (ITIs), particularly in rural regions, to make technical education more inclusive and accessible.

Viksit Bharat and Gender-Focused Budgeting

- The Viksit Bharat vision positions women's participation as critical to inclusive national growth.
- Reflecting this, the gender budget allocation rose from 6.8% (2024-25) to 8.8% (2025-26), with ₹4.49 lakh crore dedicated to gender-centric programmes.

Union Budget 2025-26 Highlights

- Introduction of term loans for women entrepreneurs
- Establishment of new National Skill Training Institutes
- Expanded investment in technology-led vocational training

These steps complement flagship initiatives like Skill India, Digital India, Beti Bachao Beti Padhao, and PM Vishwakarma Yojana, all aimed at empowering women through education, skills, and enterprise.

The Role of Industry: From Passive Employer to Active Enabler

Why Policy Alone Isn't Enough

Despite robust government initiatives, industry engagement is critical to translating education into employment.

The transition from classroom to career hinges on more than just skills—it requires mentorship, inclusive workplaces, and reskilling support.

Cultural and Social Barriers

- Deep-rooted stereotypes label technical fields as "masculine", deterring women from pursuing or sustaining STEM careers.
- World Bank and UNESCO reports highlight that women's dropout from STEM is not ability-related, but often due to:
 - Unwelcoming work environments
 - Gendered expectations at home
 - Lack of family or institutional support

Tackling Workplace and Social Challenges

For women to thrive in STEM, structural and cultural challenges must be addressed:

- Workplace safety and harassment protection
- Equal pay and transparent promotion pathways
- Support for life events such as marriage, maternity, or caregiving breaks
- Community engagement to reshape traditional mindsets about women's roles in technology and leadership

Promising Private Sector Models

Private Sector Initiatives Gaining Ground

- Companies are partnering with educational institutions to offer mentorship, internships, and hands-on training.
- A leading example is UN Women's WeSTEM programme (with Micron Foundation, Madhya Pradesh & Gujarat governments), which:
 - Trains women in STEM skills
 - Promotes workplace inclusivity and safety
 - Engages families and showcases female role models

This integrated approach underscores that skilling alone is not enough—social support and workplace change are essential.

Towards an Industry-Led Blueprint for Change

To bridge the education-to-employment divide, industry must lead by:

- Building structured mentorship programmes connecting students and professionals
- Collaborating with educational institutions to align curricula with market needs
- Implementing inclusive workplace policies that accommodate career breaks, caregiving, and safety
- Promoting diverse leadership and recognising women's contributions in innovation and R&D

Conclusion: Investing in Women is Investing in India's Future

The central question is not whether India can afford to invest in women's STEM careers—it's whether industry can afford not to.

Enabling women with skills, support, and opportunities isn't just a social good—it's an economic strategy.

When women earn, they uplift families, transform industries, and shape policies. Their empowerment is essential to building a resilient, inclusive, and future-ready India.

India-Europe Partnership: A Strategic Necessity in a Fractured World

Context: A Changing Global Landscape

In an increasingly unstable world marked by shifting alliances and geopolitical fragmentation, the partnership between India and Europe has gained renewed strategic importance. Rooted in shared democratic values and civilisational depth, this relationship offers a forward-looking vision amid global uncertainty. As traditional alliances weaken and new power structures emerge, India and Europe are uniquely positioned to build a robust, value-driven, multipolar partnership.

From Strategic Distance to Active Engagement

Historical Under-engagement

Traditionally, India and Europe remained marginal in each other's foreign policy priorities. This passive approach, however, no longer suits the complexities of the 21st century.

A Pragmatic Shift in Diplomacy

- India, under Prime Minister Narendra Modi and External Affairs Minister S. Jaishankar, has adopted a proactive stance toward Europe—not out of nostalgia for colonial-era ties, but as a realist response to a fractured global order.
- Simultaneously, European states are re-evaluating their dependence on the U.S., especially after the unpredictability of the Trump era, and are now turning to India as a strategic partner.

- The European pursuit of “strategic autonomy”, once driven primarily by France, is now echoed in capitals across the continent—from Berlin to Warsaw.

Shared Vision for a Multipolar World

At the core of the India-Europe relationship lies a mutual commitment to a multipolar, rules-based global order, built on:

- International law
- Inclusive institutions
- Pluralistic values

This convergence is reflected in:

- Institutional dialogues on climate action, digital governance, and international security.
- Bilateral ties expanding across Western, Nordic, and Eastern Europe, including deepening strategic cooperation with France, Germany, and Italy.

Economic Synergy and Growing Trust

Rising Investment and Trade

- EU FDI in India increased by 70% between 2015 and 2022.
- France's FDI rose by a remarkable 373%.
- EU imports from India have doubled in the last three years, showcasing New Delhi's growing economic appeal.

These figures highlight a shift from transactional exchanges to a long-term, trust-based economic partnership.

New Frontiers of Collaboration

1. Digital and Technological Cooperation

- India's digital innovation ecosystem—including platforms like UPI and Aadhaar—complements Europe's strengths in semiconductors, digital manufacturing, and deep tech.
- Both regions reject tech monopolies and advocate for digital infrastructure as a public good.
- Potential areas of global leadership include:
 - Clean energy technologies
 - Biotechnology and life sciences
 - Sustainable ocean development
 - Digital health and public data systems

2. Defence and Security Cooperation

- Technology co-development, joint R&D, and military-industrial partnerships align with India's *Atmanirbhar Bharat* goals and Europe's *ReArm 2025* strategy.
- Promising areas of strategic collaboration:
 - Maritime security
 - Cyber resilience
 - Space exploration
 - Counter-terrorism efforts
- There is a need for stronger European resolve on issues like Islamist extremism and Pakistan's enabling role—threats that impact both regions.
- Security cooperation must move beyond bureaucracy and adopt a principled, political approach.

Global Governance and Shared Responsibility

Multilateral Leadership

India and Europe have a joint responsibility to uphold and reform the global rules-based order—not as an idealistic pursuit, but as a strategic imperative.

- Multilateral institutions like the UN, WTO, and future governance bodies for emerging tech (e.g., AI) need inclusive leadership.
- Together, they can offer human-centric alternatives to authoritarian governance models.

Voice of the Global South

Both regions can act as bridges to the Global South, promoting frameworks that are not only rules-based but also development-focused and equitable.

The Need for Cultural Recalibration

Overcoming Mutual Misperceptions

To build a truly resilient relationship, public and political narratives must evolve:

- Europe must move beyond outdated views of India as inward-looking or reactive.
- India must better understand Europe's complex internal transformations.

Cultural Diplomacy in Action

Initiatives like:

- The Raisina Dialogue in Marseille
 - Increasing high-level diplomatic exchanges
- Reflect the deepening of people-to-people ties and a shared commitment to sustained engagement.

Conclusion: A Partnership of Conviction, Not Convenience

The India-Europe partnership is no longer optional—it is strategically indispensable. Shared democratic values, economic complementarity, and a commitment to pluralism create the foundation for a relationship built not on temporary needs, but on lasting conviction. In a world at a crossroads, India and Europe walking in step may well be the key to building a stable, multipolar, and inclusive global order.

The Issue with Criminalising All Adolescent Relationships

Context

In 2025, the Supreme Court of India delivered a landmark sentencing judgment in *Re: Right to Privacy of Adolescents*, marking a rare and nuanced intervention in Indian legal discourse. This case highlights the tension between the rigid framework of the Protection of Children from Sexual Offences (POCSO) Act and the complex realities of adolescent sexuality, consent, and autonomy.

The case involved a 14-year-old girl and her 25-year-old partner from rural West Bengal. Using Article 142 of the Constitution, the Court not only sought justice for this individual case but also aimed to spark a larger conversation on systemic legal failures, adolescent rights, and the urgent need for reform.

The Case at Hand and Supreme Court's Response

Case Details

- The case began when the girl's mother initiated criminal proceedings under POCSO.
- The girl was institutionalized, rescued, and returned to her family, only to flee again due to social stigma and constant surveillance.
- The couple married and had a child before the girl turned 18. Subsequently, the man was arrested and convicted under POCSO, receiving a 20-year sentence.
- In 2022, the Calcutta High Court overturned the conviction, citing socio-economic context and absence of exploitative intent.
- However, the High Court's judgment contained problematic language framing adolescent female sexuality as something to be controlled, reflecting deep societal biases.

Supreme Court's Evolving Position

- Responding to widespread public criticism of the High Court's language, the Supreme Court took suo-motu cognizance, underscoring the case's gravity and public interest.
- The Court reinstated the man's conviction but refrained from sentencing him.
- It appointed an expert committee to evaluate the woman's wishes and well-being, who by then was an adult.
- The Court concluded that sentencing the man would unjustly harm the woman, the very person POCSO intends to protect.
- The committee's findings revealed that her trauma stemmed less from the relationship and more from institutional processes — police investigations, judicial proceedings, and prolonged efforts to reunite the couple.

Broader Implications

Questioning the Blanket Criminalisation under POCSO

- The case reignited a critical debate about whether POCSO, as currently structured, adequately addresses adolescent agency and sexual relationships.
- Studies indicate that over 24% of POCSO cases in states like Assam, Maharashtra, and West Bengal involve consensual relationships, where many victims refuse to testify against their partners.
- The law thus often criminalizes normal adolescent behavior, defeating its own protective purpose.
- The age of consent was raised from 16 to 18 in 2012, intending to shield minors from exploitation, but inadvertently rendering all sexual activity under 18 illegal — irrespective of consent or relationship context.

Agency, Consent, and Structural Challenges

- The case exposes the conflict between the legal definition of consent and adolescents' lived experiences of agency.
- The law fails to recognize that adolescents may express limited agency through relationships, particularly in patriarchal and resource-poor settings.
- The Supreme Court's rejection of the notion that girls are voiceless under the law highlights a paternalistic view that denies young people the capacity to assert their interests.
- While consent may be imperfect—shaped by poverty, limited choices, and societal norms such as child marriage—criminalizing such relationships does not address these root issues.
- Instead, it exacerbates marginalization and trauma, especially for vulnerable adolescent girls.

Conclusion

The *Re: Right to Privacy of Adolescents* case is a watershed moment, not because it resolved all issues, but because it illuminated the disconnect between rigid legal frameworks and complex human realities. It serves as a critical reminder that laws intended to protect can cause harm if they overlook the nuances of adolescent development and relationships.

As India navigates the intricate issues of consent, protection, and justice, this judgment may catalyze progress toward a more compassionate, evidence-based, and rights-oriented legal system for young people.

The U.S. Established and Extinguished Multilateralism

Context

Under former President Donald Trump, the United States has become emblematic of a global shift where unilateralism is overtaking multilateralism.

- The U.S. sidelined the United Nations and weakened the collective influence of the Global South by prioritizing strategic, commerce-driven bilateral agreements.
- This approach fragments the global system rather than fostering unity.
- The growing power imbalance is so profound that even the July 2025 BRICS Summit did not oppose it.
- The 31-page BRICS Declaration, outlining 126 outcomes, failed to address the decline of multilateralism or highlight the importance of South-South cooperation.
- Instead, unilateral tariffs have become coercive tools used by powerful countries to extract concessions from others, rather than building global consensus.

The U.S. Shift and Global Power Dynamics

- The U.S., recognizing that it can no longer unilaterally shape global frameworks as it did post-World War II, now prioritizes national self-sufficiency and curbing China's economic rise.
- Over the last 25 years, tools like interconnected trade networks, financial sanctions, and spheres of influence have replaced traditional multilateral institutions as instruments of global power.
- This new reality has left many countries, including India, uncertain about how to navigate the changing global order.

India's Opportunity Amidst the Decline of Multilateralism

- With its expanding population and economic potential, India must acknowledge the fading role of multilateralism.
- To assert global influence—especially as a leader of the Global South—India should emphasize national prosperity and South-South cooperation, moving beyond dependence on UN voting blocs or outdated multilateral frameworks.
- Setbacks such as losing the UNESCO post to Pakistan illustrate the need for India to exercise strategic autonomy: balancing relations between global powers while safeguarding its core interests.

Shifting Focus East: Trade and Infrastructure Development

- For a self-reliant India (Atmanirbhar Bharat), the focus should pivot from the West towards the East, deepening trade ties with ASEAN countries.
- Export losses to the U.S. (for example, in the steel sector) can be offset by large-scale domestic infrastructure projects — including expressways, high-speed rail, data centers, and world-class universities.
- India should aim to replicate infrastructure growth on the scale of China's 2013 investments, which propelled rapid development.

India and the Fourth Industrial Revolution

- India's emerging strength lies in its leadership in the Fourth Industrial Revolution.
- It has surpassed countries like the UK and Germany in generative AI patents, signaling robust innovation capabilities and potential for self-driven economic growth.

Modern Military Strategy and Global Leadership

- Contemporary military strategy prioritizes air defense, satellites, drones, and cyber warfare over traditional ground forces.
- India is well-positioned to lead globally in these areas, reducing dependency on costly arms imports and gaining greater foreign policy flexibility through defence technology spin-offs.

Rethinking Borders and Building Diplomatic Trust

- India is reassessing its longstanding border disputes. Defence Minister Rajnath Singh's recent call for moving past old conflicts has been positively received by China.
- Diplomatic engagement, exemplified by cooperation with Pakistan over the Indus Waters Treaty, could pave the way for peaceful resolutions of disputes in eastern Ladakh and Jammu & Kashmir.
- India's strategic insight acknowledges that military solutions are unlikely, and long-term growth hinges on diplomatic settlements.

Revitalizing the Global South Through BRICS 2026

- The upcoming BRICS Summit in India (2026) presents a vital opportunity to realign the priorities of the Global South.
- Rather than relying on outdated multilateral bargaining blocs like the G-77 to negotiate with the G-7, the focus should shift to mutual growth and cooperation within the Global South.
- This could involve redesigning tariffs and value chains to direct exports toward rising consumption in developing countries—balancing affordability and support for local industries.
- While a major shift, this approach mirrors the transformative impact multilateralism had in the 1950s.

Gurugram's Urban Crisis: Flooded Streets and the Collapse of Publicness

Context

The article explores the deeper socio-psychological and governance failures behind urban crises in Indian cities like Gurugram.

- Recurring flooding and poor civic infrastructure reveal not only technical deficiencies but also a profound neglect of public welfare and inclusive urban planning.
- The issue extends beyond privatisation, highlighting the persistence of caste-based rural mindsets within elite urban environments.

The Visible Crisis: Flooded Dreams of an "International City"

- Gurugram, dubbed the "Millennium City" and home to numerous Fortune 500 companies, faces annual urban flooding, power outages, and infrastructure breakdowns during monsoon seasons.
- This exposes a stark contradiction: despite soaring real estate prices and aspirations of global standards, the city's basic civic amenities fail to meet residents' expectations.

Root Cause: Mental Attitudes Over Infrastructure

- Rural mindsets persist in urban spaces like Gurugram, where village-level caste-centric attitudes continue to influence city planning.
- The public good is routinely subordinated to private interests, reflecting a deep absence of publicness—shared spaces, collective responsibility, and community welfare.
- This results in rampant individualism, encroachments, and resource misuse.

Historical Continuity of Privatisation and Exclusion

- The origins of Gurugram's private urbanism trace back to 1981, when the Delhi Land and Finance (DLF) corporation received the first licence for private development under the Haryana Development & Regulation of Urban Areas Act (1975), starting in the village of Chakkarpur.
- The shift from rural to urban did not alter underlying social dynamics; instead, modern urban forms were imposed over regressive rural social structures, obscuring the exclusionary nature of public life.

Planning Without Public Welfare

- Land consolidation tools such as chakbandi and kilabandi are frequently misused to appropriate land for private interests, often involving illegal grabs of panchayat property.
- Digital technologies like GIS mapping, intended to improve transparency, have been manipulated by officials to serve private gains instead of public welfare.

The Myth of "Smart" Cities

- Technological solutions like CCTV cameras and command centers cannot replace the fundamental civic value of publicness in urban planning.
- Gated communities and luxury enclaves flourish at the expense of vibrant public life outside their boundaries, reflecting urban forms that perpetuate rural exclusivity.

Way Forward: Rebuilding the Idea of the Public

- Genuine urban development requires a fundamental mental shift toward public consciousness and collective responsibility, beyond simply constructing new infrastructure or deploying technology.
- The city's residents must evolve from rural mindsets of "looking after your own" to embrace urban citizenship, which values shared spaces, inclusivity, and public welfare.

Bihar's Higher Education Crisis – Flawed Fixes and the Need for Structural Reform

Context

The article critiques the lottery-based system for appointing college principals in Patna University, describing it as an arbitrary and superficial response to a deep-rooted crisis in Bihar's higher education. It highlights problems like nepotism, caste-based favoritism, political patronage, and administrative neglect.

The Crisis in Bihar's Higher Education

- **Lottery-Based Appointments:** The lottery system is a weak, inappropriate fix, compared metaphorically to "fixing a broken bone with a band-aid." There are several illogical appointments:
 - A chemistry professor assigned to head an arts college.
 - A history professor leading a science college.
 - A male professor appointed principal of a women's college.
- **Quality and Capacity Issues:** Delays and irregularities in recruitment have eroded trust. The student-teacher ratio is alarmingly high — about 1:50 in general and up to 1:200-350 in some postgraduate departments. Infrastructure is deteriorating, with institutions like BN Mandal University in Madhepura having multiple departments sharing the same room.

Broader Societal Impact

- **Education as a Means Out of Poverty:** In Bihar, education and migration are critical for socioeconomic mobility. The collapse of higher education institutions hampers human capital development and state progress.
- **Rise of Coaching Centers and Parallel Ecosystems:** The failure of formal institutions drives youth to coaching centers, reinforcing inequalities and reliance on informal education providers.
- **Politicisation of Appointments:** Political parties treat recruitments as patronage, cultivating a "labharthi" (beneficiary) mindset, which undermines citizens' rights-based expectations from public institutions.

The Way Forward – Structural Reforms and Transparent Systems

- **Learning from Other States:**
 - Tamil Nadu has a Teacher Recruitment Board dedicated to higher education appointments.
 - Maharashtra is developing a policy weighting 80% for academic quality, research, and teaching, and 20% for interviews, to improve transparency.
- **Needed Institutional Reforms in Bihar:**
 - Creation of specialized selection panels.
 - Establishment of independent oversight bodies.
 - Publication of public appointment records.
 - Implementation of rotational leadership.
 - Moving away from random selection to merit-based, transparent, and accountable recruitment systems.

A Tectonic Shift in Thinking to Build Seismic Resilience

Context

Recently, a 4.4 magnitude earthquake occurred near Delhi, with its epicentre 20 km southwest of the city at a shallow depth of 5 km. Although it caused no significant damage, it revealed Delhi's infrastructure vulnerabilities — over 80% of buildings, especially those constructed before 2000, do not adhere to seismic safety codes. This event adds to a string of earthquakes across Asia since March 2025, including a powerful 7.7 magnitude earthquake in Myanmar and Thailand, tremors in Tibet and Greece, and ongoing seismic activity along the India-Myanmar border. Given India's location on an active tectonic plate, there is an urgent need to bolster seismic resilience.

India's Seismic Vulnerability

India faces a major earthquake risk because the Indian tectonic plate is moving northward, colliding with the Eurasian Plate at 4–5 cm per year. This tectonic activity formed the Himalayas and poses the threat of a massive earthquake (magnitude 8 or more), potentially impacting over 300 million people across northern India, Nepal, and Bhutan.

Delhi's Specific Risks

Delhi is situated in Seismic Zone IV, classified as a high-risk zone. The city experiences a ground acceleration factor of 0.24g, making it susceptible to strong tremors. Many buildings — including more than 5,000 high-rises — fail to meet safety standards outlined in IS 1893:2016, which mandates earthquake-resistant designs like ductile detailing and shear walls. The July 2025 tremors underscored the city's lack of preparedness for a major quake, risking the safety of its 33.5 million residents.

Wider Seismic Risks Across India

Seismic danger extends beyond Delhi. India's seismic zones range from II to V, with northeastern states such as Manipur, Nagaland, and Mizoram classified in Zone V — the highest risk category with peak ground accelerations exceeding 0.36g. These regions recently experienced tremors from powerful earthquakes in Myanmar, including the 7.7 magnitude event in March 2025 and a 5.2 magnitude quake in May 2025. The Andaman and Nicobar Islands, also in Zone V, face combined threats from earthquakes and tsunamis, as demonstrated by the 2004 disaster. Even Sikkim was affected by a 5.7 magnitude quake in Tibet on May 12, 2025.

Impact of Urban Growth on Earthquake Risks

Rapid urbanization in Delhi exacerbates earthquake risks. Older buildings in areas like East Delhi rest on soil prone to liquefaction, increasing collapse hazards during tremors. Poorly designed high-rises add to the threat. Although the IndiaQuake app by the National Center for

Seismology (NCS) offers early warnings, there remains a lack of widespread public awareness and inadequate enforcement of building codes. The Himalayan seismic gap — the interval between major quakes like the Kangra (1905) and Nepal (2015) earthquakes — suggests an overdue major event, which could severely impact cities including Delhi.

Measures to Enhance Preparedness

India must enforce seismic safety standards rigorously, especially in high-risk zones. In Delhi, retrofitting older buildings with steel jacketing and deep pile foundations can reduce collapse risks. Guwahati, in Zone V, must strictly implement IS 1893:2016. Builders should avoid floodplains to prevent liquefaction, and critical infrastructure should employ base isolation techniques. In Bhuj, retrofitting and establishing community disaster response teams are necessary. The Delhi Development Authority should expedite building safety inspections. Concurrently, the NCS should expand early warning systems to cover villages in Zone V. Through strict regulations and community readiness, India's growing cities can better withstand future earthquakes.

Learning from Global Examples

Global experiences provide important insights for India. Bangkok's use of high-strength concrete and ductile detailing demonstrates how strict codes mitigate earthquake damage. Conversely, Myanmar's 2025 quake losses, exacerbated by unreinforced masonry, illustrate the dangers of neglect. India, facing greater seismic risks — particularly in Zone V areas like the Northeast and Kutch — requires tailored local solutions. Experts estimate that India needs around ₹50,000 crore annually to retrofit vulnerable structures.

Conclusion

With rising seismic activity regionally and globally, India must act promptly. The government should enforce building codes strictly, invest in resilient infrastructure, and promote earthquake safety education. Citizens must be equipped to prepare emergency kits, adhere to safe building practices, and plan evacuations. A national conversation is crucial to drive urgent action before the next major earthquake.

A Stronger Counter-Terror Strategy with J&K Police Under Elected Government

Context

In June 2025, Jammu and Kashmir's Lieutenant Governor Manoj Sinha reaffirmed the government's commitment to eradicating terrorism from the region. During his address to police cadets at the Sher-e-Kashmir Police Academy in Udhampur, he emphasized the integration of modern technology, intelligence, community participation, and inter-agency coordination alongside traditional beat policing methods.

Amid this, the evolving security framework in Jammu and Kashmir, particularly the role of the J&K Police (JAKP) under democratic leadership, is gaining renewed attention.

Central Role of J&K Police in Counter-Terrorism

The Lieutenant Governor emphasized the critical role of the J&K Police in combating terrorism—highlighting a long-held understanding that local police forces form the backbone of any counter-terror effort, while central forces offer support.

Key Strengths of the JAKP:

- Deep geographical familiarity and knowledge of local demographics
- Strong community ties, crucial for collecting human intelligence (HUMINT)

However, the April 22, 2025 Pahalgam terror attack, where the assailants remain unidentified, exposed gaps in local intelligence gathering, underscoring the need for:

- Continuous operational improvements within the police force
- Greater accountability of the police under an elected government

Elected local representatives like sarpanches and MLAs enjoy community trust and often possess key information about terrorist networks, making their inclusion in the security structure essential for achieving sustained peace.

Reviving Democratic Institutions for Improved Security

While Jammu and Kashmir has historically seen strong electoral participation, especially in local body elections, security concerns have often sidelined elected leaders, limiting their constitutional authority.

Need for Institutional Activation:

- Restore full functionality of panchayats, municipal bodies, MLAs, and MPs
- Make these bodies accountable for local security in partnership with law enforcement

Failing to do so risks fostering disengagement from the political process and weakening community support against terrorism.

Strategic Recommendations:

- Encourage structured coordination between local police and elected leaders
- Promote information exchange, address community grievances, and foster public trust
- Tailor strategies to local realities, given the complex mix of domestic and foreign terrorist elements

With local police stations as critical grassroots nodes, the JAKP acts as the interface between governance and security, and this connection must be strengthened.

Empowering Elected Representatives for Inclusive Security

Excluding elected leaders from the security ecosystem undermines both governance and counter-terrorism efforts.

Benefits of Restoring Police Oversight to an Elected Government:

- Improves accountability of policing
- Ensures security policies are aligned with community needs
- Builds public trust and cooperation, essential for intelligence gathering and enforcement

While holding Assembly and parliamentary elections restores democratic rights, true participatory governance requires that elected officials be involved in security planning and execution.

Without such inclusion, the Lieutenant Governor's vision of deep community engagement will remain unfulfilled.

Strengthening democratic involvement is key to enhancing governance and ensuring long-term security in Jammu and Kashmir.

Cooling Price Pressures in the Indian Economy

Overview

India has seen a substantial decline in retail inflation, offering a welcome macroeconomic boost. As per NSO data, Consumer Price Index (CPI)-based inflation stood at 2.1% in June 2025, down from 2.82% in May, marking the fifth consecutive month below the RBI's upper limit of 4%, indicating strong disinflationary momentum.

Current Inflation Snapshot

Indicator	Value
June 2025 Headline Inflation	2.1%
May 2025	2.82%
Q1 FY26 Average	2.7%

RBI Forecast	2.9%
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Core Inflation (Excluding Food and Fuel)

- Minor rise in June, but not widespread
- Certain segments (e.g., personal care) showed persistent inflation

Food and Beverages

- Experienced deflation of 0.2% in June
- Major contributors: vegetables and pulses

Key Factors Behind Cooling Inflation

1. Food Price Moderation
 - Sharp decline in perishables due to improved supply management, adequate stocks, and seasonal surplus
2. Favourable Monsoon
 - As of July 14, rainfall was 9.5% above the Long Period Average (LPA)
 - Significant improvement in Kharif sowing, especially rice, pulses, and oilseeds
3. Crude Oil Price Drop
 - Brent crude fell from \$75/barrel (June) to \$68/barrel (July)
 - Reduction in fuel inflation helped lower transport and logistics costs
4. Subdued Core Sector Inflation
 - Low inflation in clothing, housing, recreation, household goods
 - Reflects weak demand and limited pricing power

Monetary Policy Outlook

Recent RBI Actions

- June 2025 MPC cut repo rate by 50 bps to 5.5%
- Cumulative cut of 100 bps since February 2025
- Objective: Stimulate growth amid easing inflation

Constraints Ahead

- Policy space limited, as RBI signaled caution
- August outlook suggests pause in rate cuts, pending clearer data
- Possibility of revising FY26 inflation forecast (currently 3.7%) downwards

Macroeconomic Implications

1. Household Relief: Lower food prices benefit low-income groups, enhancing real disposable income
2. Consumption Revival: Expected boost in urban and rural demand, aiding sectors like FMCG and retail
3. Interest Rate Transmission: Banks may lower lending rates, encouraging housing, MSME, and auto loans
4. Fiscal Flexibility: Subsidy burden may fall, giving the government greater spending capacity
5. Bond Market Gains: Improved investor sentiment likely to result in lower government bond yields

Risks and Challenges

- Global Commodity Volatility: Possible crude price hikes due to geopolitical issues
- Climate Risk: Monsoon variability may still disrupt crop output
- Sticky Core Inflation: Categories like education and healthcare remain elevated
- Imported Inflation: Weakening rupee may raise costs of imports

RBI's Balancing Act

RBI must carefully manage growth recovery and inflation control:

- Real interest rates are now positive, encouraging investment

- Too much easing could reignite inflation, while excessive tightening could harm recovery

Global Context

- India's disinflation stands in contrast to persistent inflation in the US (~3.5%)
- With below-target inflation, India attracts foreign capital due to its macroeconomic stability

Way Forward

- Data-driven policymaking with frequent updates based on agricultural and monsoon data
- Strengthen food supply chains via cold storage and logistics
- Provide targeted support in sectors with sticky inflation (e.g., health, education)
- Diversify oil sourcing via strategic reserves and green alternatives

India's S-400 Purchase, Russian Oil Trade, and the Geopolitics of Sanctions

Introduction

India's strategic choices in foreign policy have once again drawn international attention amid renewed Western threats of secondary sanctions. Central to the issue is India's pursuit of strategic autonomy, as reflected in its military and energy engagements with Russia—a country the West seeks to economically isolate following its invasion of Ukraine.

This debate intensified during Operation Sindoor, where Russia-supplied S-400 air defence systems were deployed as the outermost layer of India's air defence, reaffirming the importance of these strategic acquisitions.

The S-400 Deal and CAATSA Waiver

- The S-400 Triumf is a highly advanced long-range air defence system developed by Russia, capable of neutralizing aircraft, UAVs, and missiles within a 400 km radius.
- In 2018, India signed a \$5.43 billion deal with Russia to acquire five S-400 systems, despite vocal opposition from the United States.

CAATSA Explained:

- The Countering America's Adversaries Through Sanctions Act (CAATSA) is a U.S. law mandating sanctions on nations conducting significant transactions with Russia, Iran, or North Korea.
- The law posed a challenge to India-Russia defence cooperation.
- However, recognizing India's strategic relevance in the Indo-Pacific and its defence modernization needs, the U.S. Congress granted India a waiver.

Operation Sindoor: Real-World Use of S-400

- Operation Sindoor was launched to counter potential cross-border threats.
- The deployment of the S-400 as India's first line of defence underscored its critical role in national security.
- This move also demonstrated India's resolve to prioritize its defence interests, despite global political pressures.

Rising Western Pressure: Sanctions and Tariff Threats

- In recent developments, NATO Secretary General Mark Rutte and several U.S. senators issued fresh warnings of secondary sanctions and tariffs of up to 500% on countries, including India, Brazil, and China, that continue trading with Russia.
- Former U.S. President Donald Trump proposed even stricter measures, warning of 100% tariffs on nations trading with Russia unless a peace deal in Ukraine is reached within 50 days of his potential return to office.

India's Response: Prioritizing Energy Security and National Interest

India has responded assertively through the Ministry of External Affairs (MEA), which emphasized:

- Energy security remains a top priority for India.
- The West is applying double standards, as many Western nations continue importing Russian LNG, even as they criticize India's purchases.

India's Petroleum and Natural Gas Minister added that the country has already diversified its crude oil imports, ensuring it can handle any potential supply shocks.

India's Oil Trade with Russia: The Global Loophole

- After the G7-imposed price cap on Russian oil, India began importing discounted Russian crude in large volumes.
- This move helped stabilize domestic fuel prices and manage inflation.
- A significant portion of this oil is refined in India and re-exported to Europe, utilizing a legal loophole that allows such transactions.

Findings from CREA (Centre for Research on Energy and Clean Air):

- By the end of 2024, India had emerged as the EU's largest supplier of refined oil products, especially diesel and jet fuel, much of which originated from Russian crude.
- At the same time, Europe's LNG imports from Russia in 2023 hit record highs, further exposing the inconsistency in the West's sanctions regime.

Strategic and Geopolitical Implications

While the West aims to reduce Russia's revenue—a key source of funding for its war in Ukraine—targeting India may have several unintended consequences:

- Weakening India-West strategic relations
- Undermining cooperation in multilateral platforms like the Quad, Indo-Pacific Economic Framework for Prosperity (IPEF), and collaborations in climate and technology
- Reinforcing the perception that the West applies selective and biased use of global institutions

India's Diplomatic Position: Strategic Autonomy and Multi-Alignment

India continues to follow a multi-alignment policy, avoiding exclusive alliances while building partnerships across geopolitical divides.

- It works closely with the US, Japan, and Australia in the Indo-Pacific, while simultaneously maintaining strong ties with Russia, Iran, and Central Asia.
- At the United Nations, India has consistently abstained from anti-Russia resolutions, advocating dialogue and peaceful solutions over punitive actions.
- India's consistent messaging: Strategic autonomy is non-negotiable.

Way Forward

To manage these geopolitical tensions and ensure resilience, India is taking several steps:

1. Diversifying Crude Supply

- Increased imports from Iraq, Saudi Arabia, and the United States to reduce reliance on any single source

2. Engaging the West Constructively

- Advocating mutual respect and fairness
- Emphasizing shared priorities, such as countering China's assertiveness
- Promoting dialogue over coercion or pressure tactics

3. Leveraging Global Platforms

- Utilizing forums like the G20, BRICS, Quad, and UN to articulate India's sovereign, balanced, and pragmatic approach

Conclusion

India's long-held principle of strategic autonomy is once again under scrutiny. The S-400 deployment during Operation Sindoor and its oil trade with Russia are both emblematic of a national-interest-first policy.

The West must acknowledge that India cannot be treated as a transactional partner, subject to the dictates of laws like CAATSA or threats of secondary sanctions.

True international cooperation must be founded on mutual respect for sovereignty, not conditionalities.

India's balanced and pragmatic diplomacy will continue to guide its global engagement amid shifting geopolitical tides.

India's Soil Crisis and the Urgency for Nutritional Agriculture

Context

India has evolved from a country reliant on food aid in the 1960s to:

- The world's largest exporter of rice, and
- The operator of PMGKY, the largest food distribution programme globally.

Despite achieving quantitative food security, India faces a hidden crisis of poor soil health, which undermines both nutritional outcomes and the sustainability of agriculture.

India's Food Security: From Shortage to Surplus

Historic Transition:

- 1960s: Heavily reliant on U.S. food aid under the PL-480 programme.
- 2024-25: Exported 20.2 million tonnes of rice out of a 61 MT global market.

Food Distribution:

- Under PM-Garib Kalyan Yojana (PMGKY), over 800 million people receive 5 kg of free rice or wheat per month.

Buffer Stock:

- The Food Corporation of India (FCI) holds 57 million tonnes of rice (as of July 1, 2025) — the highest in two decades, and four times the buffer norm of 13.54 MT.

Poverty Reduction:

- The percentage of people living under extreme poverty (earning <\$3/day at 2021 PPP) fell from 27.1% in 2011 to 5.3% in 2022.

The Underlying Crisis: Malnutrition Amid Surplus

NFHS-5 (2019-21) Findings:

- 35.5% of children under five are stunted
- 32.1% are underweight
- 19.3% are wasted

This points to a failure in nutritional security, even though caloric needs are met.

Cause: Nutrient-Poor Crops

- Declining soil health results in crops lacking essential micronutrients.
- This leads to micronutrient malnutrition, especially in children.

Soil Degradation: An Unseen Emergency

Soil Health Card (SHC) Scheme – 2024 Data:

- Of 8.8 million soil samples tested:
 - Only <5% had sufficient Nitrogen (N)
 - 40% had adequate Phosphate (P)
 - 32% were sufficient in Potash (K)
 - Only 20% had enough Soil Organic Carbon (SOC)

Importance of Soil Organic Carbon (SOC):

- SOC determines physical, chemical, and biological soil properties, including nutrient retention and fertiliser efficiency.
- Indian Institute of Soil Science recommends 0.50–0.75% SOC as adequate.

Micronutrient Gaps:

- Indian soils are increasingly deficient in:
 - Sulphur
 - Iron
 - Zinc
 - Boron
- These deficiencies contribute to stunting and long-term health issues.

Fertiliser Misuse: A Systemic Problem

State-Level Nutrient Imbalance:

- Punjab:
 - Nitrogen overused by 61%
 - Potash deficient by 89%
- Telangana:
 - Nitrogen overused by 54%
 - Potash deficient by 82%

Consequences:

- Fertiliser efficiency has plummeted:
 - From 1:10 in the 1970s to 1:2.7 in 2015.
- This results in:
 - Poor yields
 - Soil fatigue
 - Declining agricultural productivity

Environmental Impact:

- Only 35–40% of urea-based Nitrogen is absorbed by crops.
- The rest is lost as:
 - Nitrous oxide (N₂O) – a greenhouse gas 273 times more potent than CO₂
 - Nitrate leaching, contaminating groundwater
- There is also misuse through non-agricultural diversion and illegal cross-border trade.

The Way Forward: Building Nutritional Agriculture

Public Health Linkage:

- Healthy soil is vital for nutrient-rich crops, making it essential not just for agriculture but also for public health.

Strategic Reorientation Needed:

- Shift from generic fertiliser use to:
 - Soil-specific, crop-sensitive fertilisation.
 - Science-based nutrient management, driven by soil test results.

Collaborative Innovations:

- ICRIER–OCP Nutricrops Partnership:
 - Focus on region-specific, data-driven solutions to improve soil and crop nutrition.
 - Aims to enhance agricultural productivity sustainably.
 - OCP Nutricrops brings advanced expertise in soil fertility and sustainable fertiliser application, contributing to global food security solutions.

Conclusion: Healing the Soil, Nourishing the Nation

India's impressive food production masks a crisis of soil exhaustion and nutrient-deficient diets. To ensure nutritional security and agricultural sustainability, India must:

- Rebuild its soil health
- Transition from a focus on calorie output to crop nutrition
- Recognize soil as the foundation of public health, agricultural productivity, and national prosperity

India Can Reframe the Artificial Intelligence Debate

Context

In less than three years since ChatGPT's launch, artificial intelligence (AI) has moved from research labs into homes, schools, and legislatures. This rapid mainstreaming of AI has sparked global concern and urgency, leading to high-profile AI summits.

India will host the AI Impact Summit in February 2026, offering a chance to go beyond symbolic diplomacy and influence the global AI agenda meaningfully.

The Global Landscape and India's AI Strategy

1. A Divided Geopolitical Climate

- The Paris AI Summit (Feb 2025) aimed to unify global AI governance, but ended with discord:
 - U.S. and U.K. refused to endorse the final text.
 - China supported it, deepening global divides.
- This rivalry risks fragmenting global AI governance into competing power blocs.

India's Unique Role

- India enjoys credibility across geopolitical lines.
- It can act as a bridge-builder, promoting inclusivity and dialogue.
- India's leadership can help ensure that AI serves the global majority, not just dominant powers.

2. India's Democratic and Inclusive Approach

- India's Ministry of Electronics and IT adopted a bottom-up strategy to prepare for the 2026 summit.
- In June 2025, it launched a nationwide consultation via the MyGov platform, engaging:
 - Students
 - Researchers
 - Startups
 - Civil society

Emerging Agenda

- Built on public input, the summit will focus on:
 - Inclusive growth
 - Accelerated development
 - Environmental protection

Unlike previous summits, India's agenda is shaped by grassroots participation, offering a fresh model for global AI governance.

Key Proposals for the 2026 AI Impact Summit

1. Pledges and Accountability Mechanism

- India's success with inclusive digital systems like Aadhaar and UPI shows how tech can benefit all, not just elites.
- The summit could replicate this spirit by asking all participating countries to:
 - Make clear, measurable commitments (e.g., reducing data center energy use, AI education in rural areas).
 - Use public scoreboards to track progress and avoid vague declarations.

2. Prioritising the Global South

- At the first global AI summit, voices from the Global South were largely missing.
- India must correct this imbalance by:
 - Ensuring equitable representation.
 - Proposing an "AI for Billions Fund", backed by development banks and Gulf investors:
 - To provide cloud credits
 - Support fellowships
 - Build local-language datasets for underserved communities
- A multilingual AI challenge for 50 low-resource languages can highlight that AI innovation is global, not confined to Silicon Valley or Beijing.

3. A Common Framework for AI Safety

- Since the Bletchley Park AI Summit (2023), AI safety experts have urged stress-testing (red-teaming) of AI models.
- While national safety institutes exist, no unified global checklist has been established.

India's Initiative

- Propose a Global AI Safety Collaborative to:
 - Standardise red-team scripts
 - Share incident logs
 - Define safety benchmarks
- Develop an open-source evaluation toolkit to promote transparency and trust in high-risk AI systems.

4. Balanced and Pragmatic Regulation

- Global approaches to AI regulation vary:
 - U.S. fears overregulation.
 - EU pushes strict rules via the AI Act.
 - China favours tight state control.

India's Middle Path

- Suggest a voluntary yet enforceable code of conduct for frontier AI:
 - Based on the Seoul pledge
 - Provisions could include:
 - Disclosure of computational resources beyond a threshold
 - Publication of external red-team results within 90 days
 - Establishing an AI incident hotline
- This ensures accountability without stifling innovation.

5. Preventing Technological Fragmentation

- The global AI ecosystem is at risk of splitting due to the U.S.–China tech rivalry.
- Though India can't resolve these tensions, it can:
 - Keep the summit's agenda inclusive, broad-based, and focused on global benefits.
 - Encourage collaboration rather than competition in the AI space.

India's Role and Global Identity

- India does not aim to dominate global AI governance or create a central authority.
- Instead, it seeks to:
 - Strengthen existing frameworks
 - Promote collaboration
 - Share AI capabilities with the global majority
- If it transforms participation into real-world impact, India can redefine its global identity as a constructive and forward-looking leader.

Conclusion: A Global Opportunity for India

The AI Impact Summit 2026 presents India with a rare chance to shape the global future of AI. By championing:

- Transparent national pledges
- Inclusive participation from the Global South
- Shared safety protocols
- Balanced regulation
- Global cohesion over fragmentation

India can steer AI governance towards equity, sustainability, and collective progress—while reaffirming its role as a bridge between competing global interests in a divided world.

Reform Cannot Wait: Aviation Safety in India Under Threat

Context

The preliminary report from the Aircraft Accident Investigation Bureau (AAIB) on the Air India Boeing 787 crash in Ahmedabad (June 12, 2025), released a month later, raises serious questions about pilot decisions.

However, the broader concern lies in a systemic breakdown of trust within India's aviation sector.

There is a recurring pattern where aviation professionals—pilots, engineers, and crew—face disproportionate accountability, while regulators, airlines, and oversight bodies avoid similar scrutiny.

India's Aviation System: A Fragmented Framework

Multiple Actors, Complex Responsibilities

India's aviation ecosystem operates through a network of stakeholders:

- Aircraft operations (airworthiness, maintenance, crew) → managed by airlines.
- Infrastructure and air traffic control → handled by the Airports Authority of India (AAI).
- Regulation → enforced by the Directorate General of Civil Aviation (DGCA), under the Ministry of Civil Aviation (MoCA).

Systemic Failures, Not Isolated Errors

Accidents rarely result from single lapses. Instead, per the Swiss Cheese Model, they emerge when multiple system-level weaknesses align.

Judicial Interventions and Regulatory Failures

Judiciary as a Safety Backstop

In rare cases, judicial interventions have prevented disasters—e.g., the 2018 Ghatkopar crash saw limited damage due to earlier court-imposed construction restrictions near Mumbai airport.

Mumbai remains a cautionary example, with:

- Over 5,000 vertical obstructions within a 4 km radius of the airport—violating Inner Horizontal Surface (IHS) norms.
- Continued rise in hazards despite Public Interest Litigations (PILs).

This reflects a failure of enforcement and potential misrepresentation by bodies like DGCA, AAI, airport operators, and MoCA. The judiciary, though proactive, remains dependent on technical data from these very institutions.

Policy Erosion and Regulatory Loopholes

Dilution of Safety Norms

- Pre-2008: Construction near airports was tightly regulated by the Aircraft Act and Statutory Order 988 (1988).

- Post-2008: A non-statutory committee began clearing unauthorised building heights via flawed aeronautical studies.
- By 2015, these obstructions affected radar and communication systems.

Instead of tightening oversight, the 2015 Rules legitimised this flawed committee by granting it statutory status.

Policy Evasion

- MoCA's amendment limiting No-Objection Certificate (NOC) validity to 12 years does not mandate removal of illegal structures afterward.
- Even new airports like Navi Mumbai and Noida now suffer from obstruction-related runway safety issues.

Systemic Shortcomings in Key Operational Areas

1. Aircraft Design and Certification

- DGCA lacks technical capacity, depending heavily on foreign regulators.
- Evident during the 2017–18 Pratt & Whitney engine crisis affecting IndiGo, where Indian authorities failed to address early warnings.

2. Maintenance Practices

- Aircraft Maintenance Engineers (AMEs) face excessive workloads without regulated duty hours.
- Airlines bypass AMEs by delegating work to less qualified, lower-paid technicians, prioritising cost savings over safety.

3. Pilot Fatigue

- Flight Time Duty Limitations (FTDLs) are routinely breached.
- DGCA exemptions allow airlines to overwork pilots, increasing fatigue risks.
- Mandatory NOC requirement to change jobs limits career freedom, worsening mental stress and regulatory control.

4. Cabin Crew Undervalued

- Cabin crew responsibilities are being reduced to hospitality roles, disregarding their critical safety function in emergencies.

5. Air Traffic Management

- The AAI faces a major shortage of Air Traffic Controller Officers (ATCOs).
- Licensing reforms and duty-hour limits, recommended after earlier crashes, remain unimplemented.

6. Suppression of Whistle-blowers

- Whistle-blowers reporting safety issues are often targeted or silenced, allowing unsafe practices to continue unchecked.

Human Life and the Role of the Judiciary

Undervalued Human Life

India's compensation practices in transport accidents (aviation, rail, road) reflect a low valuation of life—often just a few lakh rupees.

This enables both governments and corporations to rationalise underinvestment in safety.

Judicial Inertia

- Despite its constitutional role, the judiciary often defers to government expertise, even when regulators are at fault.
- Courts must move beyond compensation and demand proactive safety measures.

Conclusion: A Call for Urgent Reform

The Air India crash in Ahmedabad is not an isolated incident—it's a symptom of deeper structural failure in India's aviation system.

What Must Be Done

- Comprehensive reforms across:
 - Regulatory accountability
 - Mental health support for aviation personnel
 - Strict enforcement of safety standards
- Judiciary, government, and airlines must act collaboratively to build a genuine safety culture.
- Safety must take precedence over bureaucratic shortcuts and corporate profit.

National Sports Policy 2025: A Paradigm Shift towards Science, Support, and Sustained Excellence

Context

The National Sports Policy 2025 represents a significant transformation in India's approach to athlete development. By systematically integrating sports science, medicine, and technology, the policy aims to establish a robust foundation for sustained elite performance on the global stage.

From Passion to Precision: India's Sporting Evolution

Progress and Challenges

- India has achieved notable improvement in international sports performance, with increased medal wins and participation.
- Despite this, success remains inconsistent due to:
 - Gaps in scientific support systems.
 - Inadequate athlete care and rehabilitation infrastructure.
 - Limited use of data, analytics, and mental health support.

Core Philosophy of the 2025 Policy

- Message: *"Performance must be supported, not just expected."*
- Objective: Embed science, technology, and medical support at the heart of athlete training and development.

Key Pillars of the National Sports Policy 2025

1. Integration of Sports Science and Medicine

- Injury Surveillance & Early Intervention: Focus on athlete longevity and career sustainability.
- Biomechanics & Performance Analytics: Data-driven analysis to fine-tune training techniques.
- Nutrition & Recovery Science: Optimising micro gains that often determine podium finishes.
- Mental Health & Cognitive Conditioning: Managing psychological stress and mental resilience in elite sports.

2. Infrastructure and Institutional Development

- Upgradation of Key Centres:
 - Sports Authority of India (SAI) regional centres and National Centres of Excellence are being modernized.
 - Collaboration with the National Centre for Sports Science & Research for research-backed athlete development.
- Key Examples:
 - SAI Bengaluru: Serving as an advanced sports science hub under the Target Olympic Podium Scheme (TOPS).
 - Indira Gandhi Stadium, Delhi: Hosts the new Return to Sports division for injured athletes.

- **Medical Team at Global Events:** In a first, a 10-member Indian medical team—formed by the Ministry of Youth Affairs and Sports in collaboration with the Indian Olympic Association—will accompany Indian athletes to Paris Olympics.

3. Technology: The Backbone of the New Sports Ecosystem

- **AI-Based Monitoring & Governance:**
 - Use of real-time dashboards, AI tools, and digital systems for:
 - Tracking athlete progress and recovery.
 - Predicting injuries and enabling early intervention.
 - Ensuring transparency and accountability in sports schemes.
- **Innovation and Research Ecosystem:**
 - Establishment of a Sports Innovation Task Force.
 - Provision of research grants to academic institutions for the creation of India-specific, interdisciplinary technologies.
 - Goal: Build a self-sustaining pipeline of innovations for athlete performance and care.

Strategic Vision for the Future

- The policy prioritizes systemic, proactive support over sporadic individual brilliance.
- Focus shifts from reactive treatment to preventive, planned performance care.
- Envisions a data-driven, technologically enabled, and medically informed sporting ecosystem.

Conclusion

The National Sports Policy 2025 signifies a visionary transformation in India's sporting ethos. It marks a shift from raw passion to structured excellence—driven by scientific precision, technological innovation, and strategic foresight. It stands as a benchmark in evidence-based governance and offers a critical case study at the intersection of sports, policy, and science.

Temples of Social Justice

Context

The recent controversy in Tamil Nadu concerning the diversion of temple funds to build colleges has ignited heated political debates. Beyond immediate political disputes, this issue highlights a distinctive social justice framework embedded in the governance of secular activities connected to religion. This model traces back to a 200-year-old legislative tradition from the erstwhile Madras Presidency, which continues to influence South Indian governance today.

Historical Background of Religious Endowments

Regulation of Religious Endowments in India

- The Religious Endowment and Escheats Regulation of 1817, enacted by the East India Company, established the first legislative framework for overseeing temple affairs.
- When the British Crown took over India in the mid-19th century, Queen Victoria's Proclamation of 1858 emphasized non-interference in religious practices, a response to the religious tensions of the 1857 Sepoy Mutiny.
- Despite this non-interference stance, the colonial administration continued regulating temple endowments mainly for revenue collection and administrative control.

History of South Indian Temples' Endowments

- Temples in South India have traditionally been more than just places of worship.
- Since the Chola Empire (970 AD), rulers endowed temples generously with land and wealth.

- Historian Anirudh Kanisetti highlights how queens like Sembiyan Mahadevi strategically endowed temples to become socio-cultural centers.
- During the Vijayanagara period, temples functioned as hubs for education, culture, and welfare activities.
- Architectural features such as large mandapams (pillared halls) served as venues for cultural and educational events.
- This historic role supports the notion that using temple funds for modern education aligns with the original intent of these endowments.

The Legal Framework

- The legislative control over temple funds in Tamil Nadu and other South Indian states evolved over time, culminating in the Tamil Nadu Hindu Religious and Charitable Endowments (HR&CE) Act of 1959.
- Section 36 of the Act allows trustees of religious institutions to use surplus funds—after covering temple maintenance and staff training—for other legally sanctioned purposes, subject to approval from the Commissioner.
- Section 66 permits the use of surplus funds for establishing and maintaining universities or colleges, as long as these institutions include studies related to Hindu religion or temple architecture.
- Constitutional courts have repeatedly upheld the legality of this framework, affirming the state's right to manage temple funds to further public welfare.
- Thus, diverting temple funds for educational institutions is both lawful and consistent with the traditional practice of using temple wealth to support education and societal development.

The Debate: Government Control of Temples, Social Justice, and Reform

Government Control of Temples

- The discussion on government control over temples transcends mere legal issues and is deeply connected to South India's legacy of social justice.
- Historically, temple endowments were a tool used by rulers to fund welfare activities.
- Colonial governance continued this tradition by administering temples to ensure their upkeep and proper allocation of resources for public benefit.

Social Justice and Reform

- The Self-Respect Movement of the early 20th century viewed temple regulation as crucial for dismantling caste hierarchies and promoting social equity.
- Government oversight enabled landmark reforms like the Temple Entry Acts of 1936 and 1947, which opened temple access to oppressed castes.
- Tamil Nadu and Kerala have pioneered the appointment of priests from backward classes, a change achieved after long legal struggles and social activism.
- Opposing state management of temple affairs risks reversing these decades-long reforms and undermining efforts toward caste equality.
- Government regulation thus guarantees not only the lawful use of temple surplus but also the preservation of a broader egalitarian legacy.
- Repealing these controls would amount to rolling back significant social justice progress.

Conclusion

The controversy over using temple funds for education is not simply a legal matter but one of historical continuity and social justice. Temples in South India have historically been centers of culture, education, and welfare, a tradition preserved under the HR&CE Act of 1959. Using surplus temple funds to build colleges is both legally sanctioned and consistent with the

traditional role of temples in community development. More importantly, it embodies a social justice model that has shaped South Indian politics and society for over a century.

At the Heart of the FTA: The Promise of Global Capability Centres

Context

The upcoming Free Trade Agreement (FTA) between the United Kingdom and India is set to be a milestone in international trade. Its significance goes beyond economics, promising transformative impacts on the services sector. Among various cooperation areas, the rise of Global Capability Centres (GCCs) emerges as a key strategic frontier. Here, India's established leadership in GCCs aligns perfectly with the U.K.'s post-Brexit goal to strengthen its global presence. Understanding how the FTA can accelerate the growth of GCCs through harmonized trade policies, innovation promotion, and enhanced cross-border cooperation is essential.

India's Leadership in GCCs and the U.K.'s Strategic Opportunity

India's GCC Leadership

- India is recognized globally as the premier hub for GCCs, hosting over 1,500 centres employing close to two million professionals.
- These centres have evolved from simple cost-efficient back offices to becoming innovation hubs for multinational companies.
- GCCs now provide advanced services including research and development, analytics, cybersecurity, and emerging technology solutions.
- British companies are increasingly leveraging India's GCC expertise to improve their global competitiveness.

U.K.'s Strategic Opportunity

- The FTA offers the U.K. a crucial opportunity to access India's rapidly expanding digital economy and its pool of high-quality talent.
- In the post-Brexit era, the U.K. aims to boost its global presence in services and innovation.
- India's GCC ecosystem provides an ideal platform to achieve this expansion.
- By simplifying market entry and enabling smoother professional mobility, the FTA will allow British firms not only to outsource tasks but also to collaborate on advanced services and cutting-edge technologies.

The Role of Policy and Regulation

- The FTA can tackle existing obstacles such as:
 - Double taxation
 - Data localization requirements
 - Conflicting digital governance standards

These challenges currently hamper the growth and scaling of GCCs.

- A well-designed FTA will facilitate:
 - Intellectual property protection
 - Data sharing
 - Cross-border digital trade

These elements are critical for delivering high-tech services.

- While India lacks a formal national GCC policy, it has built a supportive ecosystem through proactive efforts by central and state governments.
- The Ministry of Electronics and Information Technology (MeitY), in partnership with industry groups like NASSCOM and consulting firms like KPMG, proposed a national GCC framework in the 2025 Budget.

- States such as Uttar Pradesh are actively promoting GCC investments, exemplified by events like the GCC Conclave organized under Invest UP.
- This multilayered approach aligns with U.K. interests, as the FTA could further incentivize British investments by aligning policies and boosting investor confidence.

Economic Diplomacy and the Knowledge Corridor

- The diplomatic context adds further momentum to this economic partnership.
- Recent high-level visits by U.K. officials, including Foreign Secretary David Lammy and Business and Trade Secretary Jonathan Reynolds, demonstrate a strong commitment to deepening trade ties.
- The meeting between Prime Ministers Keir Starmer and Narendra Modi at the 2024 G20 Summit reinforced this vision.
- Both countries aim to establish a knowledge corridor focusing on services, digital trade, and the mobility of skilled talent.
- The UK India Business Council (UKIBC) highlights that future trade will increasingly focus on services, skills, and technology, areas where GCCs excel.
- By promoting cross-border professional movement and collaboration in emerging technologies, the FTA could transform the U.K.-India relationship from traditional trade to a dynamic, future-ready alliance.

Challenges and the Way Forward

- Despite the positive outlook, challenges remain:
 - The ongoing debate over the need for a dedicated national GCC policy reflects the difficulty of balancing organic growth with structured regulation.
 - Competition between state policies could create fragmentation unless coordinated effectively at the national level.
 - Managing talent diversity and ensuring professional mobility are crucial to maintain the GCC ecosystem's competitiveness and inclusiveness.
- Industry leaders play a key role in shaping this partnership.
- The UKIBC has initiated closed-door consultations to discuss best practices, legal challenges, and market prospects.
- Insights from these industry discussions, combined with governmental support, will be critical to ensure the FTA delivers practical benefits for both countries.

Conclusion

The forthcoming U.K.-India Free Trade Agreement represents a historic chance to redefine bilateral trade by focusing on services, innovation, and human capital—areas where Global Capability Centres are pivotal.

- For India, the FTA promises increased foreign investment, talent development, and accelerated digital transformation.
- For the U.K., it opens a strategic gateway to one of the world's fastest-growing digital economies.

Together, the two nations can build a resilient, knowledge-driven corridor that sets new standards for international cooperation in the 21st-century global services economy.

India's Foundational Learning Crisis

Introduction

- India has persistently worked towards improving educational access and equity, yet recent assessments reveal critical concerns about the quality of learning outcomes.

- Two major reports — the Ministry of Education's PARAKH Rashtriya Sarvekshan and UNESCO's 2025 SDG-4 Progress Report — have highlighted serious issues related to foundational learning, school infrastructure, teacher training, and education financing.
- These reports warn that India risks falling short of the New Education Policy (NEP) 2020 objectives unless urgent, systemic reforms are implemented.

Key Findings from PARAKH Rashtriya Sarvekshan

- The Performance Assessment, Review, and Analysis of Knowledge for Holistic Development (PARAKH) survey stands as one of India's largest nationwide school assessments.
- Sample size: 21.15 lakh students from classes 3, 6, and 9.
- Coverage: 74,229 government and private schools across all 36 states and Union Territories.

Results:

- Class 3 Students:
 - Only 55% could arrange numbers up to 99 in ascending or descending order.
 - Just 58% could perform basic two-digit addition and subtraction.
- Class 6 Students:
 - 54% struggled to compare whole numbers or understand large numbers.
 - 43% failed to comprehend the meaning of texts they read.
 - Over half lacked fundamental geographic knowledge about rivers and mountains.
- State-Level Variations:
 - Kerala, Himachal Pradesh, and Punjab ranked as the top performers.
 - Karnataka showed innovation in teaching methods but revealed uneven learning outcomes across regions.
- These findings expose profound gaps in foundational literacy and numeracy (FLN), aligning with previous findings by the ASER reports from the Pratham NGO.

Findings from UNESCO's 2025 SDG-4 Progress Report

- Sustainable Development Goal-4 (SDG-4) aims for inclusive and equitable quality education globally.
- UNESCO's observations on India include:
 - Major FLN deficiencies, particularly among younger children.
 - 21% of youth aged 15-17 are out of school, indicating high dropout rates.
 - 60% of students underperform in essential subjects.
 - Persistent rural-urban and gender disparities in access, learning, and retention.
- The report highlights chronic underinvestment, inadequate teacher preparedness, and weak monitoring systems as key barriers.

Causes of Poor Learning Outcomes

- Inadequate Public Spending:
 - India allocates only 4.3% of its GDP to education (Economic Survey 2023), falling short of the NEP 2020 target of 6%.
 - This underfunding restricts infrastructure improvement, teacher recruitment, and training programs.
- Teacher Shortages and Poor Training:
 - As per UDISE+ 2021-22:
 - Over 10% of schools are managed by a single teacher.
 - Many teachers lack adequate training in modern pedagogy, ICT, and FLN frameworks.
- Infrastructure Deficiencies:

- Numerous schools lack basic facilities such as functional toilets, libraries, science labs, and digital tools.
- The NAS (2017) report links poor school environments to lower learning outcomes.
- **Socio-Economic Barriers:**
 - Children from SC/ST communities, rural areas, and economically weaker families face compounded disadvantages.
 - Girls face dropout risks due to gender bias, lack of sanitary facilities, or early marriage in some regions.

Impact of Learning Deficits

- **Consequences of poor learning outcomes include:**
 - Reduced productivity and higher unemployment due to inadequate skills.
 - A semi-literate workforce ill-prepared for a transforming economy.
 - Limited effectiveness of government initiatives like Skill India and Digital India.
 - Increased reliance on the informal sector and perpetuation of intergenerational poverty.

NEP 2020: Aspirations vs. Reality

- **NEP 2020 aims to:**
 - Achieve universal foundational literacy and numeracy by 2026–27 through the NIPUN Bharat Mission.
 - Revamp teacher training, enhance early childhood education, and introduce a flexible curriculum centered on critical thinking.
- **However, these goals remain elusive due to:**
 - Insufficient financial commitment.
 - Fragmented implementation across different states.
 - Poor coordination between central and state education agencies.

Case Studies of Positive Deviance

- **Kerala:**
 - Strong emphasis on public education, active teacher unions, and social literacy campaigns.
 - Consistently high learning outcomes and enrolment rates.
- **Punjab:**
 - Launched Mission Buniyaad to boost FLN in early grades.
 - Utilized EdTech platforms for personalized learning.
- **Delhi:**
 - Introduced the “Happiness Curriculum” and enhanced teacher training through international partnerships.
- These examples provide valuable models that can be adapted to other states, considering local socio-economic conditions.

Way Forward

- **Increase Public Investment:**
 - Raise education spending to the NEP target of at least 6% of GDP.
 - Prioritize foundational literacy and numeracy programs, infrastructure, and teacher salaries.
- **FLN Mission with Accountability:**
 - Scale up NIPUN Bharat with measurable indicators and real-time monitoring dashboards.
 - Integrate mother-tongue instruction at early stages to improve comprehension.

- **Teacher Empowerment:**
 - Mandate Continuous Professional Development (CPD) for teachers.
 - Create a National Teacher Registry to standardize qualifications and facilitate upskilling.
- **Digital Inclusion:**
 - Expand digital education platforms like PM e-Vidya, DIKSHA, and Swayam in underserved areas.
 - Invest in digital infrastructure and reliable electricity for schools.
- **Decentralized School Governance:**
 - Empower School Management Committees (SMCs) to oversee learning outcomes and manage local budgets.
- **Strengthen Monitoring and Evaluation:**
 - Institutionalize large-scale assessments such as PARAKH and NAS.
 - Link school funding and teacher incentives to improvements in learning.
- **Equity and Inclusion:**
 - Focus on the education of girls, tribal communities, and disabled students.
 - Incentivize attendance and performance through targeted schemes like Kasturba Gandhi Balika Vidyalayas.

Conclusion

- The findings from PARAKH and UNESCO's SDG-4 report serve as a crucial wake-up call.
- India must go beyond ensuring mere access to schooling and guarantee that genuine learning occurs.
- Without addressing foundational learning, all other educational reforms risk being ineffective or unsustainable.

Universities Under Siege: The Global Assault on Academic Freedom

Introduction

In recent years, institutions of higher education—traditionally seen as havens for intellectual inquiry and democratic debate—have come under mounting political and economic pressure worldwide. This phenomenon transcends national boundaries, with governments increasingly employing ideological, financial, and administrative mechanisms to assert control over academic spaces. The global erosion of academic freedom threatens not only universities but also the democratic fabric of society itself.

Political Interference and the Weaponization of University Governance

The United States

In the U.S., elite universities such as Harvard and Columbia have become ideological battlegrounds, with right-wing political actors portraying them as epicenters of unpatriotic thought. Under the Trump administration, visa restrictions for international students and threats to withdraw federal funding were used to exert political pressure on academic institutions. The Supreme Court's 2023 decision to eliminate affirmative action in college admissions further emboldened conservative efforts to dismantle diversity and inclusion initiatives.

The forced resignation of Harvard President Claudine Gay, coupled with the withdrawal of significant donor funding, exemplifies how political actors leverage financial instruments to suppress academic independence. Faculty and students now operate under a climate of fear when addressing polarizing subjects such as race, gender, and geopolitics.

Australia

Australia presents a parallel case, wherein the federal government has vetoed peer-reviewed humanities projects under the pretext of national interest. Simultaneously, universities are compelled to conduct audits against so-called foreign interference, particularly regarding China. This dual pressure has led to growing self-censorship, especially in critical areas such as Indigenous rights, climate activism, and international relations. The conflation of national security with academic inquiry poses a significant threat to intellectual freedom.

Global Trends: Populist Narratives and State Control

The suppression of academic freedom is evident across diverse political contexts. In India, populist nationalism has transformed public universities into sites of ideological policing. Institutions like Jawaharlal Nehru University face repeated accusations of being "anti-national," and faculty have faced sanctions for referencing critical scholarship. A notable example is the expulsion of a scholar from the South Asian University for citing Noam Chomsky's critique of the Modi government.

Elsewhere, the pattern persists. Hungary's Prime Minister Viktor Orbán forced the closure of Central European University; Turkey dismissed thousands of academics for signing peace petitions; and Brazil and the Philippines have slashed funding for the social sciences to stifle inquiry into inequality. In Gulf nations, discourse on gender, religion, and labor rights remains tightly regulated. These cases illustrate a coordinated global trend: portraying independent research as a threat to state sovereignty.

The Neoliberal Restructuring of Higher Education

Beyond overt political interference, a more insidious threat lies in the neoliberal transformation of academia. Universities have increasingly adopted a corporate logic that prioritizes marketability, global rankings, and patent generation over critical inquiry and public good. In this model, students are reduced to consumers, faculty to contingent labor, and institutional goals to branding and profitability.

This market-driven framework has been weaponized by political actors who simultaneously criticize universities as bastions of liberal ideology and defund them in ways that constrain their intellectual breadth. Fields like the humanities and social sciences, which interrogate power and promote civic consciousness, are increasingly marginalized as economically unviable.

Defending Academic Freedom as a Democratic Imperative

According to the Academic Freedom Index (2014–2024), academic freedom has declined in at least 34 countries, including established democracies. Indicators such as institutional autonomy, research freedom, and campus integrity have reached their lowest point since the 1980s. This deterioration undermines the capacity of universities to address urgent global challenges—from climate change to artificial intelligence ethics and democratic resilience.

Safeguarding academic freedom requires a concerted effort: political appointments and funding must be shielded from partisan influence; donors should support rather than dictate academic inquiry; and both faculty and students must engage actively in institutional governance. Universities must reassert their role as democratic commons, not merely as training grounds for employability.

Conclusion

The global crisis facing universities is driven by a dual assault: ideological coercion through populist politics and economic restructuring via neoliberal logic. If research and teaching are dictated by fear, profit, or majoritarian sentiment, universities will lose their role as incubators of critical thought. The defense of academic freedom is therefore not merely an institutional concern—it is a civic imperative vital to the survival of open, democratic societies.

The Himalayas and the Politics of Faith: Buddhism as a Geopolitical Tool

Introduction

Amid rising tensions between India and China in the Indo-Pacific, a subtler yet highly consequential contest is playing out in the Himalayan region. Beyond territorial disputes and military posturing, both countries are engaged in a strategic competition for religious and cultural influence over Himalayan Buddhism. What has historically been a tradition rooted in nonviolence and introspection is now deeply embedded in the machinery of geopolitical rivalry.

Buddhism as Instrument of Statecraft

China's Strategy

Since the mid-20th century, the Chinese government has methodically integrated Tibetan Buddhism into its broader state apparatus. Independent religious authorities have been marginalized, monasteries placed under surveillance, and the reincarnation of Tibetan lamas made subject to official approval. In 2007, Beijing formalized its control by declaring that all "Living Buddhas" must receive state endorsement—an unprecedented political intervention in spiritual practice.

As part of its soft power strategy, China invests heavily in monastic infrastructure, maintains a database of approved lamas, and uses Buddhism to legitimize its territorial claims, particularly in disputed regions like Tawang in Arunachal Pradesh.

India's Response

India's engagement with Buddhist diplomacy has been more recent and reactive. Although the country has hosted the Dalai Lama and the Tibetan government-in-exile since 1959, it only began investing strategically in its Buddhist heritage over the past decade. Efforts to promote Buddhist pilgrimage circuits and cultural diplomacy are underway but remain fragmented and under-resourced compared to China's coordinated initiatives. As scholars have observed, while India practices Buddhist diplomacy, China engages in full-fledged Buddhist statecraft.

The Dalai Lama Succession Crisis

The impending succession of the Dalai Lama presents a critical inflection point in this geopolitical contest. The current Dalai Lama, now 90, has indicated a desire to reincarnate outside of Chinese jurisdiction, most likely in India. In contrast, Beijing is preparing to appoint its own Dalai Lama through the historical Golden Urn method, ensuring control over the next spiritual leader.

This will likely lead to two rival Dalai Lamas—one recognized by the global Tibetan diaspora and another endorsed by the Chinese state. Such a division would not only fracture Tibetan Buddhism but also force regional Buddhist communities—in Ladakh, Arunachal Pradesh, Nepal, Bhutan, and beyond—to declare spiritual and, by extension, political allegiances.

Cultural Influence as Territorial Strategy

China's use of Buddhist narratives extends beyond religious control to the assertion of territorial claims. In Arunachal Pradesh, China invokes historical and spiritual justifications to lay claim to Indian-administered regions. In Nepal, it has invested heavily in infrastructure around Lumbini, the Buddha's birthplace, as part of a broader soft power campaign. In Bhutan, China subtly courts monastic authorities, challenging the kingdom's traditional balance between modern diplomacy and religious heritage.

Soft Power as Hard Power in the Himalayas

In the context of the Himalayas, soft power—embodied in monasteries, religious authority, and cultural heritage—can function as a form of hard power. Shifts in monastic allegiance can influence regional stability and align border communities with one geopolitical actor over

another. This dynamic is particularly salient in areas with sparse infrastructure and contested sovereignty.

Following the Dalai Lama's death, the geopolitical ramifications of his succession will be felt far beyond India and China, extending to Buddhist-majority nations such as Mongolia, Thailand, and Sri Lanka.

Conclusion

The unfolding contest over Himalayan Buddhism reveals that contemporary geopolitics is not confined to military strategy or economic dominance. Instead, it increasingly encompasses spiritual and cultural realms. As India and China vie for regional influence, the control over religious narratives and institutions has become a central battleground. The future of the Indo-Himalayan region—and indeed, Asia—may depend as much on the politics of reincarnation and monastic loyalty as on conventional statecraft.

Swachh Survekshan 2024–25: Insights into India's Urban Sanitation Evolution

Introduction

The ninth iteration of *Swachh Survekshan*, recognized as the largest urban cleanliness survey globally, marks a significant milestone in India's sanitation landscape. Conducted under the aegis of the Swachh Bharat Mission (Urban), the survey has expanded remarkably—from a pilot project in fewer than 100 cities in 2016 to an assessment of over 4,500 urban centers by 2024–25. While public discourse often centers on the competitive rankings, the survey's deeper significance lies in its role as a diagnostic tool for urban governance, waste management, and behavioral change.

Urban Sanitation as Measured Governance

The survey employs a comprehensive methodology based on ten key parameters, including waste segregation, sanitation infrastructure, worker welfare, and citizen grievance mechanisms. Combining third-party audits with inputs from 140 million citizens, the process enhances the credibility of the findings and provides actionable insights for municipal bodies. This evidence-based framework encourages data-driven decision-making, transforming the survey into a powerful instrument for performance benchmarking and public accountability.

Enhancing Participation Through Structural Reform

- **The Super Swachh League and Categorized Competition:** To counter the dominance of a few consistently high-performing cities, the 2024–25 edition introduced the *Super Swachh League*. Cities such as Indore, Surat, and Navi Mumbai were grouped separately, enabling emerging cities like Ahmedabad, Bhopal, and Lucknow to gain visibility within their population categories. By dividing cities into five population-based tiers—from those under 20,000 to those exceeding one million—this reform democratized participation and spurred competitive improvements.
- **Case in Point: Odisha's Rise:** Odisha exemplifies the success of this inclusivity. Bhubaneswar climbed from 34th to 9th place, while smaller municipalities like Aska and Chikiti also made notable gains. These examples highlight how equitable frameworks can foster broader, decentralized progress in sanitation performance.

Innovation, Best Practices, and Waste as a Resource

Municipal Innovation and Community Engagement

Beyond the rankings, *Swachh Survekshan* has evolved into a repository of replicable innovations. Indore's six-stream waste segregation model, Surat's commercial reuse of treated sewage, and Pune's integration of ragpickers into cooperatives all demonstrate scalable urban sanitation

strategies. Lucknow's waste-themed park and Agra's bioremediation of the Kuberpur dumpsite further illustrate how urban waste can be reimaged as a public resource through creative policy-making and citizen participation.

Cleanliness and Economic Development

Tourism-focused cities were also evaluated for their ability to manage sanitation during high-footfall events. Prayagraj was recognized for its waste management during the *Maha Kumbh Mela*, reinforcing cleanliness as both a cultural necessity and an economic imperative. With India attracting only 1.5% of global tourist traffic, sustained urban hygiene is critical for both global image and domestic well-being. The 2025 survey's theme—*Reduce, Reuse, Recycle* (RRR)—reflects a broader shift from waste elimination to circular economy principles.

Persistent Challenges and Future Directions

Despite marked progress, several challenges endure. While the campaign has achieved success in eliminating open defecation, similar behavioral shifts around consumption, waste generation, and recycling have yet to take root. India's urban centers generate over 150,000 tonnes of solid waste daily, straining the capabilities of urban local bodies (ULBs). Efficient segregation, plastic and e-waste management, and capacity building at the municipal level will be crucial to long-term sustainability.

Conclusion

Swachh Survekshan 2024-25 underscores that urban transformation is possible through strategic competition, data transparency, and inclusive governance. The evolution of cities like Surat—from sanitation crises in the 1990s to national exemplars today—demonstrates the replicability of successful models. Moving forward, cities must institutionalize cleanliness as a civic ethic and an economic asset. With robust public policy, community ownership, and technological innovation, India can transition from managing waste to creating holistic urban value.

The Changing Nature of Warfare: From Realpolitik to Digital Dominance

Introduction

Machiavelli's enduring assertion that politics is driven by the struggle for power remains acutely relevant in today's geopolitical landscape. The traditional international order—once guided by post-war norms and diplomatic consensus—is disintegrating. In its place, technological advancements are redefining the instruments of warfare and the architecture of global conflict. From Post-War Illusions to Technological Realities

- **The Myth of Lasting Peace:** Following the atomic bombings of Hiroshima and Nagasaki in 1945, a narrative of enduring peace, anchored by American military superiority and rules-based multilateralism, emerged. However, conflicts in Korea, Vietnam, and North Africa revealed that global tensions had merely shifted form. The Cold War's conclusion in 1989 did not herald a peaceful era; instead, it gave rise to asymmetric and high-tech confrontations.
- **Operation Desert Storm and the Technological Pivot:** The 1991 Gulf War marked a critical inflection point. The introduction of satellite-guided weaponry, real-time intelligence, and precision airstrikes signaled the beginning of a shift from manpower-intensive warfare to technology-driven strategy. This transition redefined battlefield doctrine and laid the foundation for the current era of digitized conflict.

Pretextual and Algorithmic Warfare: Post-9/11 Paradigms

The Post-9/11 Military Landscape

The attacks on the United States on September 11, 2001, ushered in an era where wars were increasingly justified under the pretext of combating terrorism. Traditional norms around war declaration and legal legitimacy began to erode, replaced by ideology-driven justifications. These conflicts, while not always clearly defined, planted the seeds for algorithmic and perception-centric warfare.

Autonomous and Digital Warfare in the 21st Century

- **Russia-Ukraine and the India-Pakistan Conflict of 2025:** The shift toward automation and artificial intelligence (AI) in warfare became fully visible in conflicts such as Russia-Ukraine (2022–present) and the India-Pakistan clash of May 2025. In both instances, the centrality of drones, loitering munitions, and AI-driven targeting systems represented a dramatic reconfiguration of combat norms. India and Pakistan deployed precision-guided bombs, fixed-wing drones, and advanced systems like BrahMos and PL-15s alongside Turkish autonomous drones—highlighting the speed and sophistication of modern conflict.
- **The Rise of Multi-Domain Battlefields:** Today's battlefield is multidimensional, encompassing not only air, land, and sea but also cyberspace and outer space. Cyberattacks, satellite interference, AI-enabled decision-making, and hypersonic weapons now play critical roles. Traditional advantages such as physical dominance or manpower are rapidly becoming obsolete in the face of algorithmic superiority and digital infrastructure.

Strategic Implications for India

- Despite investments in advanced weapons systems like Rafale jets and BrahMos missiles, India remains behind key adversaries in indigenous technological innovation. China's leadership in drone warfare, cyber capabilities, and the development of sixth-generation fighter jets poses a strategic challenge. The 2025 conflict highlighted India's over-reliance on legacy platforms and imported systems. To remain competitive, India must accelerate the development and deployment of AI-driven platforms, long-endurance UAVs, and decentralized cyber-defence mechanisms.
- Moreover, India must diversify its procurement sources and prepare for the realistic possibility of a two-front war involving both China and Pakistan.

Conclusion

The nature of warfare is undergoing a profound transformation—from physical battlegrounds to algorithmic theatres where information, automation, and AI determine outcomes. The post-WWII illusion of peace has been definitively shattered. In its place stands a Machiavellian order where survival is dictated by innovation, speed, and control of digital ecosystems. As war becomes increasingly abstract yet devastatingly precise, those nations that fail to adapt risk strategic irrelevance.

Critical Minerals and India's Strategic Imperative: Building Resilience for the Future

Introduction

- Critical minerals underpin modern technologies, clean energy, and national security.
- India's overdependence on imports jeopardises industrial and strategic autonomy.

The Geostrategic Importance of Critical Minerals

Definition and Role

- Critical minerals are essential for:
 - Electric vehicles (EVs)

- Renewable energy infrastructure
- Semiconductors and advanced electronics
- Key examples: lithium, cobalt, nickel, graphite, rare earth elements (REEs)

Demand Drivers

- Accelerated by:
 - Global clean energy transitions
 - Supply chain diversification
 - Strategic decoupling in tech sectors

Geopolitical Concerns

- Global supply chains are highly concentrated:
 - China refines:
 - 90% of REEs
 - 70% of cobalt
 - 60% of lithium
- China's dominance is due to sustained policy planning and industrial investment.

India's Policy Response and Strategic Position

National Initiatives

- 2022: Government identifies 30 critical minerals.
- 2025: Launch of National Critical Mineral Mission (NCMM).

Key Challenges

- 100% import dependency on key minerals.
- Limited midstream capabilities: refining, separation, and processing.

Exploration and Auctions: Progress and Barriers

Policy Reforms

- Mines and Minerals (Development and Regulation) Act updated.
- 5 rounds of auctions held by early 2025.

Ongoing Bottlenecks

- Low investor participation due to:
 - High capital costs
 - Lack of technical expertise
 - Inadequate domestic processing capacity

Industrial Capability and Strategic Investments

Proposed Solutions

- Establish mineral processing and refining zones.
- Offer Production-Linked Incentives (PLI) for:
 - Mineral separation
 - Refining and value addition
- Attract private sector participation in midstream and downstream processing.

Managing External Risks and Supply Chain Security

Emerging Risks

- China's export curbs have disrupted:
 - EV battery production
 - Electronics supply chains

Strategic Responses

- Strengthen bilateral mineral partnerships (e.g., with Australia, Argentina).
- Engage in global alliances like:
 - Minerals Security Partnership (MSP)
 - Quad and G20 platforms

Sustainability, Recycling, and ESG Frameworks

Circular Economy Opportunities

- Promote battery and e-waste recycling.
- Address gaps in:
 - Formal recycling infrastructure
 - High-efficiency material recovery
 - Regulation of informal sector

Environmental and Social Governance (ESG)

- Many reserves located in:
 - Tribal areas
 - Ecologically fragile zones
- Solutions include:
 - Transparent ESG compliance
 - Community participation and benefit-sharing

Strategic Alignment and Way Forward

Policy Recommendations

- Conduct periodic assessments of critical mineral demand and risk.
- Maintain national stockpiles for emergency buffer.
- Align mineral strategy with:
 - Foreign policy
 - Energy transition
 - Industrial growth goals

Conclusion

- Reducing import dependence and developing domestic capacity is essential.
- With coordinated policies and international partnerships, India can emerge as a leader in the critical minerals economy.

India's Roadmap for Research Security in Strategic Sectors

Introduction

- Scientific innovation is key to India's vision of becoming a developed nation by 2047.
- Strategic sectors like AI, space, semiconductors, and biotechnology must be safeguarded from cyber threats and espionage.

What is Research Security and Why It Matters

Definition

- Protection of sensitive R&D from:
 - Cyberattacks
 - Espionage
 - Unauthorised access

Objectives

- Prevent misuse of high-impact research.
- Safeguard national interests and scientific competitiveness.
- Maintain confidentiality of sensitive innovations.

India's High-Risk Strategic Sectors

- Space & Defence: Satellite and missile technologies.
- Semiconductors: Backbone of digital infrastructure.
- Biotechnology: Vaccine development, agriculture, health.
- AI & Quantum Tech: Essential for automation and cybersecurity.

Global Incidents and Lessons

Key Espionage Cases

- Harvard-China espionage: Undisclosed foreign funding in sensitive research.
- 2020 cyberattacks: Attempts to steal COVID-19 vaccine data.
- ESA breaches: Exposure of aerospace data vulnerabilities.

Global Response Models

- USA: CHIPS Act, NIST security frameworks.
- Canada: Collaboration risk guidelines.
- EU: Flexible, risk-based regulation approach.
- China: Military-Civil Fusion strategy—civilian research used for military purposes.

India's Gaps and Challenges

- Limited policy awareness on research security.
- Inadequate oversight of foreign research collaborations.
- Poor cyber hygiene in R&D institutions.
- Academic resistance due to fear of losing openness and autonomy.

Strategic Recommendations

Policy and Institutional Frameworks

- Create national-level Research Security Guidelines.
- Establish a Research Security Cell under the Anusandhan National Research Foundation (ANRF).
- Clearly define "critical research domains" for heightened protection.

Operational and Technical Interventions

- Upgrade digital infrastructure in research labs.
- Implement:
 - Vetting of research personnel
 - Controlled access to sensitive datasets
- Encourage academic-industry-government cooperation to co-design practical safeguards.

Global Cooperation

- Collaborate with trusted international partners:
 - U.S., Canada, EU nations
- Co-develop standards and share best practices.

Way Forward

Governance and Capacity Building

- Develop inter-institutional coordination architecture.
- Invest in:
 - Cybersecurity tools
 - Surveillance systems
 - Capacity building and training
- Encourage a security-conscious research culture without stifling innovation.

International Alignment

- Synchronise research security frameworks with global norms to:
 - Improve global trust
 - Facilitate cross-border scientific collaboration

Conclusion

- India's ambition to lead in global science and innovation hinges on a secure research ecosystem.

- A well-balanced approach—protective yet flexible—can help India build resilience without compromising academic freedom.
- With the right measures, India can become a trusted, secure, and globally respected hub for critical research and innovation.

India's Strategic Autonomy and the West's Sanctions Diplomacy

Introduction

- Growing geopolitical tension between the West and Russia has intensified pressure on countries like India to align with Western sanctions.
- NATO Secretary-General Mark Rutte's warning to India, China, and Brazil over potential secondary sanctions has been firmly rejected by India.
- The situation reflects deeper global contradictions—particularly Western double standards and the Global South's rising assertion of strategic autonomy.

Context: Sanctions and Western Inconsistencies

- NATO and the EU have led sanctions against Russia since its 2022 invasion of Ukraine.
- Despite urging global compliance, several EU countries continue importing Russian energy through third-party channels.
- A 2024 CREA report revealed:
 - The EU still imports Russian LNG and refined petroleum via India and Turkey.
 - By 2024, India had become the EU's largest supplier of refined oil—highlighting inconsistencies in Western enforcement.

India's Energy Security: A National Priority

- India imports about 88% of its crude oil, with Russia supplying ~40% in 2024.
- Russian oil, often sold at a discount, is crucial for India's:
 - Fiscal health
 - Fuel affordability for consumers
- The Vadinar refinery in Gujarat, partly owned by Russia's Rosneft, is now under EU scrutiny—despite operating on Indian soil.
- India's Petroleum Minister reaffirmed: national interest, not foreign pressure, will dictate energy policy.

India's Diplomatic Stand

- The External Affairs Minister conveyed to the U.S. that India's energy decisions are economic and strategic—not political.
- India emphasized:
 - Its right to strategic autonomy, as Western countries also prioritize their interests.
 - Opposition to "one-sided" coercive diplomacy.
 - Support for a rules-based international order that respects sovereign choices.

Emerging Risks: U.S. Tariffs and Economic Coercion

- A U.S. bill, backed by Senator Lindsey Graham and over 170 lawmakers (including Donald Trump), proposes:
 - 500% tariffs on countries importing energy from Russia.
 - 100% tariffs if peace talks don't occur within 50 days.
- These threats signify a shift toward economic warfare, potentially undermining global trade norms.

Why Secondary Sanctions Are a Problem

- Secondary sanctions penalize third-party nations for not adhering to foreign sanctions.

- **Implications include:**
 - Violation of sovereignty and WTO norms.
 - Increased global trade fragmentation and erosion of trust.
 - Long-term damage to multilateral cooperation and economic diplomacy.

Do Sanctions Work? Lessons from Iran and Russia

- Sanctions have largely failed to meet their goals in Iran or Russia.
- Russia has adapted by:
 - Boosting domestic production.
 - Increasing trade with India, China, and Gulf nations.
 - Using shadow fleets and non-dollar payment systems to bypass sanctions.
- Overall, sanctions haven't achieved regime change or war cessation—calling their effectiveness into question.

India's Strategic Autonomy in Practice

- India continues to:
 - Abstain from UN votes condemning Russia.
 - Engage with both Russia and the West on strategic issues.
- India's approach is non-alignment, not neutrality:
 - Seeks multipolarity and global balance.
 - Diversifies energy and investment partners:
 - Middle East for long-term energy contracts.
 - U.S. and EU for renewables.
 - BRICS nations for strategic reserves and infrastructure.

Global South Pushback Against Western Pressure

- Nations like Brazil, South Africa, Indonesia, and India are asserting their right to autonomous foreign policy.
- European hypocrisy:
 - Continues indirect energy imports from Russia while pressuring others to stop.
- NATO's selective sanctions reflect a neo-colonial approach—treating Global South countries as subordinate players.

India's Long-Term Energy Strategy

- Proactively building Strategic Petroleum Reserves (SPRs) to absorb global supply shocks.
- Diversifying energy mix with:
 - Green hydrogen and solar
 - Biofuels and ethanol blending
 - Bilateral energy partnerships with Russia, UAE, Saudi Arabia, and the U.S.
- The strategy ensures energy independence and reduces reliance on any single supplier.

Way Forward

- **Diplomatic Assertion:** Maintain an independent foreign policy guided by national interest.
- **Multilateral Platforms:** Use BRICS, G20, SCO to resist unilateral sanctions and economic coercion.
- **Trade Diversification:** Expand partnerships across ASEAN, Africa, and Latin America to limit dependence on the West.
- **Energy Transition:** Fast-track renewable adoption to reduce reliance on imported crude.
- **Domestic Resilience:** Invest in:
 - Refining capacity
 - Strategic R&D
 - Secure supply chains for long-term energy security

Conclusion

- India's strong rejection of NATO's sanctions threats marks a confident assertion of sovereignty.
- Western nations, while condemning trade with Russia, continue indirect dealings—exposing the moral hollowness of sanctions diplomacy.
- India's position is clear: external pressure will not override national priorities.
- As India advances its energy security and global partnerships, it also sets a precedent for the Global South to uphold dignity, autonomy, and multipolar cooperation.

The India-U.K. FTA Spells a Poor Deal for Public Health

Context

On July 24, 2025, India and the United Kingdom signed a landmark Free Trade Agreement (FTA), hailed for its potential to boost bilateral trade and strategic ties. However, the agreement has also raised serious public health concerns in India—primarily linked to the increased influx of high fat, sugar, and salt (HFSS) foods, potentially worsening India's growing non-communicable disease burden.

This calls for a critical analysis of the FTA's broader health implications, drawing lessons from international precedents and underscoring the need for strong policy action.

Economic Opportunities of the India-UK FTA

The FTA is expected to:

- Remove tariffs, reducing consumer costs.
- Boost foreign investment and create jobs.
- Strengthen economic integration through expanded market access for goods and services.

India's gains include access to U.K. markets, enhanced imports of U.K. goods, and strategic cooperation in trade and innovation.

Public Health Risks: The Mexican Experience Post-NAFTA

The North American Free Trade Agreement (NAFTA) offers a cautionary tale:

- After NAFTA, Mexico saw a surge in the import and consumption of ultra-processed and sugary foods.
- This led to a sharp rise in obesity, diabetes, and other chronic illnesses.
- Mexico had to introduce corrective policies—a soda tax and mandatory warning labels—but only after severe public health impacts.

India, with weaker regulatory safeguards than Mexico, may face even greater risks unless preventive steps are taken immediately.

Regulatory Comparison: U.K. vs. India

United Kingdom

- Advertising Controls:
 - Ban on HFSS food ads targeting children on TV before 9 p.m.
 - From October 1, 2025, complete ban on online paid advertisements of HFSS products.
- Nutrition Labelling:
 - Traffic light labelling system helps consumers quickly understand fat, sugar, and salt content.

India

- Weak Advertising Regulations:
 - No enforceable ban on junk food advertisements.

- Heavy reliance on voluntary codes by the Advertising Standards Council of India (ASCI).
- Celebrity endorsements and cartoon branding remain largely unregulated.
- **Inadequate Labelling Systems:**
 - Mandatory front-of-pack labelling is still pending.
 - Warning labels—proven globally to be effective—have been delayed in favour of a star-rating system, heavily influenced by industry lobbying.

Public Health Consequences in India

Rising Lifestyle Diseases

- Between 2011 and 2021, sales of HFSS and ultra-processed foods in India grew at a CAGR of 13.3%.
- Resulting spike in childhood obesity, diabetes, and other non-communicable diseases (NCDs).
- Poor regulations on food marketing and labelling aggravate these trends.

Commercial Determinants of Health

- FTAs can function as drivers of unhealthy consumption, especially when commercial interests override public health.
- Without proper checks, FTAs may promote the unchecked spread of harmful dietary patterns—turning trade policy into a public health threat.

Way Forward: Policy Recommendations

1. **Enforce Comprehensive Advertising Bans**
 - Legally restrict the marketing of HFSS foods to children, in line with national dietary recommendations.
2. **Implement Mandatory Warning Labels**
 - Adopt clear front-of-pack warnings for unhealthy foods, instead of industry-friendly alternatives like the star system.
3. **Promote Healthy School Environments**
 - Prohibit sales of junk food and sugary drinks in school and college canteens.
 - Set up HFSS health boards within educational institutions to promote healthy eating.
4. **Include Public Health Experts in Trade Talks**
 - Ensure that health professionals are involved in trade negotiations, so public health is not sidelined by economic interests.

Conclusion

As India celebrates the economic promise of its trade agreements, it must also confront their hidden health costs.

The India-U.K. FTA presents a crucial opportunity to strengthen domestic health regulations before the damage is done.

India must act now—implementing bold, preventive policies to ensure that economic prosperity does not come at the expense of public health, avoiding a repeat of Mexico's costly mistakes.

The Fault Lines in India's Electoral Architecture Are Visible

Context

As the Election Commission of India (ECI) concludes the first phase of the Special Intensive Revision (SIR) of electoral rolls in Bihar (by August 1, 2025), the process has sparked controversy.

Allegations have emerged of disenfranchisement—particularly of migrants, minorities, and the poor.

While some defend the ECI's efforts to maintain electoral integrity, critics argue its methods are biased and exclusionary.

But both perspectives overlook a fundamental issue: India's electoral framework is misaligned with its highly mobile, modern society.

Historical Roots of the Problem: A Legal Legacy Mismatched with Modern India

The Representation of the People Act, 1950, was formulated for an India where:

- Over 82% lived in rural areas.
- Less than 8% of the population was mobile.

It was assumed that voters would cast their ballots in their place of birth—a reasonable assumption in 1950, but outdated today.

India Today: A Country on the Move

- Over 450 million internal migrants account for nearly 37% of the population.
- Bihar reflects this mobility:
 - 36% of its households have at least one migrant.
 - 20% of its working-age population lives outside the state at any time.
 - Around 1.2 million names were removed from electoral rolls in 2025, largely due to absenteeism during verification.

In migration-heavy districts, 5–7% of names were purged—effectively excluding voters forced to relocate for work.

Legal and Conceptual Disconnects: Citizenship vs. Residency

Conceptual Confusion

- Citizenship is a legal and constitutional identity.
- Residency, however, is the administrative basis for electoral enrollment.

This misplaced emphasis on residency denies political participation to internal migrants. They are citizens without representation—trapped between hometowns they've left and host cities that exclude them.

The ECI's Administrative Dilemma

The ECI adheres to a model of "administrative minimalism":

- Focused on rule-based compliance rather than justice-oriented reform.
- By rigidly enforcing current legal provisions—designed for a sedentary population—the ECI unintentionally facilitates systematic exclusion.

While the roll-cleansing appears neutral, the rules themselves are outdated and unsuited for a country in motion.

Global Best Practices: Learning from Other Democracies

Countries facing similar challenges have reimagined their systems to promote both integrity and inclusiveness:

- **United States:** Allows absentee and mail-in ballots, enabling voters to participate from wherever they live.
- **Philippines:** Facilitates absentee voting for its 1.8 million overseas workers, achieving over 60% turnout.
- **Australia:** Operates mobile polling stations in transient or remote communities, driving voter participation rates above 90%.

These examples show that inclusive electoral systems are possible—given political will and institutional innovation.

Political Exploitation and Public Awareness Gaps

Instead of solving the problem, political parties often exploit disenfranchisement as an electoral issue.

Practical safeguards like draft roll scrutiny or filing claims remain:

- Poorly communicated,
- Inaccessible due to illiteracy, and
- Impractical for migrant labourers.

Surveys reveal:

- Only 25% of migrants knew they could contest roll deletions.
- Over 60% of voters in Bihar were unaware of their rights in the process.

This leaves millions voiceless, uninformed, and politically invisible.

Conclusion: Towards an Inclusive Electoral System

Defending the ECI from political blame is necessary—but not enough.

Reform is essential.

- The trade-off between electoral integrity and inclusiveness is a false choice—caused by outdated legal assumptions.
- The ECI must go beyond procedural enforcement to actively advocate for reforms that reflect India's demographic realities.

Shared Responsibility

- Lawmakers, civil society, and political parties must collaborate to:
 - Educate migrants,
 - Strengthen grievance mechanisms, and
 - Ensure no citizen is excluded due to mobility.

India's democracy can only thrive when it ensures that every citizen—regardless of where they live—has an equal voice at the ballot box.

Kargil, Pahalgam and a Revamp of the Security Strategy

Context

As India commemorates the 26th anniversary of the Kargil War (1999), its strategic and emotional resonance remains strong.

It was a turning point in India's defence history, being the first televised conflict that brought the realities of warfare into Indian homes.

Fast forward to Pahalgam, 2025, recent developments show that the lessons from Kargil continue to inform India's evolving military doctrine, particularly in responding to terrorism and cross-border threats.

Kargil War: A Defining Conflict

- Backdrop:
After India and Pakistan both declared nuclear capability in 1998, the region became geopolitically tense.
- India, under economic sanctions and a fragmented coalition government, was militarily underprepared.
- The Betrayal: Despite a peace initiative—PM Vajpayee's bus diplomacy to Lahore—Pakistan infiltrated Kargil, shattering the fragile peace.
- Key Revelations:
 - War under nuclear shadow is possible if escalation is contained.
 - India's military weaknesses were exposed: Intelligence failures, Lack of preparedness for high-altitude warfare, Outdated equipment, Poor coordination among agencies

Post-Kargil Reforms: Laying the Foundation for Future Readiness

1. Overhaul of Intelligence and Strategic Structures

- Kargil Review Committee's recommendations led to:
 - Formation of the Defence Intelligence Agency (2002) and National Technical Research Organisation (2004)
 - Revamp of the National Security Council Secretariat and Joint Intelligence Committee
 - Institutionalisation of the National Security Adviser (NSA) role

2. Military Modernisation and Strategic Autonomy

- Recognising the need for self-reliance and rapid response, India:
 - Adopted the Cold Start Doctrine for swift, conventional strikes.
 - Focused on indigenous military platforms:
 - BrahMos missiles, Rafale jets, Apache/Chinook helicopters, S-400 systems, and modernised artillery
 - Shifted towards strategic autonomy and local defence manufacturing.

From Conventional War to Asymmetric Threats: The Terrorism Challenge

India's Evolving Counter-Terrorism Posture

- Post-Kargil, terrorism from Pakistan continued with devastating impact:
 - IC-814 hijacking (1999)
 - Parliament attack (2001)
 - Mumbai attacks (2008)
- India's response remained restrained for years, avoiding direct military escalation.
- A shift began with:
 - Surgical Strikes (2016, post-Uri attack)
 - Balakot Airstrikes (2019)—a bold signal of cross-border assertiveness

Pahalgam 2025 and Operation Sindoor: A New Strategic Threshold

- Following a deadly terror strike in Pahalgam, India launched Operation Sindoor:
 - Over four days, Indian forces hit:
 - 9 terror camps
 - 11 Pakistani airbases
 - A suspected nuclear storage site
- Pakistan quickly sought a ceasefire, revealing the impact of the operation.
- Key

Outcome:

This marked a paradigm shift—from strategic restraint to overwhelming retaliation.

Key Takeaways and Strategic Lessons

1. Doctrinal Shift

India has transitioned from a reactive posture to pre-emptive and retaliatory capabilities.

2. Modernisation and Coordination

- Defence preparedness now rests on:
 - Joint command structures
 - Integrated intelligence
 - Advanced weaponry
 - Indigenous platforms

3. Need for Vigilance

Despite progress, the core lesson remains—India must be constantly vigilant.

Avoiding another Kargil or Pahalgam-scale surprise requires:

- Continuous military modernisation
- Enhanced inter-agency coordination

- Political will and decisive leadership

Conclusion

From the snowy peaks of Kargil to the aftermath of Pahalgam, India's security architecture has undergone a dramatic evolution.

It has emerged as a confident, assertive regional power, capable of independent strategic action. As the nation remembers the bravery of its soldiers, it must also reaffirm its commitment to proactive defence, resilience, and peace.

The message is clear: India will not allow another Kargil or Pahalgam to happen again.

The Scientist Who Made 'Mangroves' a Buzzword

Context

Once seen primarily as local sources of livelihood and fishery support, mangroves have now become central to global environmental priorities.

They play a key role in:

- Climate resilience
- Carbon sequestration
- Disaster risk reduction
- Biodiversity conservation

This global shift in perception has been shaped by a combination of scientific validation, international policy actions, and the tireless efforts of advocates—foremost among them, Dr. M.S. Swaminathan.

From the Margins to the Global Environmental Agenda

Traditional Knowledge Meets Global Science

- Local coastal communities have long recognised the value of mangroves.
- But wider attention only arrived in the late 1980s, through major international initiatives:
 - UNDP and UNESCO's 1988 regional mangrove research programme laid the groundwork.
 - At the 1989 Climate Change and Human Responses conference, Dr. Swaminathan championed mangroves as buffers against climate risks such as rising seas and cyclones.

Innovative Proposals

- He called for sustainable mangrove management based on ecology, economy, and equity.
- His research also explored genetic transfer of mangrove salinity tolerance to crops like rice—linking ecosystem resilience with agricultural innovation.

Dr. M.S. Swaminathan's Landmark Contributions

1. Institutional Foundations

- In 1990, he founded the International Society for Mangrove Ecosystems (ISME) and served as its first President.
- He co-drafted the Charter for Mangroves, which was incorporated into the World Charter for Nature (1992) at the UN Conference.
- Under his leadership, ISME launched several global initiatives:
 - World Mangrove Atlas
 - Economic/environmental assessments
 - Restoration manuals and workshops
 - GLOMIS (Global Mangrove Database and Information System)
 - Regional genetic resource centres across Asia and Oceania

These efforts reframed mangroves from being “useless swamps” to vital, multifunctional ecosystems.

2. Transforming India's Mangrove Policy and Practice

Early Missteps

- Mangrove exploitation in India dates back to 1783, with colonial-era policies focused on land clearance for agriculture.
- Restoration projects post-independence often failed, blaming local communities for degradation.

Participatory Turn

- In the 1990s, Swaminathan's collaborative research with the Tamil Nadu Forest Department shifted the narrative:
 - It revealed that misguided government management—not local use—was the primary cause of mangrove loss.
- This led to:
 - The development of the “fishbone canal” hydro-ecological restoration method
 - Implementation across states including Tamil Nadu, Andhra Pradesh, and Gujarat
 - The launch of Joint Mangrove Management (JMM), formally recommended for national adoption in 2000

Mangroves as Nature's Coastal Shields

- The 1999 Odisha super cyclone and the 2004 Indian Ocean tsunami highlighted the protective value of mangroves.
- In both cases, areas with healthy mangrove cover suffered less damage, prompting large-scale restoration drives by both central and state governments.
- Mangroves are now treated as natural coastal infrastructure, critical to disaster management and resilience planning.

India's Progress: Expanding Mangrove Cover

According to the India State of Forest Report (ISFR) 2023:

- Mangrove cover stands at 4,991.68 km², about 0.15% of India's land area
- This marks an increase of 16.68 km² since 2019, reflecting:
 - Evidence-based policymaking
 - Stakeholder collaboration
 - Long-term commitment to mangrove conservation

Conclusion

On the occasion of World Mangrove Day, it is important to recognise the journey of mangroves from local lifelines to global climate assets.

Thanks to the vision of pioneers like Dr. M.S. Swaminathan, combined with robust scientific work, policy leadership, and community involvement, mangroves are now viewed as essential tools in climate resilience, ecological balance, and sustainable development.

The future of mangroves will depend on our continued investment in science, stewardship, and solidarity.

Fiscal Health of Indian States in FY2025: Key Trends, Emerging Concerns, and Outlook

Context

Assessing the fiscal performance of Indian states is vital to understanding the country's overall macroeconomic health. An analysis of provisional actuals (PA) for FY2025 from 17 major states—representing about 90% of India's GDP—offers valuable insights into trends in fiscal

and revenue deficits as well as capital expenditure. This analysis provides crucial implications for FY2026 and future fiscal strategies.

Fiscal Trends in FY2025 (Provisional Actuals)

A. Rise in Fiscal Deficit

- **Definition:** The fiscal deficit represents the gap between total government expenditure and non-debt receipts (including revenue receipts, recoveries of loans, and miscellaneous capital receipts).
- **FY2025 Data:** Fiscal deficit rose to ₹9.5 trillion (3.2% of GSDP) from ₹7.8 trillion (2.9% of GSDP) in FY2024.
- **Key Driver:** This increase was primarily due to a significant rise in the revenue deficit, with a relatively smaller impact from capital expenditure.

B. Surge in Revenue Deficit

- **Definition:** Revenue deficit is the shortfall of revenue receipts compared to revenue expenditure, indicating borrowing used for non-asset-forming activities.
- **FY2025 Figures:** Revenue deficit nearly doubled to ₹2.1 trillion (0.7% of GSDP), up from ₹1.1 trillion (0.4% of GSDP) in FY2024.
- **Contributing Factors:**
 - Slower growth in revenue receipts: 6.3% in FY2025 vs 7.9% in FY2024.
 - Stable growth in revenue expenditure: 9% year-on-year.
- **Implications:**
 - States experienced revenue strain even as the Centre pursued fiscal consolidation.
 - A larger share of revenue deficit in the fiscal deficit indicates reduced scope for productive capital investments.
 - The capex share of the fiscal deficit dropped to 78%, down from the usual 80–90% range observed during FY2022–24.

Capital Expenditure (Capex) Trends

A. Overall Capex Performance

- **Total capital outlay in FY2025 (PA):** ₹7.4 trillion, an increase of ₹678 billion over FY2024.
- However, the incremental increase in FY2025 was significantly lower than the ₹910–1,120 billion range recorded during FY2022–FY2024.
- States fell short of their Revised Estimates by ₹1.1 trillion, indicating underperformance.

B. Surge in March 2025 Capex

- In March 2025, capex jumped 42% YoY to ₹2.2 trillion, up from ₹1.5 trillion in March 2024.
- This last-month spike was driven by major states such as Uttar Pradesh, Andhra Pradesh, Madhya Pradesh, Maharashtra, Tamil Nadu, and Karnataka.
- 30% of the annual capex occurred in March alone, suggesting back-loaded spending and a corresponding rise in state government securities borrowings.

C. Impact of Centre's Capex Loan Scheme

- Disbursement under the scheme rose to ₹1.5 trillion in FY2025, up from ₹1.1 trillion in FY2024.
- The 17 analysed states received around ₹1.13 trillion, compared to ₹0.8 trillion in FY2024.
- This central support accounted for over 40% of the incremental capex in FY2025 for these states.

FY2026 Budget Estimates and Forward Outlook

A. FY2026 Capital Expenditure Targets

- Budget estimates for FY2026 project capital spending of ₹9.5 trillion, reflecting a 29.2% year-on-year increase.
- This implies an additional ₹2.1 trillion in capex over FY2025 provisional actuals.
- However, this target appears ambitious, as it is double the average annual incremental capex of ₹1 trillion recorded between FY2022 and FY2024.

B. Long-Term Fiscal Challenges and Policy Priorities

- Structural reforms such as those proposed by the Finance Commission, Pay Commission, and adjustments related to the GST compensation cess will significantly impact state finances.
- Going forward, it is essential to adopt fiscal policies that prioritise capital expenditure over revenue spending to ensure sustainable economic growth within limited fiscal space.

Conclusion

The fiscal trajectory of Indian states in FY2025 reveals increasing stress on revenue accounts and back-loaded capital investments, despite support from the Centre. While the push for higher capital outlays in FY2026 is encouraging, its feasibility remains uncertain. Strengthening fiscal discipline, improving the efficiency of public spending, and aligning fiscal policies with long-term developmental priorities will be key to ensuring balanced and resilient state finances.

Clarifying the Citizenship-Voting Link in Bihar's Electoral Roll Revision

Context

The question of voter eligibility in India is not a mere administrative matter but a fundamental element of the country's democratic framework. Central to this framework is the constitutional principle that only Indian citizens are entitled to vote. Recent controversy over the Election Commission of India's (ECI) move to conduct a Special Intensive Revision of electoral rolls in Bihar has prompted criticism, particularly regarding the verification of voters' citizenship. These objections reflect either a misunderstanding of the Constitution or a deliberate neglect of its mandates for political convenience.

Citizenship: A Constitutional Requirement for Voting

- Article 326 of the Constitution mandates that elections to the Lok Sabha and State Legislative Assemblies be based on adult suffrage.
- However, this suffrage is restricted to Indian citizens who are:
 - At least 18 years of age, and
 - Not disqualified under any law made by the appropriate legislature.

This principle is reinforced by the Representation of the People Act, 1950, which governs the preparation and maintenance of electoral rolls. It emphasizes that only citizens may be registered as voters.

Role and Responsibility of the Election Commission of India

- Under Article 324, the Election Commission of India (ECI) is constitutionally entrusted with supervising elections and maintaining electoral rolls.
- Its authority includes revising rolls even in non-election periods.
- In *Lakshmi Charan Sen v. A.K.M. Hassan Uzzaman (1985)*, the Supreme Court affirmed that revision is an ongoing responsibility of the ECI.
- The ECI has both the power and obligation to:
 - Verify the eligibility of applicants.
 - Remove names of those found to be ineligible, especially non-citizens.

Statutory Framework (RPA, 1950)

- Sections 15 to 24: Cover the preparation, correction, and revision of electoral rolls.
- Section 16: Clearly disqualifies non-citizens from voter registration.
- Section 16(2): Allows deletion of entries wrongly included in the rolls, reinforcing the need to confirm citizenship status.

Disqualifications Extend to Candidacy

- The link between citizenship and electoral rights goes beyond voting.
- Only citizens can contest elections for Parliament or State Assemblies.
- Articles 102 and 191 of the Constitution:
 - Disqualify any person who is not an Indian citizen, or
 - Who has voluntarily acquired foreign citizenship or pledged allegiance to another country.

Thus, permitting non-citizens to vote or contest elections would violate the Constitution and compromise the core of Indian democracy.

Overseas Citizens and Voter Eligibility

- The Citizenship Act, 1955 provides clarity on the rights of Overseas Citizens of India (OCIs) through:
 - Section 7A: Registration of OCIs.
 - Section 7B(2): Explicitly states that OCIs do not have voting rights.
- Therefore, only full Indian citizens can be included in the electoral rolls.

Residency and Lawful Presence

- Electoral roll inclusion requires a person to be ordinarily resident in a constituency.
- In *Dr. Yogesh Bhardwaj v. State of U.P. (1990)*, the court held that unlawful presence in India cannot qualify as ordinary residence.
- Individuals residing in India in violation of immigration laws are not eligible to vote or to be listed in voter rolls.

Aadhaar Does Not Prove Citizenship

- A common misconception is that possession of an Aadhaar card is proof of citizenship.
- However, under the Aadhaar Act, 2016:
 - Section 9: Aadhaar does not confer citizenship or domicile status.
 - Section 3: Aadhaar is issued to residents, not necessarily citizens.
- Therefore, Aadhaar cannot be used as legal proof of citizenship for voter registration.

Conclusion

The legitimacy of India's electoral process depends on ensuring that the voter base is comprised solely of Indian citizens, as mandated by the Constitution and electoral laws. The Election Commission, as the constitutional guardian of elections, must carry out revisions and verifications to uphold this standard.

Criticism of the ECI's initiative in Bihar to verify voter eligibility, including citizenship, is thus misplaced and contrary to constitutional principles. Ignoring these processes risks compromising the integrity of Indian democracy, potentially allowing non-citizens to dilute the electoral system. Strong verification mechanisms and voter roll maintenance are not just administrative necessities but constitutional imperatives.

The Yarlung Tsangpo Project: Strategic, Ecological, and Geopolitical Implications for India

Context

China has initiated the construction of a large-scale hydropower project on the Yarlung Tsangpo River in Tibet, near the Indian border. Launched by Premier Li Qiang, the project has raised

significant concerns in India due to its enormous scale, lack of transparency, potential ecological damage, and geopolitical ramifications. The absence of consultation with lower riparian countries like India and Bangladesh further exacerbates the issue.

Project Overview and Strategic Location

Cost and Scale

- The project is estimated to cost 1.2 trillion yuan (approximately US\$167.8 billion).
- It includes the construction of five cascade hydropower plants in Medog County, situated just 30 km from India's Arunachal Pradesh border.
- It is projected to generate 300 billion kWh annually, over three times the capacity of the Three Gorges Dam, currently the world's largest hydropower facility (88.2 billion kWh).

Engineering Specifications

- The project involves drilling 4 to 6 tunnels, each approximately 20 km long, potentially diverting up to 50% of the river's flow.
- The site lies in Seismic Zone V, near the Eastern Himalayan Syntaxis, making it geologically sensitive.

Environmental and Hydrological Concerns

Disruption of the Brahmaputra River System

- The project is likely to alter the river's hydrology and reduce seasonal flow, especially during dry months.
- It threatens aquatic biodiversity, fisheries, sediment transport, and ecosystem services.
- Despite being labeled a run-of-the-river project, the inclusion of reservoir-like structures for the five cascade dams raises concerns about actual impacts.

Flood Risks

- Sudden water discharges, particularly during monsoon rains or seismic events, could trigger severe downstream flooding in India and Bangladesh.

Seismic Vulnerability

- The region is prone to earthquakes due to tectonic features like the Himalayan Frontal Thrust and Medog Fault.
- Citing the Neelum-Jhelum project failure in Pakistan-occupied Kashmir, experts highlight serious structural safety concerns.

Diplomatic and Legal Dimensions

Lack of Riparian Cooperation

- China has historically withheld hydrological data and shown limited cooperation on transboundary water governance.
- Its past management of the Mekong River negatively affected Vietnam, Cambodia, and Laos, setting an alarming precedent.
- Although three MoUs on water sharing were signed between India and China in 2013, they remain unimplemented.

International Water Law

- Neither India nor China is a signatory to the UN Convention (1997) on the Law of the Non-Navigational Uses of International Watercourses.
- Nonetheless, principles like "equitable and reasonable utilization" and "no significant harm" are accepted under customary international law.

Geopolitical Double Standards

- China is unlikely to accept similar upstream projects by other countries that affect its interests.
- India's current approach, relying on quiet diplomacy, is viewed as inadequate.
- Experts advocate for a more assertive diplomatic and public position.

Strategic and Policy Recommendations for India

Diplomatic Measures

- Insist on full project disclosure, including seismic risk assessments and environmental impact reports.
- Urge temporary suspension of the project until India's concerns are addressed through transparent consultations.

Domestic Infrastructure Response

- Develop flood management infrastructure in Arunachal Pradesh and Assam.
- Employ remote sensing and geospatial technologies for independent monitoring of hydrological changes.
- Reduce reliance on Chinese hydrological data by enhancing domestic data networks.

International Engagement

- Encourage involvement of civil society organizations and international forums.
- Elevate the issue in bilateral discussions and multilateral platforms to demonstrate India's strategic concerns.

Conclusion

The Yarlung Tsangpo hydropower project poses significant ecological, hydrological, and strategic risks for India. It challenges regional transboundary water governance and has implications for national security and sovereign rights.

India must move beyond passive diplomatic approaches to a more proactive and strategic engagement, combining legal instruments, technical preparedness, and international collaboration to safeguard its ecological and geopolitical interests.

The Medical Boundaries for AYUSH Practitioners

Context

A recent online debate between a hepatologist and an Indian chess Grand Master regarding whether traditional medicine practitioners can identify as doctors has reignited a long-standing and complex discussion. This issue concerns not only the titles used by practitioners of Ayurveda, Unani, and other traditional systems, but also involves critical questions of public health policy, legal clarity, and cultural identity in India.

Historical Context: Committees and Governmental Shifts

- The debate on traditional versus modern medicine in India dates back nearly eight decades.
- The Bhore Committee (1946) strongly advocated for modern, evidence-based medical practices, reflecting global shifts away from traditional systems.
- Traditional practitioners, however, framed this push as a threat to India's cultural heritage, calling for the preservation of ancient systems like Ayurveda.
- Responding to this resistance, the government formed the Committee on Indigenous Systems of Medicine, which in 1948 endorsed traditional medicine as part of a Hindu nationalist narrative.
- Although Prime Minister Nehru initially withheld official recognition, policy direction changed in the 1970s under Indira Gandhi.
- This led to the enactment of the Indian Medicine Central Council Act, which granted formal recognition and regulatory status to Ayurveda, Siddha, and Unani systems.
- The framework was updated through the National Commission for Indian System of Medicine Act, 2020.

Conceptual Incompatibility and Integrative Medicine Challenges

- One of the core difficulties lies in the fundamental philosophical divergence between traditional and modern medicine.
- Ayurvedic education combines ancient theories—such as doshas, prakriti, and metaphysical notions like the soul—with selected aspects of modern medical science, including anatomy and cell physiology.
- This blending presents a scientific conflict: traditional systems view illness as an imbalance of internal energies, while modern biomedicine attributes disease to identifiable causes like germs, genes, and pathophysiology.
- As a result, efforts to promote integrative medicine—a synthesis of both traditions—face serious conceptual and clinical challenges.

Legal Authority and the Right to Prescribe Medicines

Rule 2(ee) of the Drugs and Cosmetics Rules, 1945

- This rule allows State governments to authorize certain non-MBBS practitioners to prescribe modern (allopathic) medicines.
- Several states have used this provision to extend prescribing powers to AYUSH practitioners, causing friction with allopathic doctors and resulting in legal disputes.

Key Judicial Ruling: Mukhtiar Chand vs State of Punjab (1998)

- The Supreme Court ruled that the authority to prescribe drugs from a particular medical system is inseparable from the right to practice that system.
- This decision effectively barred traditional medicine practitioners from prescribing modern drugs.
- Despite this ruling, state governments have continued issuing permissions under Rule 2(ee), leading to repeated legal challenges by bodies such as the Indian Medical Association (IMA).
- Patients have also filed lawsuits alleging they were misled about practitioners' qualifications, particularly when modern drugs or interventions were used.

Procedural Rights and Emerging Controversies

- The debate also encompasses procedural rights, such as performing surgeries.
- A 2020 government notification allowed post-graduate Ayurvedic practitioners to carry out 58 types of surgical procedures, including operations like gallbladder and appendix removals.
- This move has drawn legal scrutiny, especially concerning the use of modern surgical tools, anaesthesia, and antibiotics.
- Additionally, to reduce operational costs, some hospitals reportedly employ AYUSH graduates in roles typically reserved for MBBS-qualified doctors, raising concerns about the standard of care.

Conclusion

The issue at hand is not simply about whether AYUSH practitioners can be called “doctors.” It cuts deeper—into questions of medical ethics, legal clarity, healthcare quality, and patient safety.

The inconsistency in legal interpretation, combined with political endorsements and blurred professional roles, poses a risk to evidence-based healthcare and may undermine public trust in medical services.

As debates unfold across courts and public platforms, the central concern must remain the protection, informed consent, and well-being of Indian citizens. These issues demand sustained attention, policy coherence, and public accountability beyond momentary controversies.

Why Antitrust Regulations Are Pertinent

Context

In 1890, Senator John Sherman asserted that just as society rejects political monarchy, it must also reject monopolistic control over essential goods and services. This statement led to the creation of the Sherman Antitrust Act, which became the cornerstone of competition law in the United States and influenced similar laws worldwide, including in India.

Though the definition of what constitutes a "necessity" has evolved, Sherman's warning about concentrated market power remains highly relevant—especially in today's digital economy. As India aspires to become a global technology leader, it now faces growing concerns about monopolistic practices by global digital corporations, particularly in relation to access, discovery, and monetization avenues for domestic start-ups.

India's Digital Economy and Its Strategic Vision

- In 2022–23, India's digital economy accounted for 74% of its GDP, underscoring its centrality to national progress.
- The number of start-ups surged from 2,000 in 2014 to over 31,000 in 2023, reflecting an expanding entrepreneurial ecosystem.
- These start-ups are key to achieving the government's \$35 trillion 'Viksit Bharat' vision by 2047.

Despite advancements in infrastructure, the commercial and discovery platforms essential for digital innovation are largely controlled by foreign tech giants, creating market asymmetries that hinder the growth of Indian innovators.

Digital Gatekeeping and Market Concentration

A prime example of digital gatekeeping is Google's dominance in India's mobile digital ecosystem:

- With Android holding around 95% of the mobile OS market, Google exercises significant control over how Indian users access and interact with digital services.
- Indian developers are often forced to comply with high commission fees and unfavourable terms, giving undue advantage to select players.

A recent complaint to the Competition Commission of India (CCI) by a prominent Indian gaming company highlights this issue:

- The case targets Google's Real Money Gaming (RMG) Pilot Program, which allowed only two gaming formats—Daily Fantasy Sports (DFS) and rummy—on its Play Store.
- This exclusionary policy restricted other legitimate gaming types from being listed.
- One DFS company reportedly gained 55 million users in a single year via the program.
- Simultaneously, changes to Google's advertising policies eliminated a key promotional channel for many start-ups, which previously relied on its ad services for over two-thirds of app downloads.

Economic Consequences of Market Distortion

Such preferential practices have broader economic repercussions:

- Reduced competition leads to diminished innovation, limited consumer choice, and compromised product quality.
- Overdependence on a few digital intermediaries reduces the resilience of the ecosystem.
- For a developing economy like India, where inclusive growth depends on start-up-led innovation, this poses a major risk.

The United States offers a cautionary precedent: the unchecked dominance of monopolies has led to fewer Initial Public Offerings (IPOs) and rising entry barriers for new businesses. If

similar patterns take hold in India, the resulting loss will affect start-ups, consumers, and the economy at large.

Policy Imperatives: Building a Fair Digital Marketplace

While global technology firms like Google are foundational to the digital economy, they must be held accountable to the power they wield. To ensure fair competition:

- The Indian government and institutions like the CCI must enforce equitable market regulations.
- The ongoing CCI case is not merely a private business dispute; it reflects a broader demand for transparent and non-discriminatory digital platforms.
- It revives Sherman's vision of preventing economic monopolies and underscores the need for a democratized digital economy.

Conclusion

Senator Sherman's 19th-century warning against monopolies resonates with remarkable clarity in 21st-century India. As India advances in its digital transformation, it must remain alert to monopolistic forces that threaten to undermine its development goals.

Effective antitrust regulation, strong institutional oversight, and a commitment to fair competition will be essential to sustaining a vibrant, inclusive, and innovation-driven start-up ecosystem, aligning with India's long-term vision for Viksit Bharat and ensuring Sherman's principles are upheld in the digital era.

India's Police Must Step Out of Dirty Harry's Shadow

Context: Two Models of Policing

In the metaphorical darkness of a crime scene, two contrasting policing figures emerge:

- **Sherlock Holmes:** Rational, methodical, and committed to evidence-based investigation. He symbolizes a justice system driven by logic and truth.
- **Dirty Harry:** Impulsive, violent, and dismissive of due process. For him, justice is achieved through force and immediate action, regardless of legality.

These fictional personas represent real policing ideologies in India, raising a critical question: Do we want a justice system based on truth or one driven by vengeance?

The Cost of Impunity: A Deepening National Crisis

The recent custodial death of 27-year-old Ajith Kumar in Tamil Nadu is not an isolated incident—it exemplifies a systemic crisis.

Statistics and Patterns

- From 2018 to 2023, 687 custodial deaths were reported in India—an average of 2 to 3 deaths per week.
- Gujarat, Maharashtra, and Tamil Nadu lead in custodial deaths.
- Many such deaths are falsely labeled as natural causes or suicides to obscure the truth.

Torture Outside Official Custody

- Often carried out in remote or informal locations—such as police vans, secluded buildings, or even cow sheds (as in Ajith's case).

Who Are the Victims?

- Predominantly from marginalised backgrounds:
 - Daily-wage earners
 - Dalits and tribals
 - Migrants and slum residents

Conclusion

Custodial torture is not merely misconduct—it is institutionalised violence, deeply rooted in caste, class, and systemic power imbalances.

Legal and Moral Gaps

Despite legal safeguards, custodial violence remains widespread.

Existing Protections

- D.K. Basu Guidelines (1996) – Supreme Court's procedural safeguards for arrests and detentions.
- K.S. Puttaswamy Judgment (2017) – Reaffirmed bodily autonomy as a fundamental right.

Unfulfilled Reforms

- The 273rd Law Commission Report (2017) recommended a dedicated anti-torture law, but Parliament has not acted.
- India has not ratified the UN Convention Against Torture.
- The Global Torture Index (2025) ranks India as a high-risk country, reflecting international concern.

The Scientific and Strategic Case Against Torture

Why Torture Doesn't Work

- Neuroscientist Shane O'Mara, in *Why Torture Doesn't Work*, explains that torture:
 - Disrupts brain functions crucial for memory and reasoning
 - Causes victims to give false or misleading information to stop the pain

Historical Failures of Torture-Based Interrogation

- French forces in Algeria used torture—resulting in faulty intelligence.
- CIA's "enhanced interrogation" techniques failed to produce useful data (U.S. Senate Intelligence Committee Report, 2014).
- In Ajith Kumar's case, a coerced confession led to no evidence, only more brutality.

What Actually Works: The Case for Reform

The PEACE Model

After the wrongful conviction of six men in the Birmingham pub bombings, the UK adopted the PEACE model:

- Preparation and Planning
- Engage and Explain
- Account
- Closure
- Evaluation

This approach emphasizes:

- Rapport-building
- Open-ended questions
- Transparency, leading to:
 - Fewer false confessions
 - Higher conviction accuracy
 - Improved public trust

Global Adoption

- Norway, Canada, and New Zealand have implemented the PEACE model.
- Backed by:
 - European Committee for the Prevention of Torture
 - Studies from the U.S. High-Value Detainee Interrogation Group

Proven Results

- Norwegian police calmly extracted a full confession from mass killer Anders Breivik.

- In the U.S., Najibullah Zazi, involved in a terror plot, fully cooperated after respectful treatment—leading to dismantling of a larger network.

Conclusion: Choose Truth Over Violence

Each custodial death signals a systemic failure to uphold justice.

Urgent Steps for Reform

- Ratify the UN Convention Against Torture
- Pass a standalone anti-torture law
- Incorporate the PEACE model into police training
- Enforce zero-tolerance policy against custodial abuse

When truth can be extracted through patience, respect, and intellect, as Sherlock Holmes shows us, there is no justification for following Dirty Harry's path of brutality.

Boosting Legal Aid Systems in India: Bridging the Gap Between Promise and Practice

Context: Constitutional Right, Limited Reach

While access to justice is a constitutional guarantee in India, the reality on the ground reveals a significant disconnect. The Legal Services Authorities Act, 1987 mandates free legal aid for nearly 80% of the population. However, the actual reach and impact of legal aid services remain modest.

An analysis of data from April 2023 to March 2024 underscores the systemic limitations that prevent equitable access to justice, despite legal and institutional frameworks.

Key Issues in Legal Aid Delivery

1. Limited Outreach Despite Expansive Coverage

- In 2023–24, legal aid reached 15.5 lakh individuals, a 28% increase from the previous year's 12.14 lakh.
- However, this figure remains small compared to the vast eligible population.

Delivery Mechanisms:

- Legal aid is primarily provided via front offices in courts, prisons, and juvenile justice boards, supported by empanelled lawyers.
- Rural access depends on legal aid clinics, but their presence is sparse:
 - Only one clinic for every 163 villages, as highlighted by the India Justice Report 2025.

Challenges:

- Uneven geographic distribution of services.
- Inconsistent support in terms of funding and personnel.

2. Financial Constraints and Budgetary Gaps

- Legal aid receives less than 1% of India's total justice budget, which includes police, prisons, judiciary, and legal services.

Budget Trends (2017–2023):

- Total funding rose from ₹601 crore to ₹1,086 crore, largely due to increased state contributions.
- NALSA's share fell from ₹207 crore to ₹169 crore.
- Utilisation of NALSA funds also declined:
 - From 75% in 2017–18 to just 59% in 2022–23.

3. Inadequate Per Capita Expenditure

- Per capita spending on legal aid rose from ₹3 in 2019 to ₹7, yet this remains insufficient.

State Disparities (2023–24):

- Haryana leads with ₹16 per person.
- Bihar (₹3), West Bengal (₹2), and Uttar Pradesh (₹4) lag behind the national average of ₹6.

This uneven funding indicates not only disparities in fiscal commitment but also results in unequal access to quality legal aid services across states.

4. Decline in Para-Legal Volunteers (PLVs)

PLVs play a vital role as community intermediaries, yet their presence is rapidly declining:

- Between 2019–20 and 2023–24, their numbers fell by 38%, from 22,000 to 14,000.

Compensation Issues:

- Honorarium remains low, often below minimum wage:
 - Kerala pays ₹750/day, while Gujarat and Mizoram offer just ₹250/day.
- Poor remuneration discourages participation and undermines the long-term sustainability of this essential workforce.

5. Innovations and Budget Cuts: The LADC Scheme

Introduced in 2022, the Legal Aid Defence Counsel (LADC) scheme aims to professionalize legal aid by creating dedicated public defenders, reducing reliance on empanelled lawyers.

- Operates in 610 out of 670 districts.
- Utilised its full ₹200 crore budget in 2023–24, showing early promise.
- However, funding has already been cut to ₹147.9 crore for 2024–25.

While the LADC model holds potential to improve the quality and reliability of legal aid, it requires sustained policy and financial support to succeed.

Systemic Weaknesses and the Path Forward

Despite modest financial increases and institutional innovation, India's legal aid system continues to suffer from:

- Inconsistent quality of service
- Public distrust
- Lack of accountability
- Over-regulated fund usage
- Under-compensated and under-deployed personnel

What Needs to Change:

1. Increase overall budgetary allocation in proportion to population needs.
2. Allow flexible, context-specific fund utilisation at the local level.
3. Improve compensation and expand deployment of para-legal volunteers.
4. Provide sustained funding for initiatives like LADC, alongside robust quality monitoring.
5. Strengthen integration with community justice mechanisms to boost outreach and public trust.

Conclusion: Realising the Right to Justice

India's legal aid system finds itself at a critical juncture. While legislative intent and institutional frameworks are in place, the system lacks the resources, reach, and responsiveness needed to fulfil its constitutional promise.

Transforming legal aid into a meaningful service requires:

- Increased funding
- Decentralised governance
- Investment in human capital

Only then can India ensure that justice is not symbolic, but a tangible, lived experience for all—irrespective of income, caste, or geography.

ICJ's Climate Liability Declaration: A Landmark in Global Climate Law

Introduction

The International Court of Justice (ICJ) has issued a historic advisory opinion, asserting that nations are legally accountable under international law for their greenhouse gas emissions. Though not legally binding, this declaration provides definitive legal guidance and significantly reinforces the case for climate justice, especially for vulnerable and developing nations.

Background: Climate Change as a Legal Issue

1. Shifting the Framework

- Historically, climate change has been viewed through scientific, economic, and political lenses.
- Recent developments have reframed it as a legal responsibility, emphasizing state obligations and liability.

2. UN's Formal Request

- In 2023, following a campaign led by Vanuatu, a Pacific island nation severely threatened by sea-level rise, the United Nations General Assembly (UNGA) requested the ICJ to clarify nations' legal obligations concerning climate change.

3. Role of the ICJ

- While the ICJ's advisory opinions are not enforceable, they carry substantial moral and legal authority, shaping international customary law and guiding future legal discourse.

Key Elements of the ICJ's Advisory Opinion

1. Legal Duty to Act

- The ICJ ruled that climate mitigation is a legal obligation, not just sound policy.

2. Compliance with Global Temperature Goals

- Emphasized alignment with the Paris Agreement, particularly the aim to limit global warming to 1.5°C above pre-industrial levels.

3. Differentiated Responsibilities

- Recognized the principle that developed countries (Annex I of UNFCCC) must:
 - Lead emission reduction efforts.
 - Provide financial and technological assistance to developing nations.

4. Failure to Act as a Legal Wrong

- Inaction on climate obligations could be considered an "internationally wrongful act," opening up possibilities for legal accountability and reparations.

5. Liability for Private Actors

- States may also be held responsible for corporate actors operating within their jurisdiction if those entities neglect climate norms.

Supporting International Legal Precedents

The ICJ opinion aligns with recent rulings from other international bodies:

1. International Tribunal for the Law of the Sea (ITLOS)

- In 2023, it ruled that wealthier nations must cut emissions faster under obligations in the Law of the Sea Convention.

2. Inter-American Court of Human Rights

- Recently recognized a stable climate as a fundamental human right, reinforcing climate obligations within a human rights framework.

Implications for Developing and Vulnerable Nations

1. Strengthening Climate Justice

- The opinion validates the claims of the Global South, reinforcing the principle of Common but Differentiated Responsibilities (CBDR).

2. Legal Avenues for Compensation

- Countries affected by climate change (e.g., Pacific islands, African nations) can seek reparations or aid using this ruling as legal support.

3. Empowering the Global South

- Enhances the negotiating power of smaller, vulnerable countries in global climate diplomacy and fosters South-South solidarity.

Boost to Climate Litigation and Accountability

1. Surge in Legal Action

- The opinion is expected to fuel climate-related lawsuits against:
 - Governments that ignore mitigation commitments.
 - Corporations that continue high-emission practices.

2. Domestic Legal Ramifications

- Citizens may increasingly challenge their own governments in court for climate inaction or non-compliance with international standards.

3. Corporate Oversight

- Governments could be legally compelled to enforce stricter environmental regulations on industries like oil, gas, cement, and automotive sectors.

Challenges Ahead: Enforcement and Resistance

1. Limitations of Advisory Opinions

- As non-binding statements, ICJ advisory opinions lack formal enforcement mechanisms, relying instead on legal influence and global pressure.

2. Geopolitical Resistance

- Major emitters like the United States, which has pulled back from key climate agreements, may ignore the ruling.
- Some European nations claim to have fulfilled their Paris obligations and may resist further tightening of emissions norms.

3. Corporate Pushback

- Powerful industries may lobby against stricter environmental regulations, citing economic consequences, potentially slowing down policy reforms.

International Law's Evolving Role

1. Shaping Customary International Law

- The ICJ opinion contributes to developing international norms, laying a foundation for future litigation and treaty evolution.

2. Potential to Strengthen Treaties

- May influence amendments or stricter enforcement within the Paris Agreement and UNFCCC frameworks.

3. Catalyst for Cross-Institutional Climate Action

- Encourages entities like the World Bank, WTO, IMF, and regional courts to incorporate climate accountability in their operations.

India's Position and Strategic Opportunities

1. Championing Climate Equity

- India has consistently advocated for CBDR, emphasizing the need for historical accountability and fair climate responsibility.

2. National Policy Alignment

- India's domestic initiatives align with international commitments, including:
 - Panchamrit strategy (COP26)

- National Solar Mission
- Green Hydrogen Mission

3. Leverage for Financial Support

- The ICJ opinion strengthens India's claim to climate finance and technology transfers, aiding its low-carbon development goals.

Next Steps: Converting Legal Insight into Action

1. Codifying Climate Obligations

- Nations should work toward binding legal frameworks that reflect ICJ's interpretation of climate responsibility.

2. National Legal Reform

- Domestic laws must be updated to include stronger environmental safeguards and prevent future liability.

3. Support for the Most Affected

- Developed countries must:
 - Increase contributions to the Loss and Damage Fund established at COP27.
 - Facilitate technology transfers to support green transitions without derailing growth.

Conclusion

The ICJ's advisory opinion represents a milestone in international environmental law, elevating climate change from a policy issue to a legal and moral imperative. It legitimizes the rights of vulnerable populations and reframes climate inaction as a potential international wrong.

The challenge now lies in translating this legal clarity into enforceable policies, binding treaties, and fair outcomes on the ground. If embraced, this ruling could mark the beginning of a new era in global climate governance—one where justice, accountability, and equity lead the way.