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INDEX

Institutionalising Animal Representation	4
Inflation Targeting and Beyond	6
Energy Policy tradeoffs in times of AI and Climate Change	8
How Pakistan's judiciary is being undermined	10
PM Modi stresses policing reforms.....	12
Give states their fair share, protect their fiscal space	14
How polygamy is regulated in India, from personal laws to state bans.....	16
The need for 'heart-resilient' urban planning.....	19
A template for security cooperation in the Indian Ocean.....	22
Need for a National Legislative Index (NLI) in India	25
Privacy in a 'fishbowl society'	28
Why does India need bioremediation?	30
The climate is breaching the wall of urban metrics	32
Systemic challenges with the working of IBC	34
A Missing Link in India's Mineral Mission	36
A Dismantling of Base of Environmental Regulation	40
Need to Change Cities' Governance in India.....	43
Lifting the Police's Image in India	45
India can build a \$1.2-trillion bioeconomy by 2047	48
Urban Soils - The Unsung Hero	50
A global model to overcome TB.....	52
Chile's lesson for India's coal conundrum.....	54
A Growing Shadow Over Digital Constitutionalism	57
India-Russia Relation	60
A black Friday for aviation safety in India	63
The evolution of pension reforms in India.....	65
Why the Rupee Has a Capital Account Problem.....	67
Surveillance apps in welfare, snake oil for accountability	70
A New Step in the Dragon-Elephant Tango	72
Carceral culture: On prisons and disability-related facilities	75
Circular Economy in Dairy Sector	77
What Indians Eat, and How Being Unhealthy Is Easier and Cheaper.....	79
Delhi-Moscow ties have a logic of their own	82
India's small enterprises hold key to job growth	85
Neurotechnology in Focus: Emerging Opportunities and Regulatory Challenges.....	87
Satellites, Science, and the New Fight for Spectrum in Space.....	89

Drug Abuse Among School children	92
For AI, India can build on the Aadhaar-UPI model.....	94
Is the falling rupee a cause for alarm?	95
Parenting in the AI-age.....	98
From Licence Raj to Jan Vishwas: Freeing India's Entrepreneurs	99
Supreme Court Rules Forced Narco Tests Unconstitutional	101
Courts must protect, not regulate free speech	102
A people-led climate intelligence movement	106
New Insurance Bill: What's in & what's left out?.....	108
The right moment to boost India-Ethiopia ties	110
India-Oman Ties	112
India need to upgrade its biosecurity measures.....	115
50 years of RRBs: A story of reform and transformation in rural India	116
Stepping stone: On nuclear policy, the SHANTI Bill	118
The Trump National Security Strategy, Europe's Existential Crisis.....	121
A bill that takes us back to the days before MGNREGA.....	123
Sabka Bima Sabki Raksha (Amendment of Insurance Laws) Bill, 2025	125
About Overseas Mobility (Facilitation and Welfare) Bill, 2025.....	128
The Changing Patterns of India's Student Migration	130
Demographic Dividend' of Elders	133
How is the Aravalli range to be protected?	134
A Bold Step Amid an Ambitious Nuclear Energy Target.....	136
India-Russia Logistics Agreement, with Eye on Arctic and Indo-Pacific	138
Demographic Dividend' of Elders'	141
How is the Aravalli range to be protected?	142
Disability rights: Behind bars, but not barred	144
Lok Adalats emerge as key pillar of accessible justice	145
The bulldozed demolition of MGNREGA	147
Aviation Sector Restructuring	148
For a choking capital, going electric is the way out.....	149
Aravalli Benchmark could have effects beyond mining.....	151
Right to Disconnect: Drawing the line after work	153
Death knell for the rural job guarantee.....	156
The VB-G RAM G Act 2025 fixes structural gaps	158
Lightning an understated disaster in India.....	160
How exports are concentrated in few States	162
Regulating Academia - Viksit Bharat Shiksha Adhishtan Bill	164
Rabies: the cruel and expensive disease of India's most impoverished	165
The urban future with cities as dynamic ecosystems	167

The Case of Political Funding in India	171
Health care does not need the PPP route	174
RBI's new guidelines may slow expansion of urban cooperative banks	177
Decoding air pollution concerns in Delhi-NCR.....	179
India may soon get 4 new regional airlines, but their success isn't guaranteed.....	181
A grand vision and the great Indian research deficit.....	183
Gaps in regulating digital campaigns	185
Celebrating 25th Anniversary: Pradhan Mantri Gram Sadak Yojana (PMGSY)	186
India-New Zealand Free Trade Agreement (FTA) 2025	188
Invalidate all forms of unilateral talaq	190
Quick delivery apps are taking a toll on gig workers	192
A multipolar world with bipolar characteristics	194
How India's oil basket has changed over the years.....	195

Institutionalising Animal Representation

UPSC Syllabus Topic: GS Paper - IV

Introduction

Modern democracy is built on a divide between humans and animals. Animals are treated as non-political beings, without voice or status. This creates structural injustice, not just individual cruelty. The core issue is how to redesign institutions so that animal interests are seen and protected within democratic decision-making.

Rethinking the human–animal divide in democracy

1. **Anthropocentric divide:** Modern political thought places humans at the centre, as the only rational and political beings. Animals are classified as “mere life”, outside politics. The single category “the animal” hides many non-human forms of life and is used as a negative mirror to define human superiority in language, reason and agency.

2. **Structural erasure of animal interests:** Law and institutions usually treat animals as property. Their interests are not systematically recorded, weighed or defended in public decisions. Because there are no dedicated channels to bring their standpoint into policy, large-scale harm can occur as an unnoticed background to economic and administrative activity.

3. **Artificial categories:** The human–animal divide rests on an artificial picture of animals as a single, inferior block. In reality, animals are a heterogeneous group, and different kinds of beings create different types of moral and political duties for humans. This mismatch between reality and inherited categories distorts how responsibilities are understood.

4. **From compassion to political responsibility:** The core issue is not inadequate compassion but the structure of democracy. Animals are excluded from decision-making even though they are affected by collective choices. Humans therefore become morally and politically accountable for how institutions treat dependent, vulnerable beings whose interests they cannot express on their own.

Meaning of animal representation in democracy

1. **From charity to accountability:** Animals should not depend on occasional kindness. Human choices on land, food, environment and security shape their lives. Representation means giving this vulnerability a place in public decisions, with **sentience and bodily experience** as the basis for including animal interests.

2. **Structured trusteeship:** Because animals cannot speak or vote, humans must act as **authorised guardians** with a mandate to study animal needs and present them in law-making and administration. Representation here is **structured trusteeship** inside institutions, not loose goodwill-based activism.

3. **Rejecting human-centric standards:** Representation does not require animals to resemble humans or hold rights such as voting. It rests on the fact that they can suffer, flourish and be harmed, so political standing should follow from these **morally relevant capacities**, not from human-style intelligence or behaviour.

Working of fiduciary institutions for animals

1. Need for non-majoritarian guardians

- Animals lack votes and lobbying power, so majority politics bypasses them. Welfare frameworks are reactive, acting only after harm occurs.
- Democratic legitimacy therefore needs **non-majoritarian pathways of representation**, through fiduciary institutions whose sole mandate is to articulate animal interests in legislative, administrative, and regulatory processes.
- This mirrors institutions that protect children, the environment, data, and future generations, extending the **same logic consistently to animals**.

2. Trusteeship, independence and expertise

- These institutions rest on the idea that humans serve as **trustees for animals**. Trustees must protect animal interests with care, loyalty and prudence, not human convenience or profit. For this, institutions require fixed terms, transparent appointments and secure, independent budgets•
- Independence is crucial because governments gain from animal exploitation and because animal interests require expert knowledge in behaviour and welfare.

3. Risks of weak or captured institutions: Without independence or urgency, such bodies turn symbolic and fail the very animals they are meant to protect.

Way forward

1. Multi-level representation and rule-based procedures

- Animal-representation bodies should work at several levels of government. At the executive level, advisory councils can review proposed rules for their animal welfare impacts.
- In Parliament, dedicated committees or subcommittees can examine relevant legislation, propose amendments, and demand impact assessments.
- Non-voting expert delegates can ensure that animal interests enter core law-making spaces through stable procedures.

2. Accountability and transparency:

- Clear procedures, timelines and checklists should guide reviews so that animal interests are regularly assessed.
- Independent evaluations, published for the public, courts and civil society, should show recommendations and how authorities responded.

3. Phased implementation: Reform should start with pilot projects in sectors such as urban planning. Experience from these pilots should refine tools and data systems before extending the model more widely.

4. Sustainable funding: Stable financing is essential for independent work. Funds can come from reallocating harmful subsidies and creating dedicated budget lines.

5. Public education and citizen engagement: Public campaigns should explain why animal representation supports justice and democratic responsibility. Schools, media and civic forums can promote everyday care towards animals, helping representatives gain backing for stronger protections.

Conclusion

Institutionalising animal representation deepens democracy by making vulnerable beings part of political judgement. Fiduciary bodies with clear powers, independence and expertise can speak for animal interests that cannot appear on their own. Gradual rollout, secure funding and public support are necessary so that animal welfare becomes a routine part of law, policy and everyday administration.

Question for practice:

Examine why modern democracies need to rethink the human-animal divide and institutionalise fiduciary mechanisms for animal representation.

Source: [The Hindu](#)

Inflation Targeting and Beyond

UPSC Syllabus Topic: GS Paper 3 -Inflation

Introduction

India uses inflation targeting to guide monetary policy, but recent experience shows sharp price swings and mixed results. Food inflation has shifted strongly, while repo rate changes often looked weak. As the current flexible inflation targeting framework ends in March 2026, India must reassess what has worked, where it falls short, and how it should evolve.

India's Flexible Inflation Targeting (FIT)

1. **Origin:** In 2016, India adopted the **Flexible Inflation Targeting (FIT)** framework with a **4% inflation target and a tolerance band of +/- 2%**, and gave institutional autonomy to monetary policy through the Monetary Policy Committee.

2. Objectives and macro-fiscal context

- Under **Flexible Inflation Targeting (FIT)**, policy aims to keep inflation near 4% within the 2%–6% band to protect savings and investment and curb the **regressive impact of high inflation** on poorer households.
- Earlier inflation from monetised deficits led to ending ad hoc treasury bills and adopting the **Fiscal Responsibility and Budget Management (FRBM) Act** to discipline fiscal policy and support price stability.

Performance: Inflation has been more range-bound after 2016. However, **annual average CPI inflation has exceeded 4% in six of nine FIT years**, so the target has not been met consistently.

Concerns with the current inflation targeting framework

1. Limited impact of monetary policy on core inflation

- Core inflation excludes food, fuel, petrol and diesel and has a **weight of 45%** in the CPI basket. It has often stayed **above 4%** even when headline inflation has fallen **below 2%**.
- This pattern suggests that repo rate changes have not clearly reduced core inflation, and claims of bigger impact under FIT remain **unproven**.

2. Headline versus core inflation and use of the band

- Headline inflation, which includes food prices, is more relevant to protect savings, investment and the poor. Food and headline inflation move together, with a correlation of 0.89, showing that food prices dominate CPI.
- The target of 4% with a 2%–6% band gives flexibility, but if inflation stays near 6% for long, it weakens both the framework and growth.
- Studies find that the inflation–growth relationship changes around 3.98%, which supports using **4% as the central target** for India.

3. Distributional impact and inflation expectations: Lower-income households feel inflation more when **food prices rise**, so their expectations are strongly shaped by food inflation. Anchoring expectations, therefore, needs **sustainably low and less volatile food inflation**.

Way forward

1. Continue targeting headline inflation: Headline CPI should remain the main target in India because it reflects the price changes that households actually face, especially poorer groups.

2. Place food inflation at the centre of policy: Food inflation drives headline CPI and strongly shapes what people expect about future inflation. Keeping food inflation low and less volatile needs better storage, logistics, market integration, buffer stocks, and suitable trade and stock policies, which lie mostly outside conventional monetary policy.

3. Ensure shared responsibility of RBI and government: Inflation control must be a joint task. The RBI should use interest rates and communication under FIT, while the government acts on supply, especially food and other key items, keeping income distribution in mind.

4. Align inflation targeting with fiscal rules: Flexible Inflation Targeting (FIT) must work together with **FRBM like fiscal discipline** so that deficits and government borrowing do not create persistent inflation and undermine the **4 %** target.

Conclusion

India's inflation targeting framework has given structure and autonomy to monetary policy, but its success is uneven and heavily dependent on food prices. Evidence on durable core inflation control and firm expectation anchoring remains limited. The next framework must keep headline targeting, manage food inflation, align fiscal rules and shield poorer households from the costs of inflation.

Question for practice:

Discuss the effectiveness and limitations of India's current inflation targeting framework in light of recent trends.

Source: [Businessline](#)

Energy Policy tradeoffs in times of AI and Climate Change

Source: The post "Energy Policy tradeoffs in times of AI and Climate Change" has been created, based on "In era of AI and climate change, energy policy must navigate new trade-offs and dilemmas" published in "Indian Express" on 1st December 2025.

UPSC Syllabus: GS Paper-3- (Environment, Energy, Economy, Technology)

Context: India's energy policy has traditionally focused on universal access, affordability and security of supply, and it has achieved significant progress in electrification and diversification. However, the rise of climate change concerns and the rapid expansion of AI and data-centre-driven electricity demand have created a new set of complex trade-offs. These trade-offs require the government to balance economic development, technological growth, energy security and environmental sustainability simultaneously.

The New Energy Policy Dilemma

1. India's energy policy must now simultaneously promote economic growth, technological innovation, environmental sustainability, energy security and social equity.
2. These objectives often conflict with one another, making energy decision-making more complex than in earlier decades.

Sources of Emerging Trade-offs

1. Growth vs Environment

- a. India's economic expansion requires greater energy consumption, increasing pressure on fossil fuel use.
- b. Continued fossil dependence undermines climate commitments and contributes to environmental degradation.

2. Technological Demand vs Grid Capacity

- a. The rise of AI and data centres has sharply increased demand for uninterrupted, high-quality electricity. Meeting this new demand requires major investments in transmission networks, battery storage and renewable baseload capacity.
- b. States struggle to balance industrial energy needs with decarbonisation commitments, seen in Maharashtra's delay of a thermal plant closure to support data centres.

3. Energy Security vs Market Vulnerability

- a. The transition to clean energy technologies increases dependence on critical minerals like lithium, cobalt and rare earths.
- b. China dominates processing and manufacturing of these minerals, exposing India to strategic vulnerabilities.

4. Affordability vs Decarbonisation

- a. Renewable transition requires high upfront capital investments, raising near-term costs.
- b. Political pressures make tariff increases, subsidy rationalisation or fossil-fuel reduction difficult.

5. **Domestic Fossil Resources vs Sustainability Goals**

- a. New hydrocarbon discoveries in countries like Brazil and Guyana may tempt India to rely on cheaper fossil imports.
- b. Such choices may conflict with India's long-term climate objectives and net-zero commitments.

Challenges

1. India faces a widening demand-supply gap as industrial growth, AI workloads and data centres increase electricity needs.
2. Transmission and storage infrastructure remains inadequate for large-scale renewable integration and 24×7 clean power.
3. State governments often delay thermal plant closures to meet industrial and digital load, conflicting with climate goals.
4. Political constraints hinder tariff reforms, subsidy rationalisation and reductions in fossil-fuel dependence.
5. Heavy reliance on China-dominated mineral supply chains exposes India to geopolitical risks.
6. Fragmented governance across PSUs, private companies and multiple ministries creates policy delays and inefficiencies.
7. The need to maintain affordable energy conflicts with the high cost of clean-tech transition and grid modernisation.
8. India's energy governance includes PSUs, private players, regulators and consumers, increasing coordination challenges.
9. Effective policymaking requires stronger regulatory capacity and integration across power, renewables, climate, industry and digital ministries.

Way Forward

1. India should modernise its electricity grid by expanding high-capacity transmission corridors, boosting battery storage and strengthening renewable baseload systems.
2. The country must diversify critical mineral supply chains through domestic exploration, global sourcing partnerships and recycling technologies.
3. A balanced energy mix should integrate renewables with flexible thermal power, nuclear energy, offshore wind and green hydrogen.
4. Tariff reforms and subsidy restructuring should be phased in gradually to avoid burdening vulnerable consumers while supporting clean energy goals.
5. Clear regulatory frameworks should guide energy use in data centres and AI-driven industries to ensure efficiency and predictability.
6. Stronger inter-ministerial coordination is required to align energy, climate, industrial and digital policies.
7. India should invest in research and innovation related to storage technologies, grid digitalisation, renewable manufacturing and waste-to-energy systems.
8. A unified long-term national energy strategy should ensure coherence across public and private sector institutions.

Conclusion: India's energy policy now confronts complex trade-offs driven by climate imperatives, rising AI and data-centre energy demand, supply-chain vulnerabilities and the need for economic growth. Addressing these challenges requires a diversified energy mix, robust governance and sustained investment in clean and

resilient infrastructure. A coordinated and forward-looking approach is essential to meet the demands of both the climate era and the AI-driven digital revolution.

Question: In the context of rising AI-driven electricity demand and escalating climate change concerns, India's energy policy must navigate a new set of trade-offs between growth, sustainability, energy security and affordability. Discuss the emerging challenges and suggest a way forward

How Pakistan's judiciary is being undermined

Source: The post “How Pakistan's judiciary is being undermined” has been created, based on “How Pakistan's judiciary is being undermined : Explained” published in “The Hindu” on 1st December 2025.

UPSC Syllabus: GS Paper-2- Polity and Constitution

Context: Pakistan's Parliament has passed the 27th Constitutional Amendment, which has triggered a major debate about the future of judicial independence in the country. The amendment has created a new Federal Constitutional Court (FCC) and has reduced the Supreme Court's traditional constitutional authority.

Has the Judiciary–Executive Conflict Occurred Earlier?

1. Pakistan has a long history of tension between the judiciary, the executive and the military Establishment.
2. Earlier courts used the “Doctrine of Necessity” to legitimise military coups by Ayub Khan, Yahya Khan and Zia-ul-Haq.
3. The 1990s saw repeated confrontations, including judicial decisions supporting or striking down the dismissal of elected governments.
4. Nawaz Sharif's attempt to remove the Chief Justice in 1996 even led to his supporters storming the Supreme Court.
5. The Panama Papers verdict of 2017 and the 2007 Lawyers' Movement show the judiciary's more assertive phases, which have increasingly worried both political and military actors.
6. Recent allegations of intimidation by intelligence agencies have intensified concerns about external interference in judicial functioning.

Why Has the 27th Amendment Created a New Federal Constitutional Court?

1. The 27th Amendment establishes the FCC to hear cases on constitutional interpretation, federal–provincial disputes and fundamental rights.
2. The creation of the FCC removes these matters from the Supreme Court's original jurisdiction, thereby restricting its powers as the guardian of the Constitution.
3. The government argues that the FCC will reduce the burden on the Supreme Court, but critics believe it is meant to curb the Court's involvement in politically sensitive issues.
4. The speed of FCC appointments suggests an attempt by the executive to shape constitutional adjudication through judges more aligned with its **interests**.

Does the Amendment Curtail the Role and Powers of Pakistan's Supreme Court?

1. The Supreme Court can no longer hear cases relating to constitutional interpretation, which weakens its foundational role.

2. The amendment reduces the Supreme Court to an appellate court and sidelines it from matters that define the balance of power in the state.
3. The executive has been given the power to transfer judges without their consent, which threatens judicial autonomy and increases the risk of punitive or politically motivated transfers.
4. The judiciary has become internally divided as some judges have resigned in protest while others have accepted positions under the new system, further weakening institutional resistance.

What Did the 26th Amendment Mandate?

1. The 26th Amendment changed the composition of the Judicial Commission of Pakistan by increasing the presence of executive members, thereby reducing judicial dominance.
2. It also shifted the power of appointing constitutional benches from the Chief Justice of Pakistan to the JCP, diluting the internal autonomy of the Supreme Court.
3. The 26th Amendment laid the groundwork for greater political control over the higher judiciary, which the 27th Amendment has deepened.

Implications of the 27th Amendment

1. The amendment weakens the independence of the judiciary by curtailing the Supreme Court's constitutional jurisdiction.
2. It strengthens executive and military influence over judicial appointments, transfers and constitutional cases.
3. It re-politicises the system that the 18th Amendment (2010) had tried to depoliticise by strengthening the Judicial Commission.
4. A divided judiciary becomes less capable of protecting constitutional norms or resisting executive overreach.
5. The shift upsets the principle of separation of powers and endangers the checks and balances necessary for stable constitutional democracy.

Way Forward

1. Pakistan must restore the Supreme Court's original jurisdiction over constitutional and federal matters to preserve judicial independence.
2. Reforms in the Judicial Commission should reduce executive influence and re-establish judicial primacy in appointments.
3. Transparent procedures for judicial transfers and postings are necessary to prevent misuse of executive authority.
4. Greater unity among the judiciary, legal fraternity and civil society is essential to resist political interference.
5. Institutional dialogue, rather than confrontational politics, is needed to rebuild trust and uphold constitutional balance.

Conclusion: The 26th and 27th Amendments collectively mark a significant weakening of the higher judiciary in Pakistan. The creation of the FCC and the diminishing role of the Supreme Court undermine the separation of powers and give the executive and military Establishment greater control. A strong and independent judiciary remains crucial for safeguarding democracy, accountability and constitutional governance in Pakistan.

Question: The 26th and 27th Constitutional Amendments in Pakistan reflect a deeper attempt to restructure judicial power and tilt the balance of authority towards the executive. Examine the historical context, key provisions, implications, and the way forward.

PM Modi stresses policing reforms

Source: The post “PM Modi stresses policing reforms” has been created, based on “PM Modi stresses policing reforms, tech integration at DGPs conference in Raipur” published in “Hindustan Times” on 2nd December 2025.

UPSC Syllabus: GS Paper-2- Governance

Context: Prime Minister Narendra Modi, while addressing the 60th All India Conference of DGPs and IGPs at IIM Raipur, emphasised the need to align policing with the national vision of *Viksit Bharat*. He highlighted modernisation, technology adoption, citizen-centric governance, and strengthening of urban and forensic policing as core priorities.

Key Directions Given to Police Leadership

- 1. Realigning Policing with Viksit Bharat:** The Prime Minister stressed that policing must be aligned with the national aspiration of building a developed India. He urged the police to enhance professionalism, sensitivity, and responsiveness in day-to-day interactions. He emphasised that the police must work to improve public perception and deepen youth engagement.
- 2. Strengthening Urban and Tourist Policing:** He stated that rapidly expanding urban areas require dedicated urban policing frameworks to manage complex law-and-order challenges. He called for the reinvigoration of tourist police to ensure safety and improve India's global tourism image.
- 3. Increasing Awareness of New Criminal Laws:** He highlighted the need to spread awareness about the Bharatiya Nyaya Sanhita, Bharatiya Sakshya Adhiniyam, and Bharatiya Nagrik Suraksha Sanhita. He underlined that smooth transition from colonial-era laws to the new legal system requires mass public understanding.
- 4. Enhancing Use of Technology:** He urged State and UT police forces to integrate NATGRID-linked databases with Artificial Intelligence to generate actionable intelligence. He pointed out that technology-driven and data-backed policing will enhance preventive and investigative capacities.
- 5. Improving Forensic Capabilities:** He encouraged universities and academic institutions to conduct case studies on forensic use in investigations. He noted that deeper forensic application will make investigations more scientific and reinforce the criminal justice system.

Significance for Viksit Bharat

- 1. Strengthened Internal Security:** Technology-enabled and integrated policing enhances early detection of threats and enables faster responses
- 2. Improved Citizen-Centric Governance:** Professional, sensitive, and law-aware policing increases public trust and strengthens democratic governance

3. **Safer and Better-Managed Cities:** Specialised urban policing contributes to economic vibrancy and improves urban liveability
4. **Boost to Tourism:** Dedicated tourist police improve visitor safety and support India's global tourism potential
5. **Modern and Scientific Justice System:** Enhanced forensic use promotes evidence-based investigations and higher conviction rates.

Challenges in Achieving These Goals

1. **Capacity and Skill Gaps:** Many police personnel lack advanced skills in cybercrime detection, AI usage, and forensic techniques. There is wide variation in training standards across states, leading to uneven preparedness.
2. **Resource and Infrastructure Limitations:** Several states face shortages of modern equipment, surveillance tools, and accredited forensic laboratories. Budget constraints hinder uniform technological modernisation across the country.
3. **Human Resource Constraints:** India continues to have a low police-to-population ratio, which affects timely and quality service delivery. Long working hours and occupational stress reduce the sensitivity and responsiveness of personnel.
4. **Public Trust and Perception Issues:** Legacy issues such as delays, corruption, and occasional misuse of force continue to affect police credibility. Weak community engagement prevents the development of cooperative policing relationships.
5. **Implementation Challenges of New Laws:** The rollout of the new criminal laws requires retraining, administrative restructuring, and public outreach. Lack of awareness may lead to procedural confusion during the transition period.
6. **Technology and Cyber Risks:** Increased digitisation exposes police systems to potential cyberattacks and data breaches. There is a need for uniform standards for managing digital evidence and protecting sensitive databases.

Way Forward

1. **Strengthening Training and Capacity Building:** Police forces need sustained training programmes in AI, cybercrime, forensic science, and soft skills
2. **Investing in Modern Infrastructure:** States must expand surveillance systems, integrated command centres, and high-quality forensic labs
3. **Promoting Community Policing:** Police should institutionalise community partnerships through beat policing and neighbourhood safety committees
4. **Ensuring Smooth Implementation of New Laws:** Government agencies must develop clear guidelines, online training modules, and public awareness initiatives
5. **Deepening Academic-Police Collaboration:** Police institutions should work closely with universities to promote criminology research and forensic audits
6. **Enhancing Urban Safety Planning:** Urban policing strategies should be integrated with smart city planning, women's safety frameworks, and emergency response systems.

Conclusion

The Prime Minister's directions highlight a clear shift towards modern, technology-enabled, and citizen-first policing. Addressing existing challenges through training, infrastructure upgrades, legal awareness, and community engagement will be crucial in building a secure, efficient, and people-centric policing ecosystem aligned with the vision of *Viksit Bharat*.

Question: Modern, technology-enabled and citizen-centric policing is essential for realising the vision of Viksit Bharat. Discuss the key challenges in transforming India's policing system and suggest measures to strengthen its role in national development.

Give states their fair share, protect their fiscal space

Source: The post "Give states their fair share, protect their fiscal space" has been created, based on "Give states their fair share, protect their fiscal space" published in "Indian Express" on 2nd December 2025.

UPSC Syllabus: GS Paper-2- Polity

Context: The Indian fiscal federal system requires both the Union and the states to possess adequate and predictable resources to meet rising developmental and governance challenges. States have increasingly expressed concerns about shrinking fiscal space, making fair tax devolution and grants crucial for cooperative federalism.

Trends in States' Fiscal Space

1. Expansion during the 14th Finance Commission

- a. **Higher Devolution Share:** The 14th Finance Commission significantly enhanced states' share in the divisible pool of central taxes from **32% to 42%**, expanding their fiscal autonomy.
- b. **Rise in Tax Share:** The share of states in central taxes relative to combined revenue receipts rose from **15% (13th FC) to 19.2% (14th FC)**, marking a rise of 4.25 percentage points.
- c. **Improved Post-Transfer Share:** The post-transfer share of states in combined revenue receipts increased from **63.85% to 68.08%**, reversing the earlier Centre-state balance.

2. Reduction in Fiscal Space

- a. **Overall Decline:** States' revenue receipts (as a share of combined revenue receipts) fell from **68.08% (14th FC) to 67.39% (15th FC)**, indicating a fall of 0.70 percentage points.
- b. **Lower Tax Devolution:** This decline was driven primarily by a reduction in tax devolution from **19.2% to 18.2%**, amounting to a fall of 1.05 percentage points.
- c. **Only Partial Compensations:** Although FC and non-FC grants increased slightly, total transfers still recorded a minor reduction of **0.23 percentage points**.
- d. **Reduced Own Revenues:** States' own revenue receipts also declined from **37.72% to 37.35%**, reducing their independent fiscal space.

Structural Causes

1. **Rise in Cesses & Surcharges:** An increasing reliance on non-sharable cesses and surcharges by the Centre has reduced the size of the divisible pool
2. **GST-Related Concerns:** The discontinuation of the GST compensation cess and rate reductions under GST 2.0 have created risks for states' GST revenue buoyancy.

3. **Impact of State Reorganisation:** The reorganisation of states into 28 units also influenced distributional outcomes under the 15th FC.

Impact on High-Income States

1. **Five High-Income States:** High-income states such as Haryana, Karnataka, Kerala, Maharashtra and Tamil Nadu show unique fiscal patterns across FC cycles.
2. **Offsetting Trends (13th → 14th FC):** During the 13th to 14th FC transition, their fiscal space remained stable because higher transfers were offset by reduced own revenue performance.
3. **Decline (14th → 15th FC):** These states experienced a reduction of **0.38 percentage points** in their fiscal space during the 15th FC period.
4. **Reasons for Decline:** The fall was due to a **0.25 percentage-point** decline in own revenue receipts and a **0.13 percentage-point** decline in central transfers.
5. **Formula-Linked Issues:** Increased dependence on cesses and the weightage of the distance criterion in horizontal devolution contributed to their adverse outcomes.

Key Challenges

1. **Rising Expenditure Responsibilities:** States face increasing demands in health, education, infrastructure and social welfare without corresponding increases in their revenue space.
2. **Shrinking Divisible Pool:** The growing share of unshared cesses and surcharges reduces predictability and fairness in resource transfers.
3. **GST Instability:** GST structural issues, including compensation withdrawal and rate rationalisation, weaken states' fiscal stability.
4. **Horizontal Imbalance:** High-income states feel relatively disadvantaged by the current horizontal devolution formula that emphasises equalisation parameters.

Way Forward

1. **Reduce Cesses & Surcharges:** The divisible pool must be strengthened by limiting the use of non-sharable cesses and surcharges by the Centre.
2. **Reform Horizontal Formula:** The 16th Finance Commission should re-examine the weight of the distance criterion and reward revenue effort more effectively.
3. **Enhance Tax Buoyancy:** Both the Centre and states must broaden the tax base, improve compliance and strengthen GST administration to boost revenues.
4. **Stabilise GST Revenues:** GST reforms should ensure long-term stability for states through rational rate structures and transitional support.
5. **Predictable Grants:** Non-FC grants should be made more transparent, rules-based and predictable to reduce discretionary distortions.
6. **Strengthen Fiscal Federalism:** Centre–state coordination through platforms like the GST Council must be enhanced to promote cooperative fiscal federalism.

Conclusion: Protecting the fiscal space of states is essential for achieving national development targets and sustaining cooperative federalism. A fair, transparent and buoyant system of revenue sharing—supported by strong tax collections at both levels—is critical to ensure states receive their rightful share and remain fiscally empowered.

Question: Shrinking fiscal space of states is undermining cooperative federalism. Discuss.

How polygamy is regulated in India, from personal laws to state bans

UPSC Syllabus- GS 2- Issues related to Fundamental rights and constitution

Introduction

Polygamy in India lies at the meeting point of personal laws, criminal law and new state-level reforms. The Assam Prohibition of Polygamy Bill, 2025, following Uttarakhand's Uniform Civil Code, challenges earlier exemptions under Muslim and tribal laws. This new push to criminalise polygamy has revived debates on gender justice, equality and a future Uniform Civil Code.

What is polygamy?

Polygamy is the practice of being married to more than one person at the same time.

Types of polygamy

- **Polygyny:** A man is married to more than one woman at the same time. This is the most common form of polygamy globally.
- **Polyandry:** A woman is married to more than one man at the same time. This is much less common.
- **Group marriage:** Three or more adults are married to one another, and all adult members are responsible for the group's children.

Status of Polygamy in India

- According to NFHS-5, polygamy is **2.1% among Christians, 1.9% among Muslims, 1.3% among Hindus and Buddhists, 0.5% among Sikhs and 2.5% among other religions or castes.**
- **Highest incidence among the Scheduled Tribes:** Compared to the national average of 1.4 per cent (NFHS-5), the rate of polygamy was 2.4 among STs, 1.5 among SCs, 1.3 among OBCs and 1.2 among others.
- **High prevalence in North Eastern states District:** East Jaintia Hills (20%), Kra Daadi (16.4%), West Jaintia Hills (14.5%), and West Khasi Hills (10.9%) have particularly high rates of polygynous marriages.
- The **2011 Census** records **28.65 crore married men and 29.3 crore married women**, a difference of **65.71 lakh**.
- **Decrease in polygamous marriages:**
 - A study by the International Institute of Population Sciences (IIPS) titled '**Polygyny in India: Levels and Differentials**' has analysed data from the NFHS-3 (2005-06), NFHS-4 (2015-16) and NFHS-5 (2019-21). It showed that **polygynous marriages** (one man married to more than one woman at a time) have **decreased from 1.9% in 2005-06 to 1.4% in 2019-21**, among the whole population.
 - Among **Buddhists**, the rate dropped from **3.8% to 1.3%**, sharpest decline of **65.79%**.
 - The incidence of polygyny in the total population fell by 26.31%.

Current Legal Status of Polygamy in India

The Hindu Marriage Act, 1955

The **Hindu Marriage Act, 1955** (for Hindus, Buddhists, Jains and Sikhs), **Parsi Marriage and Divorce Act, 1936**, **Indian Christian Marriage Act, 1872** and **Special Marriage Act, 1954** all treat a second marriage during the lifetime of a spouse as **void**, and **Section 17 of the Hindu Marriage Act** makes such bigamy an offence.

Under **Section 82 of the Bharatiya Nyaya Sanhita / Section 494 IPC**, marrying again while a spouse is alive attracts **up to seven years' imprisonment and fine**

Muslim personal law

The **Muslim Personal Law (Shariat) Application Act, 1937** permits a **Muslim man to have up to four wives**, so bigamy provisions are usually not used against such unions.

This **asymmetry**, where polygamy is a crime for some and a right for others, drives debates on **Article 44** and a UCC.

State Bans Polygamy

Goa follows the **Portuguese Civil Code, 1867**, which requires civil registration and generally enforces **monogamy**, so a Muslim man cannot legally take a second wife.

- The **Codes of Usages and Customs of Gentile Hindus of Goa** still allow a Hindu man to remarry if his wife fails to conceive by 25 or bear a male child by 30.

The **Uttarakhand Uniform Civil Code, 2024**, bans bigamy for all residents and makes **absence of a living spouse** a basic condition for marriage.

The Assam Prohibition of Polygamy Bill, 2025

- It makes polygamy a **cognisable** and **non-bailable** offence.
- It provides for **imprisonment of up to seven years with fine**, which can increase to **ten years** if the earlier marriage is **concealed from the new spouse**.
- A person convicted under this law is **barred from state-funded public employment**. Such a person is also **disqualified from contesting elections in Assam**, and
- This law does **not apply to Scheduled Tribes or Sixth Schedule areas** like the Bodoland Territorial Region and the hill districts.

Judiciary Views on Polygamy in India

Parayankandiyal v. K. Devi & Others (1996): The Supreme Court stated that **monogamy is the norm and ideal of Hindu society**, and a second marriage is socially rejected and condemned.

Kanwal Ram & Others v. Himachal Pradesh Administration (1965): The Supreme Court held that for a charge of bigamy, there must be strict proof that the second marriage was performed with valid ceremonies, and a live-in relationship does not count as marriage.

Sarla Mudgal v. Union of India (1995): The Supreme Court ruled that a person **cannot convert to another religion only to enter into a second marriage**, and such conversion to commit bigamy is unconstitutional.

Lily Thomas v. Union of India (2000): The Supreme Court reaffirmed *Sarla Mudgal case (1994)* and made it clear that **conversion cannot be used as a device to validate a bigamous marriage.**

Javed & Others v. State of Haryana & Others (2003)

The Supreme Court held that the **right to freedom of religion under Article 25 is subject to public order, morality, health and social reform**, and that **polygamy is not an essential religious practice** that must be protected.

Supreme Court judgment on polygamy and Islam (2015): The Court held that polygamy is not an integral part of Islam and that Article 25 protects religious faith, not practices that go against public order, health or morality, so the state can reform such practices.

Shayara Bano v. Union of India (2017): The Supreme Court stressed that **personal laws must respect gender justice and fundamental rights**, reinforcing that practices such as polygamy can be tested on the touchstone of equality and dignity.

Major Concerns Related to Polygamy in India

1. Constitutional equality and different personal laws: Polygamy is banned for some communities but allowed for others under personal and customary laws. This uneven system raises concerns about **equality before law (Article 14)** and **non-discrimination (Article 15)** because citizens do not enjoy the same marital rights and obligations across religions and regions.

2. Gender inequality and violation of dignity

- Polygamy often affects women's **dignity, emotional security and mental health**. It can create neglect, unfair treatment and humiliation for wives.
- This goes against **Article 21**, which protects the right to live with **dignity** and personal autonomy, and makes polygamy a serious concern for **women's rights**, not just personal law.

3. Economic dependence and vulnerability of women: Many women in polygamous unions are **financially dependent** on their husbands and in-laws. Around **60% of victims rely on the husband's family for livelihood**, which makes it difficult for them to challenge polygamy, leave abusive situations or approach the legal system.

4. Weak enforcement and low conviction rates: Even where bigamy is a crime, **implementation is weak**. Conviction rates under bigamy provisions remain **below 10%**, because cases are under-reported, social stigma is high and it is hard to prove a valid second marriage with proper evidence in court.

5. Challenges in tribal and Sixth Schedule areas: Polygamy is more common in some **tribal communities** and **Sixth Schedule areas**, which have special protections and autonomy. State laws like those in **Assam and Uttarakhand** often **exclude these regions**, leaving many tribal women with **less legal protection** against polygamy.

Way forward

1. Educating about the ills of Polygamy- The tribal and Muslim communities must be made aware about the ills of Polygamy like the **socio-economic deprivation**.

2. Special legislation- Special legislation need to be brought to curb the menace of polygamy, like the legislation to ban triple talaq.

3. Address the rights of Children in Polygamous marriages- Law commission report of 1961 and 2009 has recommended to address the rights of children born from polygamous union.

4. Enactment of Uniform Civil Code- Uniform civil code needs to be enacted at the earliest to bring **uniformity in marriage, divorce and inheritance rights** among major religious communities, in **consonance with constitutional values**.

5. Gradual uniformity: Law Commission Report No. 279 (2018) recommended **phased UCC-related reforms** with wide consultation. Step-by-step changes in personal laws can align them with **constitutional morality, equality and dignity** while limiting social resistance.

6. Victim support:

Reform must be backed by **victim-support mechanisms**, including financial, psychological and legal aid.

Schemes such as the **NCW's One Stop Centre Scheme** can help women exit polygamous unions. A **state registry of marital status and second marriages**, on the lines of **Indonesia's ID-linked marriage registration**, can improve monitoring.

Stronger **family courts, legal aid centres, women's commissions and fast-track special courts** can give quicker relief.

Conclusion

Overall, the regulation of polygamy in India now shows a clear move from different personal laws toward more uniform and gender-just rules. Declining prevalence, stricter state bans and strong judicial scrutiny show this shift, but real change needs better enforcement, victim support, good data and sensitive dialogue with religious and tribal communities.

Question for practice:

Examine how polygamy is currently regulated in India and the key concerns arising from this framework.

Source: [Indian Express](#)

The need for 'heart-resilient' urban planning

UPSC Syllabus Topic: GS Paper 3 -Environment

Introduction

Urban India is facing a silent heart crisis. Cardiovascular diseases now cause a large share of city deaths, with urban prevalence nearly twice that of rural areas and rising cases below 50 years. Long commutes, pollution, shrinking green spaces and stress increase risk, while healthcare remains uneven and market-driven. Urban planning and governance must now treat heart health as a core priority, not a side effect of development.

Urban heart health as an urgent concern

1. **Prevalence of Risk Factors:** Urban environments foster lifestyles and conditions known to harm heart health, including sedentary behavior, high stress, poor diets (easy access to processed foods), and insufficient sleep.

2. **Environmental Pollution:** Cities concentrate environmental pollutants like fine particulate matter (PM_{2.5}) from traffic and industry, which can enter the bloodstream, cause systemic inflammation, and may lead to heart attacks, and strokes.

3. **"Urban Heart Syndrome":** Doctors observe an emerging trend, sometimes referred to as "urban heart syndrome," where young professionals (in their 30s and 40s) present with early cardiovascular distress without traditional symptoms. This makes early diagnosis difficult and increases the risk of premature heart disease.

4. **Physical Environment Challenges:** Urban design often features a lack of green spaces and an abundance of heat-retaining materials (asphalt, concrete), leading to "urban heat islands". This results in higher temperatures, which place extra strain on the cardiovascular system, especially during heat waves.

5. **Health Inequities:** Health disparities within cities are stark, with low-income and marginalized populations disproportionately affected. These groups often live in areas with fewer healthy food options, less green space, higher pollution, and limited access to quality healthcare, compounding their health risks.

6. **Difficulty in Diagnosis:** Symptoms in urban dwellers, particularly women, may be subtle (e.g., fatigue, jaw pain, shortness of breath) and are often dismissed as stress or acidity, leading to dangerous delays in diagnosis and treatment.

Planning and technology for heart-healthy cities

The Role of Urban Planning

1. Promoting Physical Activity:

- Designing walkable and bike-friendly cities is crucial. This involves creating safe, continuous sidewalks, dedicated cycle paths, crosswalks, and reducing traffic speeds.
- Proximity to parks and recreational facilities encourages regular exercise and is associated with lower rates of obesity, hypertension, and heart disease.
- Experiences from **WHO's Healthy Cities Network** show that when such design is backed by governance, chronic disease risks fall.

2. **Creating Mixed-Use and Compact Neighborhoods:** Developing areas where residences, workplaces, shops, and amenities are all within a 15-minute walk or bike ride reduces reliance on cars, shortens commute times, and promotes active transportation.

3. **Integrating Green Spaces:** Incorporating urban greenery, parks, and tree canopy cover helps to mitigate the "urban heat island" effect, reduce air pollution, and provide spaces for relaxation and mental well-being, which alleviates stress on the cardiovascular system.

4. Improving Food Environments:

- Enabling food-sensitive planning ensures affordable and physical access to nutritious, fresh foods (e.g., via local markets and community gardens), while discouraging fast-food promotion in key areas like schools.
- These planning choices can work in harmony with the **National Urban Health Mission (NUHM), Smart Cities Mission and AMRUT** to support healthier neighbourhoods.

The Role of Technology

1. **Environmental Monitoring and Mapping:** Smart city technologies use sensors to monitor air and noise pollution levels in real time. This data can inform residents of environmental hazards and help urban planners identify priority areas for intervention, such as increasing tree cover along high-pollution corridors.
2. **Smart Transportation Systems:** Clean energy public transport and e-mobility solutions (e.g., e-bikes) can reduce vehicular emissions and noise pollution.
3. **Personal Health Management:** Wearable devices (smartwatches and fitness trackers) allow individuals to monitor key metrics like heart rate, sleep, and physical activity levels in real time, empowering them to manage their health proactively.
4. **Digital Healthcare Access:** Telehealth services, smartphone applications for self-management, and remote patient monitoring systems for chronic conditions like hypertension and heart failure can improve patient adherence to treatment plans and reduce hospital admissions.
5. **Data-Driven Planning:** Using AI and data analytics allows urban planners to integrate health data with urban design tools, providing evidence-based insights to create health-promoting environments and support city-level decisions.

Way forward

1. **Make health a core planning goal:** City plans should integrate heart health into land use, transport, housing and green space decisions, instead of treating health as a separate sector.
2. **Align with national urban missions:**
 - Urban design should support the National Urban Health Mission (NUHM), Smart Cities Mission and the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) by using these programmes to fund compact, low-pollution, activity-friendly neighbourhoods.
 - It should also build on the **Asian Development Bank's \$10-billion urban investment plan** to embed heart health into future city development.
3. **Use digital tools for risk mapping:** AI-enabled air-quality and heat mapping, sensors and citizen-reporting apps should be built into planning systems to identify high-risk zones and guide targeted action.
4. **Anchor all action in equity:**

Cities need equity audits and priority investment in vulnerable localities so low-income groups do not remain trapped in high-risk environments.

Supportive neighbourhood design can also strengthen campaigns such as **Tobacco-Free Youth 3.0** by making healthy choices easier.

5. Guard against green gentrification: New parks and greenways must be planned with communities so they are not displaced and can fully benefit from healthier surroundings.

6. Build long-term coalitions and skills: Collaboration among MoHUA, health agencies, academia, civil society and youth platforms such as **Urban October** can create a generation of planners trained to design heart-resilient cities.

Conclusion

Cardiovascular disease reflects how cities are built and governed. Air quality, heat, mobility and access to healthy spaces shape risk more than individual willpower. A heart-resilient future for urban India depends on planning that protects the most vulnerable first, links health with every urban decision and treats the human heart as a central design concern.

Question for practice

Discuss how urbanisation in India is increasing heart health risks and explain the role of planning and technology in creating heart-resilient cities.

Source: [The Hindu](#)

A template for security cooperation in the Indian Ocean

UPSC Syllabus Topic: GS Paper 2-Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

Introduction

The Colombo Security Conclave (CSC) has become an important platform for cooperation in the Indian Ocean. It brings India and its island neighbours together to manage shared maritime risks and development-linked vulnerabilities. The 2025 summit in India reflects how rising geopolitical shifts, new defence partnerships, and the growing role of China are reshaping security cooperation and pushing CSC members to work more closely.

Colombo Security Conclave

Origin: The Colombo Security Conclave began in 2011 as a trilateral platform between India, Sri Lanka and the Maldives. It slowed down later as political changes in Sri Lanka and the Maldives weakened alignment on shared security priorities. This reduced the group's ability to maintain momentum.

Revival: The platform was revived in 2020 under a broader framework. It adopted cooperation in maritime security, counter-terrorism, trafficking and organised crime, and cybersecurity. This wider focus helped the member-countries rebuild trust and recommit to joint work in the Indian Ocean.

Expansion: The Conclave has expanded steadily. Mauritius became a member in 2022, Bangladesh joined in 2024, and Seychelles entered as a full member at the 2025 summit. Malaysia attended as a guest. The widening membership signals growing interest in the platform and its mandate.

Aim: The Conclave aims to strengthen cooperation in a region where the maritime security framework is still fragmented. It seeks to reduce gaps in coordination and provide a platform for countries to work together on shared security concerns in the Indian Ocean.

Maritime security holds crucial importance for CSC members

1. Dependence on oceans for development: The economies of CSC members are deeply tied to the oceans. Their development priorities rely on secure seas, making maritime security important for long-term economic stability and growth.

2. Link to lives, livelihoods and opportunities: Maritime risks directly affect coastal communities. Addressing such risks protects livelihoods but also opens new economic possibilities in an era where global trade depends heavily on sea routes.

3. Focus on non-traditional security threats: The Conclave gives special attention to issues such as trafficking, organised crime and cyber vulnerabilities linked to the maritime domain. These threats are cross-border in nature and require joint action.

4. Need for coherent cooperation: Regional security mechanisms remain scattered. Stronger cooperation among CSC members is necessary to develop coordinated and effective responses to common maritime challenges.

The 2025 summit marks a significant turning point for the CSC

1. Importance of timing: The summit took place when security frameworks in the Indo-Pacific and Indian Ocean are shifting. This increased the urgency for stronger collective action to address emerging risks.

2. India's deeper engagement with neighbours: For India, the Conclave offers a path to reinforce ties with its maritime neighbours at a time of rising geopolitical volatility and growing Chinese presence in the region.

3. Expansion and regional commitment: Seychelles joining as a member reflects regional confidence in the platform. Malaysia's participation as a guest indicates potential for wider outreach in the future.

4. Strengthening security cooperation: The summit highlighted that security cooperation is becoming central to regional relations. Security issues now shape how countries collaborate in the Indian Ocean.

Challenges Shaping the CSC's Future Direction and Resilience

1. Different views on China: India sees the scale of Chinese activity in the Indian Ocean as a major security concern. Other members rely on China for development and do not share the same threat perception. This gap makes coordination more difficult.

2. Need for stronger institutional structure: The Conclave now works at the National Security Adviser level. Members need a more stable institutional framework to ensure consistent policies and predictable cooperation.

3. Domestic uncertainties in member states: Internal political changes, especially in Bangladesh, may affect how actively these countries engage with each other. Such uncertainties can slow down collective efforts.

4. Strengthening resilience and cohesion: Even with challenges, the Conclave has created a new space for cooperation in a region where unity on security issues has been weak. Its future depends on building stronger institutional resilience and deeper cohesion among its members.

India's Wider Maritime Initiatives as a Template for Indian Ocean Security Cooperation

1. SAGAR Doctrine: This foundational vision aims to deepen economic and security cooperation with maritime neighbors. Its pillars include:

- **Security Cooperation:** Strengthening maritime security through bilateral and multilateral relations to combat threats like piracy, terrorism, and illegal fishing.
- **Capacity Building:** Assisting partner countries (such as Mauritius, Maldives, Seychelles) with maritime infrastructure development, training, and providing equipment like patrol vessels and radar systems.
- **Humanitarian Assistance and Disaster Relief (HADR):** Serving as a "first responder" during natural disasters and humanitarian crises (e.g., "Mission Sagar" operations during the COVID-19 pandemic and cyclone relief efforts).
- **Sustainable Development:** Promoting the responsible and sustainable use of marine resources, also known as the "Blue Economy".
- **Connectivity and Infrastructure:** Investing in port development (e.g., Chabahar Port) to enhance regional trade and connectivity.

2. MAHASAGAR (Mutual and Holistic Advancement for Security And Growth Across Regions): An extension of SAGAR that broadens the scope to include wider economic and geopolitical issues and enhances collaboration with the "Global South".

3. Information Fusion Centre – Indian Ocean Region (IFC-IOR): Established in Gurugram. This center has information-sharing arrangements with 22 countries and other partners to monitor and respond to maritime activities and threats.

4. Joint Exercises and Patrols: The Indian Navy conducts numerous bilateral and multilateral exercises and coordinated patrols with IOR littoral states to enhance interoperability:

- **Bilateral Exercises:** Such as *Malabar* (with the US, Japan, Australia), *Varuna* (France), *SIMBEX* (Singapore), and *SLINEX* (Sri Lanka).
- **Coordinated Patrols (CORPATs):** Regularly conducted with nations like Bangladesh, Indonesia, Myanmar, and Thailand.
- **Multilateral Exercises:** Including MILAN (hosted by India) and the recent maiden Africa India Key Maritime Engagement (AIKEYME).

5. Indian Ocean Naval Symposium (IONS): Initiated by India in 2008, it provides a forum for navies of the IOR littoral states to cooperate on security matters.

6. **Indian Ocean Rim Association (IORA)**: India is a founding member and assumes the chairmanship from November 2025, working on economic cooperation, maritime safety, and environmental security.

7. **Quadrilateral Security Dialogue (Quad)**: A strategic grouping with the US, Japan, and Australia that addresses shared challenges in the Indo-Pacific, including maritime security and disaster relief.

Conclusion

Taken together, CSC and India's wider maritime initiatives show how the Indian Ocean is slowly moving towards a more cooperative security order. The next test will be closing institutional gaps, managing differences over China, and keeping smaller states engaged so that security, development and resilience can advance together.

Question for practice:

Evaluate the role of the Colombo Security Conclave (CSC) and India's wider maritime initiatives as a template for security cooperation in the Indian Ocean region.

Source: [The Hindu](#)

Need for a National Legislative Index (NLI) in India

UPSC Syllabus Topic: GS Paper 2 -Parliament and State legislatures—structure, functioning, conduct of business, powers & privileges and issues arising out of these.

Introduction

India's governance has become complex. Yet many State legislatures remain weak, with disruptions, short sittings and poor research support. A **National Legislative Index (NLI)** is proposed to measure how well these institutions function and to push them towards being disciplined, research-based and citizen-facing "temples of democracy" in spirit, not only in name.

About National Legislative Index (NLI)

Purpose:

- The NLI is a **proposed annual, state-wise benchmarking system for State legislatures**.
- It would provide a **common yardstick** to measure legislative productivity, transparency and innovation across India.
- Its purpose is to turn how Houses function into measurable public data so that performance is visible, comparable and open to scrutiny.

Functions:

- The NLI aims to provide a **comprehensive benchmarking mechanism** and to distill a transparent annual score from **0 to 100** for each legislature.

- It will identify gaps in functioning, inform corrective reforms, highlight inter-State disparities, strengthen the Speaker's office as a driver of institutional excellence, and encourage reforms and digital, participatory practices.

Key indicators and focus areas:

- The NLI will consider **sitting days, session duration, and time spent on debate and questions.**
- It will track the percentage of Bills referred to committees, the average time taken to pass Bills, and the hours devoted to Question Hour and floor discussion.
- It will assess transparency, digitisation and efforts for knowledge preservation. These measures convert processes into public information without prescribing any policy stance.

Need for National Legislative Index (NLI)

1. Very Low Sitting Days: Many state assemblies meet for only **20–25 days a year**, and Parliament's sitting days have fallen from **135 days** in the 1st Lok Sabha to about **55 days** in the 17th Lok Sabha. Such low sitting time weakens debate and oversight. This gap shows the need for a clear system that measures and encourages regular functioning.

2. Loss of Working Time Due to Disruptions: Frequent disruptions severely reduce debate hours. The **15th Lok Sabha lost over 30%** of its scheduled time due to disruptions. Without a common assessment tool, legislatures do not face pressure to improve discipline. An index can highlight and compare disruption levels.

3. Weak Committee Scrutiny: Only **10% of Bills** were referred to committees in the 17th Lok Sabha, compared to **60–71%** in earlier Lok Sabhas. Poor scrutiny leads to weak laws. An index can track and reward assemblies that strengthen committee-based examination.

4. Declining Quality of Debate and Accountability: Question Hour functioned for only **19% of scheduled time** in Lok Sabha and **9% in Rajya Sabha** during the 17th Lok Sabha. Limited debate reduces executive accountability. An index helps monitor how seriously legislatures engage in questioning and discussion.

5. Low Participation and Weak Legislative Engagement: MPs attended around **79%** of sessions in the 17th Lok Sabha but participated in only **45 debates** on average. Private Member Bills rarely move forward, and key posts like the Deputy Speaker remained vacant. A performance index can highlight such gaps and push for corrective reforms.

6. Lack of Transparency and Comparable Data: State legislatures follow different reporting practices, and most information is obtained only through RTIs. There is no unified tool to compare productivity, committee use, or debate hours. The NLI helps create standardized, publicly available data across states.

7. Growing Complexity of Governance: Modern governance demands deeper technical understanding, research support, and disciplined functioning. Many legislatures lack research systems, digital processes, and structured evaluation.

Other Initiatives to Strengthen India's Legislative Efficiency

1. Digital Adoption in Legislative Work: India has introduced digital tools such as paperless systems, live streaming, and digitised records to make legislative work faster, more transparent, and easier for citizens to follow.

2. e-Vidhan (NeVA) for Paperless Legislatures: The e-Vidhan (NeVA) initiative aims to convert all State Legislatures into fully paperless institutions, ensuring real-time access to documents, smoother functioning, and higher transparency in legislative processes.

3. One Nation, One Legislative Platform: A national digital platform is being developed to connect all legislatures by 2026, enabling states to share debates, budgets, committee reports, and legislative updates on one integrated interface.

4. Strengthening the Parliamentary Committee System: India continues to strengthen parliamentary committees so that they can examine Bills, policies, and executive actions in greater detail, improving the depth and quality of legislative scrutiny.

5. Capacity Building for Legislators: Regular workshops, training programmes, and handbooks equip legislators with better knowledge of procedures, rules, and policy issues, helping them participate more effectively in debates and oversight work.

6. Strong Disciplinary Mechanisms: Parliament enforces disciplinary tools such as suspension or expulsion to control disruptions, uphold decorum, and ensure that legislative work proceeds in an orderly manner.

Way Forward

1. Rebuilding Discipline: Legislatures need predictable annual calendars, minimum sitting days, and uniform procedural rules. These steps help ensure structured deliberation and reduce disruptions that weaken debate quality.

2. Institutionalising Scrutiny: Stronger committees, mandatory referrals for major laws, and regular sharing of attendance and debate data will deepen accountability. Live streaming and archiving should become standard practices.

3. Promoting Dialogue: Legislatures must shift from disruption to dialogue. Citizen-centric outreach, educational programs, and participatory platforms can bring legislatures closer to people and reinforce democratic trust.

4. Harnessing Technology and Innovation: Digital systems, AI tools, and shared platforms can help manage legislative records, strengthen debate quality, and ensure uniformity across states. This supports a more responsive and modern legislative ecosystem.

Conclusion

The National Legislative Index offers a clear path to strengthen India's legislative institutions through transparency, competition, and reform. By measuring productivity and promoting best practices, it can rebuild trust and deepen accountability. With disciplined functioning, digital integration, and citizen engagement, legislatures can rise to meet the demands of a rapidly changing India and reinforce democratic governance.

Question for practice:

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Examine why India needs a National Legislative Index (NLI) to improve legislative functioning.

Source: [Indian Express](#)

Privacy in a 'fishbowl society'

Source: The post "Privacy in a 'fishbowl society'" has been created, based on "Privacy in a 'fishbowl society'" published in "The Hindu" on 03rd December 2025.

UPSC Syllabus: GS Paper-3- Technology

Context: India today faces a "fishbowl society" where pervasive technological surveillance and AI-based harms challenge the traditional understanding of privacy. Despite the Puttaswamy judgment (2017), the IT Act (2000), and the Digital Personal Data Protection Act (2023), the lived experience of privacy violations—especially through deepfakes and NCII—remains inadequately addressed.

Society's over-reliance on technology, **as highlighted by Meredith Broussard in *Artificial Unintelligence***, has left individuals unprepared to cope with AI-driven risks. Deepfake algorithms create pornographic images without consent, pushing individuals into forced visibility and loss of autonomy. Harms arising from NCII extend far beyond privacy loss and include psychological distress, fear, stigma, and long-term damage to dignity and bodily integrity.

About Standard Operating Procedure (SOP) to Curtail Dissemination of Non-Consensual Intimate Imagery (NCII)

1. The **Ministry of Electronics and IT (MeitY)** issued a Standard Operating Procedure **to strengthen mechanisms for removing and preventing the spread of NCII content online.**
2. The SOP was developed following directions of the Madras High Court and aims **to ensure swift, uniform and victim-centric action across platforms and agencies.**
3. It **provides clear guidance to victims, intermediaries and law enforcement agencies** for reporting and promptly removing intimate or morphed images shared without consent.
4. The SOP **mandates that all intermediaries take down or disable access to reported NCII content** within 24 hours of receiving a complaint.
5. Victims **can report incidents through multiple channels**, including **One Stop Centres, the National Cybercrime Reporting Portal (NCRP)**, in-app grievance mechanisms, and local police stations.
6. Significant Social Media Intermediaries are required **to use hash-matching and crawler tools** to prevent re-uploads of the same or similar NCII content.
7. The **SOP strengthens inter-agency coordination by involving I4C** as the central aggregator of complaints, DoT for URL blocking, and MeitY for monitoring compliance.
8. Overall, the SOP aims **to empower individuals especially women to regain control over their digital identities** and reinforces the government's commitment to ensuring privacy, dignity and safety in cyberspace.

Limitations

1. The SOP **lacks a gender-neutral framework and fails to recognise the vulnerabilities of transgender persons**, despite Supreme Court recognition of the third gender.

2. It **does not clearly define the accountability of platforms or AI developers**, nor does it specify penalties or enforcement mechanisms.
3. It **lacks detailed regulations on deepfake generation, dissemination, traceability**, and investigation, limiting its effectiveness.
4. The **SOP remains merely a starting point** and cannot replace the need for comprehensive legislation.

Key Challenges

1. **Lack of data and under-reporting:** The NCRB does not collect or publish disaggregated statistics on NCII or cyberbullying, making the scale of the problem invisible.
 - a. An RTI filed in October 2025 revealed that the Union government lacks specific data and places the responsibility on States, showing systemic data gaps.
 - b. Social stigma and fear of victim-blaming discourage many survivors, especially women and transgender persons, from reporting incidents.
2. **Limited public awareness:** Many young users remain unaware of what crimes such as voyeurism, deepfake pornography, or revenge porn legally constitute. Digital illiteracy, combined with societal shaming, further prevents victims from seeking legal remedies.
3. **Weak institutional capacity:** Police officials often lack adequate training and sensitivity to handle NCII cases effectively. Cyber-investigative capacity remains limited, leading to slow or ineffective responses. Conviction rates remain low despite the filing of thousands of complaints across the country.

Why Laws Alone Are Not Enough

1. Existing legal provisions remain ineffective without awareness, accessibility, and societal acceptance.
2. Victims often avoid reporting due to shame, fear, and lack of trust in investigative systems.
3. Rapid technological advancements have outpaced current legal and institutional capacities, leaving victims unprotected.

Way Forward

1. Dedicated NCII legislation: A comprehensive, gender-neutral law should be enacted to specifically address NCII and deepfake harms. Such a law must define the duties of platforms, intermediaries, and AI developers and incorporate strict traceability and takedown norms.

2. Strengthening institutional capacity: Police forces need specialised training in cyber investigations and gender-sensitive handling of NCII cases. Governments must invest in advanced digital forensic infrastructure to expedite evidence gathering.

3. Victim-centric mechanisms: Anonymous reporting systems, confidential complaint processes, and psychological support services should be institutionalised. Fast-track mechanisms for content removal, legal assistance, and compensation must be ensured.

4. Platform and AI developer accountability: Online platforms must conduct mandatory risk assessments and adopt watermarking and detection tools for AI-generated images. Clear obligations must be imposed on platforms to promptly remove harmful content and cooperate with law enforcement.

5. Public awareness and education: Government and civil society must launch nationwide campaigns to improve digital literacy and awareness of cyber rights. Educational institutions should incorporate modules on consent, online safety, and gender justice.

6. Independent oversight: A specialised regulatory body for AI harms and digital safety should be established to audit platforms and enforce compliance.

Conclusion: Deepfakes and NCII have transformed privacy from a purely legal right into a domain increasingly shaped by technological vulnerabilities. While the 2025 SOP is a crucial step, it remains insufficient without comprehensive, gender-neutral laws, capable institutions, platform accountability, and robust support mechanisms for victims. A holistic and proactive approach is essential to safeguard dignity, autonomy and digital safety in an increasingly transparent and technology-driven society.

Question: India today lives in a 'fishbowl society' where AI-driven harms have outpaced existing legal protections." Discuss in the context of rising deepfake and NCII crimes.

Why does India need bioremediation?

Source: The post "Why does India need bioremediation?" has been created, based on "Why does India need bioremediation? | Explained" published in "The Hindu" on 03rd December 2025.

UPSC Syllabus: GS Paper-3- Environment

Context: Bioremediation refers to the use of microorganisms and plants to break down or transform toxic pollutants into harmless by-products, thereby restoring contaminated environments. It is increasingly important for India as rapid industrialisation, population growth, and environmental degradation have made clean soil, air, and water harder to access.

What is Bioremediation?

1. Bioremediation **literally means "restoring life through biology"** and uses bacteria, fungi, algae, or plants to degrade pollutants such as oil, pesticides, plastics, and heavy metals.
2. These **organisms metabolise pollutants as food, converting them into harmless substances** like water, CO₂, or organic acids, and sometimes convert toxic metals into non-leaching forms.

Types of Bioremediation

1. **In situ bioremediation** occurs directly at the contaminated site, such as oil-eating bacteria sprayed on ocean spills.
2. **Ex situ bioremediation** involves removing contaminated soil or water, treating it in controlled facilities, and returning it after cleanup.

How Modern Biotechnology Enhances Bioremediation

1. New biotechnologies allow scientists **to identify microbes and biomolecules with pollutant-degrading capabilities.**
2. Genetically modified microbes are engineered **to degrade complex pollutants** like plastics and oil residues more effectively than natural species.

3. Synthetic biology **enables “biosensing,” where organisms change colour or fluorescence** if they detect toxins, thereby providing early warnings of contamination.

Why Does India Need Bioremediation?

1. India faces severe pollution challenges, with rivers like the Ganga and Yamuna receiving untreated sewage and industrial waste daily.
2. Oil spills, pesticide residues, and heavy metal contamination threaten ecosystems, agriculture, and public health.
3. Traditional cleanup technologies are costly, energy-intensive, and sometimes cause secondary pollution, making bioremediation a more sustainable and affordable option.
4. India's rich biodiversity offers unique indigenous microbes adapted to local conditions such as high temperatures, salinity, and acidity, allowing more effective environmental recovery.
5. India's resource constraints make scalable, low-cost, and environmentally friendly technologies essential for long-term ecological restoration.

Where Does India Stand Today?

1. Bioremediation is gaining momentum but remains in pilot or early implementation stages.
2. The Department of Biotechnology (DBT) supports bioremediation through its Clean Technology Programme, fostering collaborations between universities, research institutions, and industry.
3. CSIR-NEERI leads research and implementation of bioremediation projects, including developing microbial formulations.
4. IITs have contributed innovations such as nanocomposites from cotton for oil spill absorption and bacteria capable of degrading toxic pollutants.
5. Startups like BCIL and Econirmal Biotech offer microbial products for soil and wastewater treatment, indicating growing industry participation.

Challenges to Adoption in India

1. There is **limited site-specific knowledge** about microbial behaviour and pollutant complexity, leading to inconsistent results.
2. India **lacks unified national standards or regulatory frameworks** for bioremediation protocols, safety monitoring, and microbial applications.
3. Many **contaminants are chemically complex**, requiring tailored solutions that India has not fully developed yet.
4. There is **limited public awareness about the safety and benefits of microbial cleanup technologies**, leading to hesitation and resistance.
5. **Biosafety concerns exist**, especially regarding genetically modified organisms that may cause unintended ecological effects if not properly contained.

What Are Other Countries Doing?

1. Japan integrates plant-based and microbial remediation into urban waste management systems.
2. The European Union funds cross-border projects using microbes to clean oil spills and rehabilitate mining sites.
3. China has prioritised bioremediation in its soil pollution control programme and uses genetically enhanced bacteria to restore industrial wastelands.

4. These examples show that bioremediation can become mainstream environmental policy with proper investment, regulation, and monitoring.

Opportunities and Risks for India

1. Bioremediation can restore polluted rivers, rehabilitate contaminated land, and improve public health while creating jobs in biotechnology and environmental consulting.
2. It can support major national missions such as Swachh Bharat and Namami Gange, offering cost-effective solutions.
3. However, risks such as ecological disruption from genetically modified organisms need strict regulation, testing, and continuous monitoring.
4. Public engagement and trust-building are crucial to ensure safe and widespread adoption.

Way Forward

1. India must develop national standards for bioremediation protocols, microbial usage, and biosafety guidelines to ensure uniform and safe implementation.
2. Regional bioremediation hubs should be created by linking universities, industries, and local governments to address local contamination challenges more effectively.
3. Support for startups and community-led bioremediation projects should be expanded through DBT-BIRAC funding mechanisms.
4. Public awareness campaigns must be strengthened to educate citizens that microbes can be allies in environmental restoration rather than threats.
5. India must train skilled personnel, create certification systems, and invest in long-term monitoring frameworks for safe deployment of engineered microbes.

Conclusion: Bioremediation offers India a sustainable, affordable, and biotechnology-driven solution to its escalating pollution crisis. While pilot projects and innovations are promising, India needs stronger standards, biosafety frameworks, public awareness, and institutional capacity to scale these technologies. By responsibly integrating bioremediation with national missions, India can restore its ecosystems, protect public health, and move toward a greener future.

Question: Bioremediation offers India a sustainable and biotechnology-driven alternative to conventional pollution control methods. Discuss the need for bioremediation in India and evaluate the opportunities and challenges associated with its adoption.

The climate is breaching the wall of urban metrics

Source: The post “The climate is breaching the wall of urban metrics” has been created, based on “The climate is breaching the wall of urban metrics” published in “The Hindu” on 04th December 2025.

UPSC Syllabus: GS Paper-3- Environment

Context: Urban resilience, particularly in the face of climate change, is an emerging concern in rapidly urbanizing regions like Asia. While global urban indices, such as the UN-Habitat City Prosperity Index and the Global Liveability Index, measure a city’s development based on factors like infrastructure, governance, and quality of life, these metrics often fail to account for the risks posed by extreme weather events. Recent natural

disasters in Asia, such as floods and cyclones, highlight significant gaps in how urban resilience is assessed, revealing the need for more comprehensive and inclusive measures.

Limitations of Current Urban Resilience Metrics:

1. **Exclusion of Vulnerable Areas:** Most global urban indices focus on major metropolitan areas or capital cities, overlooking secondary cities and peri-urban regions that often bear the brunt of climate risks.
 - For example, cities like Hat Yai in Thailand or Cebu in the Philippines, despite being key regional hubs, are excluded from liveability rankings.
 - These areas, though economically important, lack the same resources and infrastructure as larger cities, leaving them more vulnerable to climate-induced disasters.
2. **Narrow Focus on Visible Infrastructure:** Indices like the Global Liveability Index prioritize indicators such as healthcare, public transport, and education, which are important but fail to consider
 - The recent floods in Sri Lanka and Indonesia, where existing infrastructure was overwhelmed by extreme rainfall, demonstrate that modern cities must be assessed on their capacity to handle such shocks, not just their visible amenities.
3. **Mispricing of Risk and Inequity:** Current urban metrics tend to use city-wide averages, which mask the disparities in vulnerability within cities.
 - Wealthier residents benefit from better infrastructure, mobility, and access to insurance, which helps them mitigate risks during extreme weather events.
 - In contrast, marginalised communities living in informal settlements or flood-prone areas face higher risks, yet they are often not included in resilience assessments. This exacerbates the inequality of urban risk and misrepresents the actual resilience of the city.
4. **Failure to Address Long-Term Climate Adaptation:**
 - Urban indices largely fail to incorporate long-term climate adaptation strategies. They focus on the present state of a city, but do not measure its preparedness for future climate challenges.
 - This oversight can lead to investments that prioritize short-term economic growth rather than sustainable infrastructure and disaster management systems, further deepening vulnerabilities in the long run.

Way Forward

To more accurately measure urban resilience in the context of climate change, a new framework that goes beyond traditional urban indices is necessary. The following measures should be considered:

1. **Inclusion of Secondary Cities and Peri-Urban Areas:**
 - Urban resilience metrics must include all regions within a city, not just major metropolitan hubs.
 - Secondary cities and peri-urban areas are often more vulnerable to climate change but are essential parts of national economies. Integrating these areas into urban assessments will provide a more holistic picture of a city's resilience.

2. **Focus on Climate-Resilient Infrastructure:**

- Future urban indices should prioritize measures of climate resilience, such as the capacity of drainage systems, the stability of infrastructure on floodplains, and the effectiveness of early warning systems.
- Cities should be evaluated on their ability to withstand and recover from extreme weather events, not just on their economic output or connectivity.

3. **Equity in Risk Assessment:**

- Urban resilience metrics should account for the varying levels of vulnerability across different socioeconomic groups within a city.
- Wealthier areas should not be over-represented in resilience assessments while poorer, more vulnerable regions are underrepresented.
- Indices should measure how effectively a city protects its most at-risk populations, ensuring that resilience is inclusive.

4. **Long-Term Adaptation and Sustainability:**

- The focus of urban indices should shift towards long-term sustainability and adaptation to climate change. This includes evaluating cities on their ability to implement and maintain resilient infrastructure, enforce building codes, and manage risks in informal settlements.
- Prioritizing climate adaptation projects in areas prone to natural disasters should be a key metric in urban assessments.

5. **Transparent and Accessible Data:**

- To make these changes effective, cities must have access to comprehensive, real-time data on climate risks, urban infrastructure, and social vulnerability.
- Governments should be encouraged to collect and share data on local climate hazards, infrastructure performance, and community resilience, allowing for more accurate assessments and targeted investments.

Conclusion: The existing urban resilience indices do not adequately reflect the vulnerabilities cities face due to climate change, especially in Asia. A more inclusive and effective approach to urban resilience measurement is necessary, one that focuses on the specific risks posed by extreme weather events, considers the inequities within cities, and emphasizes long-term climate adaptation strategies. By adopting these approaches, cities can better prepare for the challenges posed by climate change and ensure a more resilient and equitable future for all urban residents.

Question: Discuss the limitations of current urban resilience metrics in addressing the climate challenges faced by cities in Asia. Suggest a more inclusive and effective approach for measuring urban resilience.

Systemic challenges with the working of IBC

Source: The post “Systemic challenges with the working of IBC” has been created, based on “IBC resolution process: House panel raises concerns over ‘haircuts’, asset valuation; encourage global bidding” published in “Indian Express” on 04th December 2025.

UPSC Syllabus: GS Paper-3- Indian Economy

Context: The Insolvency and Bankruptcy Code (IBC) has played a crucial role in strengthening the confidence of creditors and encouraging foreign investment since its implementation. However, the Parliamentary Standing Committee on Finance, in its recent report, raised several concerns about the code's effectiveness, including delays in resolution processes, inadequate asset valuation, and the issue of 'haircuts'. To address these challenges, the committee proposed several reforms aimed at improving the overall functioning of the IBC.

Key Concerns Raised by the Committee:

1. **Delays and Inadequate Judicial Infrastructure:** One of the primary issues highlighted by the committee is the delay in the resolution process, primarily caused by inadequate judicial infrastructure. This results in prolonged timelines, undermining the purpose of IBC, which aims for time-bound resolution of insolvency cases.
2. **Uncertainty Regarding Finality of Resolution Plans:** The committee noted the uncertainty surrounding the finality of resolution plans, often due to judicial reversals. This creates an environment of unpredictability, discouraging investors and creditors from participating in the resolution process.
3. **Lack of Accountability Among Resolution Professionals (RPs):** Another significant concern is the lack of accountability among resolution professionals. The committee emphasized the need for clearer roles and responsibilities for RPs to ensure transparency and better outcomes in the resolution process.
4. **Haircuts and Asset Valuation Issues:** The committee raised concerns over the issue of 'haircuts' — the difference between the amount a lender is owed and the actual recovery achieved.
 - The committee pointed out the lack of transparency in the process and its tendency to lead to distress sales, often resulting in lower recovery rates. Furthermore, assets are valued based on their liquidation potential rather than their enterprise value, leading to suboptimal recovery.

Recommendations for Reform:

1. **Enterprise-Level Price Discovery Mechanism:** To address asset valuation concerns, the committee recommended adopting an enterprise-level price discovery mechanism. This would ensure that assets are valued based on their true enterprise value, better reflecting the corporate debtor's potential and improving the recovery rates.
2. **Expansion of Competitive Bidding:** To reduce 'haircuts' and enhance competition, the committee proposed expanding the competitive bidding process by encouraging global outreach. This would increase the pool of quality resolution applicants, potentially leading to better resolution outcomes and higher recoveries for creditors.
3. **Introduction of Standard Operating Procedures (SOPs):** The committee suggested the introduction of clear standard operating procedures (SOPs) to define the roles of liquidators and registered valuers, establish audit trails, and facilitate post-resolution valuation reviews. These measures would ensure greater accountability and transparency in the resolution process.

4. **Cross-Border Insolvency Framework:** The committee highlighted the need for a cross-border insolvency framework under the IBC, especially for Indian companies operating internationally. Given that many corporate entities have assets spread across multiple jurisdictions, the lack of a robust framework to handle cross-border insolvency disputes is causing significant losses and complicating asset recovery.
5. **Online Mechanism for 'No Dues' Certificates:** The committee recommended the establishment of a transparent online mechanism for issuing 'no dues' certificates to companies post-resolution. This would help resolved companies start afresh by clearing their liabilities and facilitating access to fresh financing.

Conclusion: The IBC has been instrumental in streamlining the insolvency resolution process in India, but the Parliamentary Standing Committee on Finance's concerns highlight several areas for improvement. Addressing issues such as delays, asset valuation, and the accountability of resolution professionals, along with implementing reforms like enterprise-level price discovery and cross-border insolvency frameworks, can significantly enhance the effectiveness of the IBC. By adopting these recommendations, India can strengthen its insolvency resolution mechanism, improve creditor recovery, and foster a more transparent and efficient financial system.

Question: Discuss the concerns raised by the Parliamentary Standing Committee on Finance regarding the Insolvency and Bankruptcy Code (IBC) and suggest reforms for improving its effectiveness.

A Missing Link in India's Mineral Mission

Introduction

India wants secure, low-carbon growth, but its critical mineral policy still focuses more on mining than on processing. **Processing is the missing link** that decides whether India remains a supplier of raw ores or becomes a builder of resilient, high-tech industries. Closing this gap is central to energy security, industrial competitiveness, and strategic autonomy.

What are critical minerals?

Critical Minerals: Critical minerals are a category of non-fuel minerals and elements which satisfy 2 conditions:

- **Economic development & National Security:** It is essential for economic development and national security as they are vital for development of materials for defense, aerospace, nuclear, and space applications.
- **Supply chain vulnerability:** There are associated risk of supply chain vulnerability and disruption with these minerals, due to their lack of availability, and concentration of existence, extraction or processing of these minerals in few geographical locations.

Significance of Critical Minerals for India

1. Push to India's Economic Development: These Minerals give a push to India's economic development as industries such as high-tech electronics, telecommunications, transport, and defense rely heavily on these

minerals. Their growth can lead to job creation, income generation, and innovation in these sectors. **For ex-** India's push to become semiconductor manufacturing hub rests on the availability of these minerals.

2. Energy transition towards Net-Zero Emissions: These minerals are the foundation of modern technologies like solar panels, wind turbines and advanced batteries, which will help in energy transition and would give a push to India's goal of net-zero emission by 2070.

3. Competitive value chain establishment in India: The discovery of critical mineral wealth and identification of areas of their potential use in advanced technologies will help in establishing competitive value chain in India. This would help in attracting foreign direct investments from countries like UK, USA as part of their China+1 strategy.

4. National Security: These minerals are vital for defense, aerospace, nuclear, and space applications due to their usage in development of high-quality and reliable materials capable of withstanding extreme conditions and performing complex functions. These would help in bolstering India's national security.

5. Reducing India's import Bill: Currently most of the critical minerals are imported in India. The exploration and increased production of these minerals would help in reducing India's import burden and Current Account Deficit.

Challenges with Critical Minerals

1. Geopolitical and oligopolistic monopoly: The concentration of critical minerals in few countries, has led to geopolitical monopoly with only a few countries dominating these mineral resources. This leads to oligopolistic (domination by a few large firms) markets. **For ex-** Australia controls 55% of lithium reserves, and China has 60% of rare earths.

2. China's dominance in the processing and refining sector: China is a central player in the global critical mineral supply chains, particularly in processing and refining. It accounts for:

- 60% of worldwide production
- 85% of critical mineral processing, 70% of cobalt processing
- 90% of rare earth refining
- 60% of lithium conversion capacity.

China's dominance in the critical mineral sector leads to its political leverage over other countries. It alone can bring the global EV industry to a halt by restricting the supply of rare earths – which is happening right now.

3. Geopolitical Risks: The geographical concentration of these minerals makes them vulnerable to geopolitical risks. Geopolitical tensions, conflicts, trade disputes, or sudden policy changes in those regions can impact their supply. **For ex-** The civil war in Democratic Republic of the Congo, has affected the global supply chain of cobalt, as 70% of the world's reserves of cobalt are located in DRC.

4. Resource Nationalism: The geographical concentration of these minerals has led to resource conflicts. This has increased resource nationalism, and trade fragmentation. **For ex-** Rising resource nationalism in Africa.

5. Price Volatility: Unlike oil, most critical materials are not widely traded on exchanges, and this limits opportunities to hedge against price volatility. Further, insufficient data on consumption, production, and trade of minerals causes uncertainty, price volatility and delays in investments.

6. Rising Import Bill: Between FY22 and FY23, there has been a 34% rise in imports of critical minerals, totaling nearly Rs. 91,000 crore. India's heavy reliance on imports for these minerals, poses a risk to its industrial and energy security.

7. Environmental Concerns: Mining activities of these can lead to biodiversity loss, land use change, water depletion and pollution, waste contamination, and air pollution. **For ex-**Lithium mining in the fragile landscapes of the Chilean Atacama desert is water-intensive.

8. Long Gestation Period for Alternatives: Development of alternative sources and processing capabilities of critical minerals, like India's plans with Australia, can take more 15 years for fruition, delaying self-reliance.

Government Initiative to Strengthen Critical Mineral Supply Chain

1. Legal and policy reforms

- The government has amended the **Mines and Minerals (Development and Regulation) Act (MMDR Act)** to allow exploration licences, national auctions, and a mineral exchange.
- The **National Critical Mineral Mission (NCMM)**, launched in 2025, aims to secure supplies and strengthen value chains from exploration to processing and recycling.

2. Exploration and resource mapping: The **Geological Survey of India** will undertake **1,200 exploration projects between 2024-25 and 2030-31**. More than **100 critical mineral blocks** will be auctioned, including offshore areas with polymetallic nodules.

3. Processing, recycling and secondary resources

- Measures include **fast-track clearances**, a new **Exploration Licence**, and **Critical Minerals Processing Parks**.
- Recovery from **coal fly ash, tailings and red mud** is promoted through relaxed rules, incentives and work with PSUs and State utilities.
- A **₹1,500 crore recycling scheme** supports critical mineral recovery.

4. Overseas assets and partnerships

- India backs PSUs and private firms in **acquiring assets abroad** through funding, guidelines and inter-ministerial coordination.
- **Khanij Bidesh India Limited (KABIL)** lithium projects in **Argentina** and partnerships with **Australia**, plus the **Australia-Canada-India Technology and Innovation Partnership**, deepen supply-chain and processing cooperation.

5. Budgetary Support:

- **Customs Duty Removal:** Customs duties on 25 critical minerals, such as lithium, nickel, copper, and cobalt, have been removed to enhance domestic manufacturing of advanced technologies like electric vehicles (EVs) and energy storage systems.

- **Concessional Customs Duty Extension:** The concessional customs duty of 5% on lithium-ion cells has been extended until March 2026.

6. FDI liberalization: In 2019, India has allowed 100% foreign direct investment.

Certain minerals which were previously classified as atomic have been reclassified, facilitating private-sector mining.

7. Engagement with United Nation: India is engaging with the United Nations system on critical minerals, notably as a member of the UN Secretary-General's Panel on Critical Energy Transition Minerals.

Way forward

1. Centralised National Authority for Critical Minerals: Set up a unified national authority to oversee exploration, overseas acquisition, processing and recycling of critical minerals. It should coordinate between ministries, PSUs, States and regulators, streamline decision-making, and align domestic and external policies.

2. Turn Centres of Excellence into innovation engines

- The nine **Centres of Excellence** under the **National Critical Mineral Mission** should **focus on applied research that meets downstream industry needs**.
- They must **deliver processing technologies** close to commercial readiness, with clear metrics on purity, recovery, cost and waste.
- Collaboration among IITs, NITs, CSIR labs, industry and think tanks should move innovations quickly from lab to market.

3. Unlock secondary resources and residues

- India generates **over 250 million tonnes of coal fly ash** each year, containing light and heavy rare earths. Pilot projects at **CSIR and IITs** show recovery is feasible.
- Embedding recovery units in processing parks, co-funded with PSUs and State utilities and backed by **streamlined clearances from the Environment Ministry**, can convert these waste streams into secure domestic supplies.

4. Build a specialised processing workforce

- The **₹100 crore** National Critical Mineral Mission (NCMM) **skilling allocation** should support trainer programmes, diploma courses and updated curricula in academic and CSIR labs.
- Industry-led apprenticeships at existing refiners will help workers gain hands-on experience in hydrometallurgy and advanced refining.

This can create skilled jobs in mineral-rich states such as Odisha, Gujarat and Jharkhand.

5. De-risk investment and assure demand

- Distorted global prices discourage new entrants. India can use its planned mineral stockpile as a **market-maker** by offering long-term contracts, offtake commitments and price support to domestic producers.
- Key sectors such as defence, pharmaceuticals and electronics can be encouraged to source part of their needs domestically, giving processors stable demand.

6. Integrate mineral diplomacy with processing capacity: Overseas mineral assets must be linked with strong domestic refining. High-purity processing can shift India's external partnerships from raw-ore supply to co-investment models and strengthen India's position in platforms such as G-20, BRICS and IPEF.

7. Encourage FDI in domestic mining: Rising Foreign Direct Investment (FDI) will not just support businesses like battery and EV manufacturing. It will also bring the expertise of international mining firms to aid in exploring critical minerals for the country's benefit.

8. Path to global leadership: India can emulate Indonesia's success in nickel to become a global leader in these minerals, utilizing access to both domestic and international raw materials.

9. Alignment of mineral incentives: The Production-Linked Incentive (PLI) scheme for minerals should align with global aspirations, creating employment opportunities.

Conclusion

Critical minerals can either remain a strategic vulnerability or become a foundation of resilient, high-value growth. India must move beyond exporting raw ores to building strong domestic capacity in processing, recycling, skills, technology and financing, supported by smart diplomacy and FDI. Aligning these efforts can secure supplies, lower import risks and support energy and security goals.

Question for practice:

Examine why critical mineral processing is the missing link in India's mineral mission and how India can strengthen this stage to achieve strategic autonomy.

Source: [The Hindu](#)

A Dismantling of Base of Environmental Regulation

UPSC Syllabus Topic: GS Paper 3 -Environment

Introduction

In *CREDAI vs Vanashakti* (November 18, 2025), the Supreme Court recalled its May 2025 decision that had struck down ex post facto **environmental clearances (ECs)**. This recall reopens the dispute and weakens a

strict, preventive approach based on prior ECs. It raises concern that finished projects and sunk costs may outweigh constitutional duties of environmental protection and long-term ecological safety.

Background

1. Evolution of preventive environmental principles: For decades, the Supreme Court linked environmental protection to **Article 21's right to life**. It upheld the precautionary principle, intergenerational equity, sustainable development, and even recognised a **right against the harms of climate change**. These ideas required early and preventive state action to avoid irreversible ecological harm.

2. Formation of the EIA regime: Following the **Stockholm Conference (1972)**, India enacted the **Environment (Protection) Act (1986)**, and later introduced the **Environmental Impact Assessment (EIA) Notifications of 1994 and 2006**. Together, they established a system where certain industries and projects required *prior environmental clearances (ECs)* before starting operations—ensuring public hearings, expert scrutiny, and scientific evaluation.

3. Dilution through executive actions:

- The **2017 Notification** allowed projects that began without prior EC to apply retrospectively within six months.
- Later, a **2021 Office Memorandum** extended this leniency through a “Standard Operating Procedure,” regularising violators with penalties and costs.
- These measures transformed preventive clearance into post-violation approval.

4. The May 2025 Vanashakti ruling:

- A bench of **Justices A.S. Oka and Ujjal Bhuyan** held that *prior environmental clearances (ECs) is the only lawful route*.
- It struck down both the 2017 and 2021 relaxations as unconstitutional, restrained future regularisations, and affirmed environmental protection as a **foundational duty under Articles 21 and 51A(g)**.
- It also noted that the Union government had earlier assured that the 2017 relaxation was a one-time measure.

Review Petitions and the Reversal: Split Verdict of November 18, 2025

Grounds for review

1. Industry bodies, especially **Confederation of Real Estate Developers of India (CREDAI)**, and the Union government sought review, saying Vanashakti had **ignored earlier precedents** such as Common Cause, Alembic Pharmaceuticals, Electrosteel Steels and Pahwa Plastics, where **limited ex post facto environmental clearances (ECs)** were allowed in exceptional cases under Article 142.
2. They called review “imperative and expedient” and demanded a **“balanced approach”**, arguing that a total ban on retrospective ECs would make regularisation of ongoing projects impossible.

Majority view (CJI Gavai & Justice Chandran)

1. By **majority of CJI B.R. Gavai and Justice K. Vinod Chandran**, the Court **recalled the May 2025 judgment** and restored the case for a fresh hearing.
2. CJI Gavai warned of a **“devastating effect”**, including possible demolition of projects worth **nearly ₹20,000 crore**—such as SAIL investments, a **962-bed AIIMS hospital in Odisha**, a **greenfield airport in Karnataka**, a **CAPF medical institute in Delhi**, and many other central and state projects funded from the public exchequer.
3. The majority held that **ex post facto environmental clearances (ECs) should not be refused with pedantic rigidity** and may be permitted in **rare, exceptional situations**, with heavy penalties and strict conditions instead of demolition.

Minority dissent (Justice Bhuyan)

1. Justice Bhuyan dissented, saying the review **overlooked fundamentals of environmental jurisprudence** and meant **“backtracking on sound environmental jurisprudence” for the sake of violators**.
2. He rejected the “dustbin” argument over sunk public costs, opposed **prodding the government towards ex post facto environmental clearances (ECs)**, and pointed to **Delhi’s deadly smog and rising pollution** as proof of the human cost of weak enforcement.
3. He insisted that **retrospective environmental clearances (ECs) are an “anathema”**, a concept “devoted to evil”, that would cause **irreparable environmental degradation**.

Concerns Arising From the Review Judgment

1. **Shift from prevention to regularisation:** The ruling replaces preventive environmental protection with post-violation accommodation, allowing illegality to justify itself.
2. **Weakening of the EIA process:** Public hearings and expert appraisals lose meaning once projects already stand completed, making scrutiny a mere formality.
3. **Erosion of deterrence:** The polluter-pays principle risks turning into a “pay and legalise” route, encouraging non-compliance through fines instead of enforcement.
4. **Loss of accountability:** Regulatory authority weakens as compliance appears voluntary, reducing the state’s power to ensure genuine environmental discipline.
5. **Undermining judicial credibility:** Reversing a reasoned judgment undermines consistency and public faith in environmental rule of law.
6. **Negative climate signal:** At a time of deepening ecological crisis, the rollback signals retreat from India’s commitment to sustainable, rights-based development.

Way Forward

1. **Reaffirm Prior EC as the Rule:** Prior environmental clearance must remain the legal norm, not a flexible condition. Any retrospective **environmental clearances (ECs)** should be strictly exceptional and time-bound.
2. **Prevent “Pay and Legalise” Practices:** Penalties should deter, not legitimise, illegal projects. Fines cannot substitute environmental compliance.

3. Strengthen Monitoring and Accountability: Authorities must ensure real-time monitoring, transparent approvals, and public disclosure to prevent post-violation regularisation.

4. Align Policies with Constitutional Principles: Future notifications and memorandums must reflect Article 21's right to health and the precautionary principle.

5. Restore Public Trust in Environmental Governance: The Court and government must rebuild credibility by enforcing preventive laws, not bending them to suit economic convenience.

Conclusion

The recall of Vanashakti in *CREDAI vs Vanashakti* reopens the question of ex post facto clearances. It also signals a retreat from preventive environmental regulation. Protecting India's environment now requires restoring the primacy of prior **environmental clearances (ECs)**, rejecting "pay and legalise" regularisation, and upholding constitutional environmental rights and the rule of law.

Question for practice:

Discuss how the Supreme Court's recall of the Vanashakti judgment in *CREDAI vs Vanashakti* affects the preventive framework of environmental regulation in India.

Source: [The Hindu](#)

Need to Change Cities' Governance in India

UPSC Syllabus Topic: GS Paper 2 -Devolution of Powers and Finances up to Local Levels and Challenges There in.

Introduction

Indian cities face weak and unclear governance because elected local leaders have very little real authority. Most decisions are taken at the State level, while municipalities struggle with limited powers, poor finances, and overlapping institutions. Frequent political interference, weak civic awareness, and the incomplete impact of the 74th Amendment have further reduced local autonomy. These gaps show why India must rethink how its cities are governed to meet growing urban needs.

Need to Change Cities' Governance in India

1. Mayors Have Limited Power: Mayors in large Indian cities have almost no authority. Most decisions are taken in the Chief Minister's office, leaving municipal leaders with little control.

2. Overlapping Political Power: MLAs and MPs act as ex-officio members in municipalities. Their influence often overshadows corporators and Mayors. **Local representatives cannot act independently** because they remain subordinate to their party leaders in the Assembly or Parliament.

3. Cities Are Not Prioritised in Governance Structures: Urban areas have not received sustained attention, as India was seen mainly as a rural economy. Even though municipalities are historically old, **their powers have not expanded**, making strong reform necessary to meet the needs of rapidly growing cities.

4. Constitutional Amendments Did Not Strengthen Urban Local Bodies: The 73rd and 74th Amendments were expected to empower cities, but **urban governance actually weakened** due to political competition and the lack of public pressure.

5. Limited Civic Awareness: There is a need for change because **public apathy allows delays and weak institutions**. Cities like Bengaluru have gone years without municipal elections, yet people did not protest. When citizens do not demand strong local governments, political actors have no reason to support reform.

6. State-Controlled Agencies Overshadow Municipalities: Many essential services are handled by State agencies and parastatals, leaving municipalities with few functions and weak finances. **This reduces the role of local elected representatives**

7. Political Interference in Municipal Boundaries: Frequent mergers or divisions of city corporations are often used to postpone elections. **Such actions prevent stable governance**, creating another strong reason for reform.

Initiatives Taken to Change Cities' Governance in India

1. Changing City Boundaries and Structures: Different States have attempted reorganising municipal bodies. Bengaluru has been split into five corporations, while many municipalities in Telangana are being merged into the GHMC. However, **these steps often lack genuine governance goals**.

2. Constitutionalisation Through the 74th Amendment: The 74th Amendment was expected to empower urban local governments by giving them constitutional status.

3. Attempts at Financial Devolution: In the past, cities like Hyderabad and Bombay transferred funds to ward offices. This allowed quicker decisions and more local accountability. **These attempts showed that decentralisation can work when financial authority reaches the lowest level**, but such practices weakened over time

4. Delimitation and Expansion Exercises: States have conducted periodic delimitation and expansion of municipal limits. While these exercises claim to represent population growth and administrative needs

Way forward

1. Build Strong Public Demand for Local Governance: Urban governance will improve only when citizens ask for stronger municipal bodies. People must see local governments as real governments and not as minor offices. **Political leaders act when public pressure is clear**, so active civic demand is essential to drive change.

2. Reduce Centralised Power: City leadership cannot function independently if the Chief Minister's Office controls budgets, agencies, and key decisions. **Reducing this concentration of power is crucial** for giving space to Mayors and corporators to act on local issues without constant dependence on State-level approval.

3. Clear Division of Responsibilities: Many governance gaps arise from unclear roles. Multiple agencies control water, transport, waste, planning, and housing. **A clear delineation of functions is important to avoid overlap**. Each institution must have a defined area of work and a leader accountable for results.

4. Strengthening Local Finances: Cities need predictable financial flows. Ward offices must receive funds directly and be able to decide on local priorities. **Without money and authority, decentralisation cannot succeed.** Financial empowerment is the base for any governance reform.

5. Regulate Bureaucratic Dominance: Bureaucrats often become more powerful than elected bodies. They control key services and operate without local accountability. **Reducing their dominance is essential for making Mayors visible and effective,** and for ensuring that decisions respond to citizen needs, not bureaucratic priorities.

6. City-Specific Redesign : Every city faces unique political, administrative, and spatial challenges. Reform must be flexible and based on local needs.

Conclusion

Indian cities can function better only when local leaders gain real authority, finances flow predictably, parastatals are regulated, and citizens actively demand stronger urban governance. Reducing centralised control and redesigning city systems based on local realities are essential steps. Without these reforms, municipalities will remain weak and unable to deliver responsive urban services.

Question for practice:

Examine why India needs to change the governance structure of its cities and how these changes can make urban governance more responsive.

Source: [The Hindu](#)

Lifting the Police's Image in India

UPSC Syllabus Topic: GS Paper 2- Governance- Important aspects of governance.

Introduction

The recent Director General of Police (DGP) conference in Raipur, also attended by the Prime Minister, revealed a hard truth: Indian policing is still feared more than respected. Lifting this image needs more than new schemes. It requires better training and working conditions for constables, ethical and professional conduct from senior IPS officers, and a change in mindset from a coercive “force” to a citizen-centred service. Structural reforms, modern technology and community engagement must all move in this direction.

Need to uplift the police's image in India

1. Trust deficit in a democracy: Police are the most visible face of the state. Yet surveys and court observations repeatedly note public fear, especially among the poor and minorities.

2. Custodial violence and human rights concerns: NCRB-based analysis shows an average of about **92 deaths in police custody every year between 2000-2022.** These figures damage the institution's moral authority.

3. Under-staffing and poor service delivery: The India Justice Report notes that **overall police vacancies rose from 20.3% to 22.1% of sanctioned strength between 2020 and 2022**. Under-resourced personnel often get blamed, further eroding public image.

4. Weak diversity and gender imbalance

- Despite a 33% aspiration for women's representation in police, a recent analysis shows women form only **about 12.3%** of the force nationally and barely **8% of senior officers**.
- SC/ST/OBC personnel form a majority (59%) of the police workforce but remain concentrated at constable levels; their share in senior posts (like DSP and above) is very low.
- This makes the police appear socially distant from communities they serve.

5. Politicisation and lack of autonomy: The Supreme Court in **Prakash Singh vs Union of India (2006)** noted political interference in postings, transfers and investigations, and ordered measures like fixed tenures and independent State Security Commissions. Non-implementation keeps the image of police as a partisan tool instead of a neutral rule-of-law agency.

6. Changing crime profile and public expectations: Today crime is not limited to theft or street crime. **Cybercrime, financial fraud, organised crime networks and frequent public protests** have become more common. People now expect the police to handle these issues in a **professional, fair and non-violent** way.

7. International human-rights commitments: India endorses United nation (UN) standards that require police to protect human rights and use force only when strictly necessary and proportionate. When local practices diverge from these norms, India's global image and domestic confidence in the police both suffer.

Initiatives Taken for Uplifting the Police's Image in India

1. Supreme Court-mandated structural reforms

In **Prakash Singh (2006)**, the Court directed States to create State Security Commissions, Police Establishment Boards, Police Complaints Authorities, National Security Commission (NSC) and ensure fixed tenures for DGPs and key field officers. These measures aim to reduce political interference and professionalise the force.

2. Commissions and Model Police Acts

- The **National Police Commission, Padmanabhaiah Committee (2000)** and **ARC-2 (Public Order)** recommended **community-oriented, accountable policing and separation of law-and-order from investigation functions**.
- The Union government has also promoted a **Model Police Act, 2006** (drafted by a committee led by Soli Sorabjee) for States to replace the colonial 1861 law.

3. SMART policing and modernisation schemes:

- The Ministry of Home Affairs (MHA) has promoted **SMART policing** (Strict and Sensitive, Modern and Mobile, Alert and Accountable, Reliable and Responsive, Trained and Tech-savvy).

- SMART concepts along with modernisation schemes like **Assistance to States for Modernisation of Police (ASUMP)**.

4. Technology platforms: CCTNS and ICJS

- Under **Crime and Criminal Tracking Network and Systems (CCTNS)**, **17,712 police stations** have been networked, creating over **35 crore crime and criminal records** at the national level.
- Integration with the **Inter-operable Criminal Justice System (ICJS)** aims to speed up FIRs, chargesheets and coordination, improving public perception of efficiency.

5. **Citizen-centric ranking and best-practice compendiums:** The **Ranking of Police Stations** initiative uses performance data and **citizens' feedback** (20% weight) to identify people-friendly stations.

6. Gender-sensitive measures and women help desks

- India Justice Report notes that as of January 2022, **72% of police stations** had women help desks, with some States achieving 100% coverage.
- Under the **Women Safety Division of MHA**, the Union government has issued advisories to States/UTs for **setting up Women Help Desks in every police station** and has provided financial assistance for these desks under the Nirbhaya Fund.

7. **Training, surveillance and ethics initiatives:** Bureau of Police Research and Development (BPR&D) and States have expanded training in human rights, cybercrime and forensics, while CCTV use in police stations and public spaces has grown.

Way Forward

1. **Reform the 'Thana'**- The thana system is the most basic unit of police functioning. Through the thana, the police remains in contact with the common man. Thus, improving the working conditions of thana-level constables should be a priority.
2. **Enhance Police Budget and upgrade Police Infrastructure**- More than 90% of the police budget in the states are used for salary and establishment costs. Allocation for training, procurement and technology deployment should increase. States must fully use the funds for police modernisation.
3. **Reform the criminal justice system**- Focus must be on the effective implementation of the Malimath Committee recommendations to reform the criminal justice system.
4. **Training and Capacity Building of policemen**- Training the police forces should be a continuous process along with the evolving nature of the crime space. **For ex-** The cyber cell of the Delhi Police to deal with cyber criminals.
5. **Upgrade technology and research in policing**- Reform the Bureau of Police Research and Development (BPRD) by making it a more inclusive institution. **For ex-** Expertise of social science experts for better research on criminology, NCRB's Automated Facial Recognition System (AFRS) to identify criminals.

6. Improving public perception through community policing- Community policing initiatives like 'Janamaithri Suraksha Project-Kerala', 'Meira Paibi-Assam' must be undertaken to improve ground level policing.

7. Learning from international best practices- Japan's separate police commission for recruitment, New York Police specialisation of police model, must be used to reform our police and make it a global Police.

8. Increase women representation- 33% women reservation in police should be implemented in all the states. States like Bihar have taken a step in this direction.

All reforms must be enunciated in the direction of development of SMART Police– Sensitive, Mobile, Alert, Reliable and Techno-savvy.

Conclusion

Lifting the police's image in India needs work at many levels. We must reduce fear, end custodial abuse, and address vacancies, diversity gaps and politicisation. Existing reforms like Supreme Court directions, SMART policing, CCTNS, gender-sensitive measures and community policing provide a base. The real change will come when every thana becomes people-friendly, technology-enabled and accountable, and when citizens begin to see the police as a trusted partner in justice, safety and democratic governance.

For detailed information on **Police Reform In India In 2024** [read this article here](#)

Question for practice:

Discuss the challenges in improving the image of the Indian police and the reforms undertaken to address them.

Source: [Businessline](#)

India can build a \$1.2-trillion bioeconomy by 2047

Source: The post “**India can build a \$1.2-trillion bioeconomy by 2047**” has been created, based on “**India can build a \$1.2-trillion bioeconomy by 2047**” published in “**The Hindu**” on 05th December 2025.

UPSC Syllabus: GS Paper-3- Economy

Context: India's bioeconomy has grown significantly, from \$10 billion in 2014 to over \$165 billion in 2024. With the right reforms, India has the potential to surpass \$1.2 trillion by 2047, contributing significantly to the vision of Viksit Bharat. Achieving this goal requires not only scientific excellence but also substantial reforms in capital markets and regulatory systems. These reforms are critical to ensuring that India can become a global biotech leader, much like China has.

Current Status of India's Bioeconomy

1. Biotechnology is a capital-intensive sector driven by deep science and long development cycles.
2. Globally, biotech companies list on public markets even at the research stage to secure patient capital.
3. However, in India, pre-revenue or research-stage biotech companies cannot list, which limits their access to funding.

4. This has forced many high-potential Indian biotech startups to relocate abroad, stifling domestic growth.

China's Success Model

1. China provides a valuable case study in how capital-market innovation and regulatory reform can foster rapid biotech growth.
2. The STAR Market in Shanghai and the Biotech Chapter in Hong Kong allowed early-stage biotech firms to list without profitability requirements.
3. This policy has mobilized billions in capital, with China attracting \$45 billion in life sciences venture capital between 2018 and 2022—nearly 10 times more than India.
4. This influx of capital has powered China's rise as a global leader in biotechnology.

Challenges in India's Bioeconomy

1. **Capital-Access Challenges:** In India, the inability of biotech companies to list during their early stages restricts their access to capital.
 - a. This situation makes it difficult for innovators to raise funds and scale their businesses, resulting in the relocation of promising startups to countries with more favorable capital-market conditions.
2. **Regulatory Bottlenecks:** India's regulatory system is slow and fragmented. Approval timelines for First-in-Human (FIH) trials are lengthy, and each phase of clinical trials requires separate reviews, leading to delays.
 - a. Additionally, regulatory bodies like the CDSCO lack the scientific capacity to evaluate emerging technologies, such as mRNA vaccines and gene therapies, which slows down innovation.

Proposed Solutions

1. **Capital-Market Innovation:** India needs to create a dedicated listing board for biotech companies, similar to NASDAQ, the STAR Market, and Hong Kong's Biotech Chapter. This reform would:
 - a. Allow pre-revenue and research-stage biotech companies to list, providing them with access to patient capital.
 - b. Mobilize domestic capital and attract global investors.
 - c. Prevent Indian biotech firms from relocating abroad by providing them with the funding they need to scale in India.
2. **Regulatory Reforms:** India must modernize its regulatory framework to align with global standards and accelerate approval processes. Key reforms include:
 - a. **Empowering ICMR:** The Indian Council of Medical Research (ICMR) should take responsibility for reviewing clinical trial protocols for new drugs, vaccines, and biologics. ICMR's research capabilities and ethical infrastructure make it well-suited for this task.
 - b. **Role of CDSCO:** The Central Drugs Standard Control Organization (CDSCO) should focus on final approvals, ensuring good manufacturing practices (GMP) compliance, and pharmacovigilance. By separating scientific review and regulatory oversight, approval timelines can be reduced, and scientific rigor can be improved.

Expected Outcomes of the Reforms

1. Faster Innovation: The proposed capital-market innovations will provide biotech firms with the funds they need to accelerate research and development. Regulatory reforms will shorten approval timelines by 40-60%, enabling faster commercialization of new technologies.

2. Global Leadership in Biotechnology: With these reforms, India can become a global leader in emerging biotech fields such as mRNA, gene therapy, biosimilars, and biologics. India could also establish itself as a hub for clinical research and bio-manufacturing, creating millions of high-value jobs and contributing to global healthcare innovation.

Way Forward

1. **Capital-Market Innovation:** Create an Innovation & Biotech Board to allow pre-revenue biotech companies to list and access patient capital.
2. **Regulatory Reforms:** Restructure the regulatory system by empowering ICMR for scientific reviews and assigning CDSCO responsibility for final approvals and compliance.
3. **Encourage Investment:** Promote investment in biotech research and development to drive growth in the sector.

Conclusion: India's bioeconomy holds immense potential, but realizing the \$1.2 trillion target by 2047 requires substantial reforms in capital markets and the regulatory system. By establishing a dedicated listing platform for biotech companies and streamlining the regulatory approval process, India can foster a thriving biotech ecosystem. These reforms will allow India to transition from being the "pharmacy of the world" to the "lab of the world," contributing significantly to global health and economic progress.

Question: Discuss the challenges faced by India's bioeconomy and the proposed solutions, particularly in capital-market innovation and regulatory reforms. How can these reforms help India become a global leader in biotechnology by 2047?

Urban Soils - The Unsung Hero

Source: The post "Urban Soils - The Unsung Hero" has been created, based on "A day to pause and come down to earth" published in "The Hindu" on 05th December 2025.

UPSC Syllabus: GS Paper-3- Environment

Context: World Soil Day is observed on December 5th every year to raise awareness about the importance of soil in sustaining life. The theme for 2025, "Healthy Soils for Healthy Cities," emphasizes the need to protect urban soils and address challenges faced by cities.

Significance of Urban Soil

1. Urban soil is a dynamic, living resource that plays a crucial role in sustaining urban life.
2. With over 56% of the global population now living in cities, the health of urban soil has become a critical issue.
3. Soil in urban environments contributes to environmental, social, and economic resilience.

Key Benefits of Healthy Urban Soil

1. **Combating Climate Change and Extreme Heat:** Urban areas are prone to higher temperatures due to the urban heat island effect. Healthy soils, covered with vegetation, absorb heat, sequester carbon, and act as natural air conditioners in parks and green spaces.
2. **Flood Prevention and Water Management:** Healthy urban soil absorbs and filters rainwater, helping prevent flooding. It replenishes groundwater supplies and reduces the risk of urban floods, unlike impermeable surfaces like concrete.
3. **Supporting Urban Food Systems and Biodiversity:** Urban agriculture (e.g., rooftop farms, community gardens) relies on fertile soil to provide fresh food and enhance local resilience. Healthy soils support biodiversity, including essential organisms like earthworms and pollinators, which help with plant growth and soil fertility.
4. **Improving Mental and Physical Health:** Contact with nature in urban green spaces has been proven to reduce stress, anxiety, and depression. Gardening and spending time in soil-rich environments encourage physical activity and improve overall well-being.

Degradation of Urban Soil

1. Urban soil is among the most degraded natural resources due to various pressures.
2. Common causes of degradation include: Contamination from industrial waste, Compaction from construction activities, Loss of organic matter and sealing of soil by concrete and asphalt, which suffocates soil life.
3. These factors reduce soil fertility, threaten food safety, and damage ecosystems.

Blueprint for Action: Steps to Protect Urban Soil

1. **Urban Soil Restoration and Protection**
 - Prioritize the rehabilitation of degraded urban soils through composting, soil testing, and organic amendments.
 - Prevent further soil sealing by controlling urban development and minimizing new construction that covers soil.
2. **Promoting Green Infrastructure**
 - Replace concrete with soil-based solutions such as parks, rain gardens, and tree belts.
 - These green infrastructures reduce urban heat, manage stormwater, and improve urban livability.
3. **Supporting Urban Agriculture**
 - Encourage community gardens, rooftop farms, and backyard plots to promote soil health and local food production.
 - Urban agriculture can also strengthen social bonds and enhance resilience in urban communities.
4. **Adopting Responsible Soil Management Practices**
 - Use eco-friendly practices like reducing chemical fertilizers, minimizing pesticide use, and planting native species.
 - Protect topsoil through mulching and other soil conservation techniques.
5. **Increasing Soil Literacy and Composting**
 - Schools and communities should engage in soil education through workshops and hands-on activities.
 - Promote composting at the household level to recycle organic waste back into the soil, enriching its fertility.

Conclusion: The foundation of resilient cities lies not just in infrastructure but in the health of urban soil. By prioritizing the protection and restoration of urban soils, cities can address environmental challenges such as climate change, flooding, food insecurity, and public health. Healthy cities depend on healthy soils, and it is up to individuals, communities, and governments to act as stewards of this vital resource for a sustainable future.

Question: Discuss the key benefits of healthy urban soil and the actions required to protect and restore it. How can healthy soil help address challenges like climate change, flooding, and food insecurity in cities?

A global model to overcome TB

Source: The post “A global model to overcome TB” has been created, based on “A global model to overcome TB” published in “The Hindu Businessline” on 06th December 2025.

UPSC Syllabus: GS Paper-2- Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources.

Context: India, despite being one of the fastest-growing economies globally, continues to battle a high burden of tuberculosis (TB). This age-old disease, both preventable and curable, presents a stark contrast to India's economic progress. The National Strategic Plan (NSP) for Tuberculosis Elimination, set with the goal of eradicating TB by 2025, faces significant hurdles. The Global TB Report 2024 highlights that India accounted for over a quarter of global TB cases in 2023, a situation that underscores the ongoing challenge despite India's growth.

Current TB Scenario in India:

1. India continues to account for 26% of global TB cases, maintaining the highest share in global TB incidence for almost a decade.
2. As per the World Health Organization (WHO), India is part of all three global High Burden Country lists — TB, TB with HIV, and Multi-Drug Resistant (MDR) TB.
3. The country has seen a steady rise in TB notifications, especially in the years 2017–2024, with a notable dip during the COVID-19 pandemic due to limited healthcare access.
4. The number of medically treated TB cases per 100,000 people has slightly decreased from 305 per 100,000 in 2015-16 to 222 per 100,000 in 2019-21, but the high prevalence persists.

National Strategic Plan for Tuberculosis Elimination (2017-2025):

1. India's NSP aims to eliminate TB by 2025, five years ahead of the global target of 2030. However, achieving this target seems increasingly ambitious given the current trends.
2. Despite efforts to scale up TB interventions, India is struggling with high TB incidence and mortality, reflecting significant gaps in TB prevention, detection, and care.

Key Challenges in TB Control:

1. **Lack of Public Awareness and Misconceptions:** Awareness about TB's transmission remains limited.
 - a. **NFHS-5 data reveals** that misconceptions about how TB spreads are widespread, including beliefs that TB spreads through sharing utensils or touching a person with TB.

- b. Such misunderstandings lead to inadequate preventive practices and fuel the stigma surrounding TB, causing patients to conceal their diagnosis and reducing reporting and treatment adherence.
2. **Stigma and Secrecy:** Stigma is a significant barrier in TB control. Data from NFHS-5 shows that around 15.6% of adult women and 22.9% of men would prefer to keep a TB diagnosis secret. This tendency contributes to underreporting and delays in seeking medical attention, further exacerbating the spread of the disease.
3. **Involvement of the Private Sector and Treatment Gaps:** Despite India's free TB care infrastructure through public healthcare facilities, over 25% of TB patients seek treatment exclusively from private healthcare providers.
 - a. The private sector often provides suboptimal care, including misdiagnosis and exorbitant treatment costs, pushing patients into "medical poverty."
 - b. Additionally, private TB providers do not always report cases to the government, impeding accurate data collection and effective program implementation.
4. **Nutritional Deficiency:** Under-nutrition is a major contributor to India's TB burden. Research indicates that nutritional deficiencies contribute to nearly 35% of the country's TB burden.
 - a. The Ni-kshay Poshan Yojana, launched in 2018, has provided direct nutritional support to over 1.37 crore TB patients, which has helped improve treatment adherence and recovery outcomes.

Innovations and Progress in TB Control:

1. **TB Mukht Bharat Abhiyan:** The TB Mukht Bharat Abhiyan, launched to accelerate the decline of TB cases, has led to a 21% reduction in TB incidence between 2015 and 2024.
 - a. A key factor behind this progress is the shift towards early and proactive detection, including the screening of asymptomatic individuals. This approach has uncovered subclinical TB cases, which are significant contributors to the spread of the disease.
 - b. Over 19 crore people have been screened, leading to the detection of over 8.61 lakh asymptomatic cases among the total 24.5 lakh diagnosed TB cases.
 - c. India has pioneered the use of AI-enabled handheld X-ray devices for large-scale, rapid screening, especially in underserved areas, including urban slums and remote regions.
2. **Community Involvement:** The Jan Bhagidari (People's Participation) approach has been central to the campaign's success.
 - a. Over 2 lakh youth volunteers and 6.77 lakh Ni-kshay Mitras (TB care supporters) have been mobilized to support TB patients. This has helped reduce stigma and foster community-based care.
 - b. Over 15 lakh Ni-kshay Shivirs (community support camps) have been conducted, encouraging active community participation in TB control.
3. **Impact of Nutrition on TB Outcomes:** The integration of nutritional support has been another pillar of India's success. The Ni-kshay Poshan Yojana, which provides financial assistance for nutrition, has been crucial in improving the health and resilience of TB patients.
 - a. Nutritional support has improved patient outcomes, treatment adherence, and recovery rates.
 - b. Additionally, over 45 lakh nutritious food baskets have been distributed to TB patients through the Ni-kshay Mitra initiative, directly supporting the well-being of affected individuals.

Way Forward

1. **Strengthening Awareness and Education:** Large-scale awareness campaigns focusing on the correct modes of TB transmission and the importance of early treatment seeking are crucial. The role of the media, celebrities, and TB survivors in reducing stigma and spreading awareness must be amplified.
2. **Enhancing Healthcare Access and Regulation:** Access to affordable, quality TB care must be enhanced, particularly in rural and underserved areas. The regulation of private healthcare providers and better integration with the public TB control program is essential to ensure all patients receive accurate diagnoses and effective treatments.
3. **Increased Investment in TB Research and Technology:** India's commitment to scaling up TB detection through technology, such as AI-based diagnostics and rapid molecular testing, must be expanded. This includes further improving surveillance systems to track and intervene in TB cases earlier. The government must invest in research to develop more effective TB vaccines and drugs, especially for drug-resistant strains.
4. **Political Commitment and Funding:** For the NSP to succeed, stronger political will, increased funding, and a comprehensive whole-of-government approach are needed. Ensuring equitable allocation of resources between TB and other public health challenges, such as COVID-19, is essential.

Conclusion: India's TB burden remains one of the world's highest, but the country has made notable progress in its fight against the disease. Initiatives like the TB Mukt Bharat Abhiyan, strengthened community participation, and nutritional support are driving change. However, significant challenges remain, including stigma, underreporting, and healthcare gaps. To achieve the ambitious goal of TB elimination by 2025, India must continue its innovative approach while expanding access to care, enhancing public awareness, and securing sustained political and financial commitment. Only through a multi-faceted, inclusive approach will India be able to achieve a TB-free future.

Question: Despite significant progress, what are the main challenges India faces in eliminating tuberculosis by 2025?

Chile's lesson for India's coal conundrum

Source: The post "Chile's lesson for India's coal conundrum" has been created, based on "Chile's lesson for India's coal conundrum" published in "The Hindu" on 06th December 2025.

UPSC Syllabus: GS Paper-3- Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.

Context: India faces a critical challenge in phasing out coal while balancing its economic growth, energy needs, and environmental concerns. Despite significant renewable energy progress, India dropped in the **Climate Change Performance Index** due to slow progress in reducing coal reliance. Chile's experience in transitioning away from coal provides valuable lessons for India. While both countries face challenges in transitioning to cleaner energy sources, Chile's approach could offer insights into how India might manage its own coal exit.

Current Coal Scenario in India:

1. **High Dependency on Coal:** Coal continues to make up over half of India's energy mix, and it contributes to 75% of electricity generation. This high reliance on coal remains a major barrier to achieving India's climate goals.
2. **Renewables Share:** While India has increased its renewable energy capacity significantly, with 50% of total installed power capacity coming from renewables by 2024, only **20% of electricity** was

generated from renewable sources in the same year. This shows that renewable energy is still not fully integrated into the national grid.

3. **Increase in Domestic Coal Production:** India is increasing domestic coal production, exacerbating the challenge of reducing coal dependence while expanding clean energy sources.

Chile's Experience:

1. **Dramatic Coal Reduction:** Chile reduced coal's share in electricity generation from 43.6% in 2016 to 17.5% by 2024. This was accompanied by a shift towards renewable energy, with wind and solar power now contributing over 60% of the country's electricity mix.
2. **Government Policy and Actions:** The transition in Chile was driven by **decisive government actions**. This included a carbon tax of \$5 per tonne of carbon emissions and stringent emission standards for coal plants. The government also used **competitive auctions** for wind and solar power, which drove down the cost of renewable energy.
3. **Energy Storage and Grid Stabilization:** Chile invested in energy storage systems to ensure the stability of the grid as renewable energy sources like solar and wind were scaled up.
4. **Phaseout Commitment:** Chile has committed to phasing out all coal-fired power plants by **2040**, showing a clear long-term strategy for the country's energy transition.
5. **Political Environment and Market Reforms:** Chile's political environment and the privatization of key sectors enabled the rapid implementation of market-driven reforms. The smaller share of coal in Chile's energy mix also made the transition easier compared to India's deeper reliance on coal.

Challenges for India:

1. **Deep Coal Dependency:** Unlike Chile, India has a much deeper dependency on coal, especially in coal-rich regions like Jharkhand, Chhattisgarh, Odisha, and West Bengal. This makes the transition more complex and potentially more disruptive for local economies.
2. **Social and Economic Risks:** Coal regions in India face social risks from abrupt closures, including job losses and economic disruption. The lack of alternative industries in these areas poses a significant challenge for providing new employment opportunities for displaced workers.
3. **Economic Alternatives:** India's limited economic alternatives in coal-dependent regions make it difficult to create viable paths for economic diversification.

Need for Decarbonization:

1. **Climate Change Risks:** Phasing out coal is essential to mitigate the impact of climate change, which is expected to significantly harm India's economy. It is estimated that by 2100, climate change could reduce India's GDP by 3%-10% due to **heat stress** and declining **labour productivity**.
2. **Health Impacts:** Coal pollution is linked to severe health problems, including higher infant mortality rates in districts near coal plants. This makes the coal phaseout a critical part of improving public health, in addition to mitigating climate change.
3. **"No Regrets" Policy:** Coal phaseout is a "no regrets" policy because it not only helps in avoiding the damage caused by climate change but also reduces health-related damage caused by coal pollution.

Steps for Transition:

1. **Tackling Renewable Energy Limitations:**

- a. **Expanding Renewable Energy:** India must focus on expanding renewable energy capacity, particularly solar and wind power, and improve energy storage systems to ensure grid stability.
- b. **Electrification of Sectors:** A major part of the transition involves electrifying **transport, industry, and households**. This would reduce the overall demand for coal and facilitate the integration of clean energy into various sectors.
2. **Reforming Markets and Regulations:**
 - a. **Carbon Pricing:** Implementing **carbon pricing** will make coal less attractive economically by accounting for its environmental costs.
 - b. **Remove Coal Subsidies:** Coal subsidies must be phased out to avoid further entrenching coal dependence.
 - c. **Clean Dispatch Rules:** Power procurement contracts should favor renewables over coal, incentivizing investment in clean energy projects.
 - d. **Encourage Renewable Investments:** Reforming market structures and creating incentives for renewable energy investments will help accelerate the shift away from coal.
3. **Support for Workers:**
 - a. **Reskilling Programs:** Following Chile's example, India must provide robust support for coal workers through **reskilling programs** to help them transition to new industries and employment opportunities.
 - b. **Alternative Livelihoods:** Developing alternative livelihoods for workers displaced by coal plant closures is essential. This will help mitigate the social impact of the transition.
 - c. **Transition Fund:** A dedicated transition fund, such as the proposed "**Green Energy Transition India Fund**," is crucial to support displaced workers and foster the growth of renewable energy industries in coal-dependent regions.
4. **Financing the Transition:**
 - a. **Blended Financing Model:** A blended financing model, combining public and private capital, should be adopted. The government can direct funding toward **community welfare, worker reskilling, and social protection**, while private investors can focus on **expanding renewable energy infrastructure**.
 - b. **District Mineral Foundation:** The **District Mineral Foundation corpus** can be strategically utilized to support **entrepreneurship and economic diversification** in coal-dependent regions, helping to reduce their reliance on coal.

Conclusion: The phaseout of coal needs to become a **top political priority** in India. While renewable energy gains show promise, a clear roadmap to replace coal with renewable sources is essential for achieving India's climate goals. India needs to develop a comprehensive, actionable roadmap for phasing out coal, addressing financing, worker support, and market reforms. Chile's experience provides valuable lessons in transitioning from coal to renewable energy, particularly in terms of policy, market reforms, and worker support. India must learn from these strategies while adapting them to its unique context to ensure a just and sustainable energy transition.

Question: Drawing lessons from Chile's experience, discuss the challenges and strategies for India to phase out coal and transition to renewable energy while ensuring socio-economic stability and environmental sustainability.

A Growing Shadow Over Digital Constitutionalism

UPSC Syllabus Topic: GS Paper 2 -Government Policies for various sectors

Introduction

Digital technologies now shape welfare services, policing, communication, and even political expression. But as these systems expand, concerns about surveillance, data misuse, consent, bias, and weak oversight have intensified. The Sanchar Saathi controversy exposed how quickly digital tools can challenge constitutional protections. With algorithms, biometrics, and AI influencing daily life, India faces an urgent need to safeguard liberty, dignity, equality, and accountability in the digital space. This is the core idea of digital constitutionalism.

What is “digital constitutionalism”?

Meaning: Digital constitutionalism means applying core constitutional values such as liberty, dignity, equality, fairness, accountability, and the rule of law to the digital world. It ensures that technology, data systems, and artificial intelligence do not weaken citizens’ rights.

Digital Governance and New Risks: It recognises that today’s governance increasingly depends on digital tools like biometric databases, predictive algorithms, AI-based policing, and automated welfare systems. These systems deeply influence people’s daily lives. Without constitutional checks, they can become instruments of surveillance, exclusion, and discrimination.

Constitutional Basis: The idea gained strength after the Supreme Court in **Justice K.S. Puttaswamy (2017)** held that privacy is a fundamental right and that any restriction on it must be legal, necessary, and proportionate. This judgment created a constitutional basis for protecting individual rights in the digital age.

Why There Is Need for “Digital Constitutionalism”

1. Constant and invisible surveillance: Surveillance today is silent. Metadata, location tracing, behavioural patterns, and biometric identifiers allow authorities and companies to observe people without physical presence. This chills free speech and encourages self-censorship.

2. Erosion of meaningful consent: Consent is now a routine click. People do not fully understand how their data will be used or shared. This leads to slow loss of personal control over identity and choices.

3. Concentration of power: Control lies with tech designers, law enforcement agencies, and private companies. Citizens become passive data subjects rather than active right-holders. This shifts the democratic balance away from people towards institutions and corporations.

4. Discriminatory technologies: Algorithmic tools and facial recognition can produce biased results. Global studies show higher false positives for people of colour and women. These errors may lead to humiliation, wrongful suspicion, denial of services, or unfair targeting. The main problem here is **discrimination in the outcome** of the technology.

5. Lack of transparency and appeal: Automated systems decide who gets welfare, who is flagged by police, and whose content is removed online. Often, people do not know **why** a decision was taken or **how** the system works. When a decision is wrong, there is no clear explanation or simple appeal process. The main problem here is the **absence of openness and remedy**, which violates natural justice.

6. Weak legal framework: The IT Act, 2000 and existing rules were not designed for AI or data-driven governance. Courts have issued limited guidelines, but they are scattered. India lacks an institution that can regularly audit high-risk algorithms or surveillance tools.

7. Growing democratic risk: When digital systems influence rights but remain outside constitutional control, democracy becomes weak. If unchecked, digital governance can shift towards a “monitoring state” rather than a rights-respecting state.

Thus, digital constitutionalism is essential to ensure that technology does not overpower citizens’ freedoms.

Initiatives Taken

Government Initiatives in India

- **Sanchar Saathi rollback:** The government withdrew the mandatory installation order within 48 hours after concerns about privacy and consent. This shows that public pressure can correct digital overreach.
- **Puttaswamy Judgment (2017):** Established privacy as a fundamental right and set the tests of legality, necessity, and proportionality for any intrusion.
- **Digital Personal Data Protection Act, 2023:** Introduced rules on data processing, although exemptions for the State remain wide.
- **NITI Aayog’s Responsible AI Framework:** Suggests transparency, safety, accountability, and non-discrimination in AI systems.
- **India AI Mission (2024–25):** It calls for ethical, responsible AI deployment, although concrete enforcement mechanisms are still developing.

Global Government Initiatives

- **EU’s General Data Protection Regulation (GDPR):** Sets strict rules on consent, data minimisation, purpose limitation, and user rights. It is considered the strongest example of digital constitutionalism.
- **EU AI Act (2024):** Introduces a risk-based approach. It bans unacceptable AI uses like certain biometric mass surveillance and demands strict checks for high-risk AI.
- **UN Resolutions on AI Governance (2023–24):** It call for safe, secure, trustworthy and human-centric AI that respects human rights and supports sustainable development.

Private Sector and Civil Society Initiatives

- **Platform resistance:** Apple refused to install Sanchar Saathi by default, forcing reconsideration.

- **Investigative journalism:** Reuters exposed the issue, creating public awareness.
- **Digital rights groups:** Organisations like the Internet Freedom Foundation highlight legal gaps, protest mass surveillance, and demand stronger oversight.
- **Global NGOs:** Amnesty International and others campaign against biased facial recognition systems.

These actors cannot replace constitutional institutions, but they often initiate public debate and push governments to rethink intrusive measures.

Way Forward

1. **Independent digital rights commission:** Create a statutory, independent body with powers to audit high-risk algorithms, inspect surveillance programmes, order corrections and provide quick remedies to citizens.
2. **Comprehensive surveillance law:** Surveillance should be allowed only in clearly defined, grave national-security or serious crime situations, subject to the Puttaswamy tests of legality, necessity and proportionality and prior judicial warrants wherever possible.
3. **Strong transparency and oversight:** Mandatory parliamentary review, public transparency reports on interception and algorithmic tools, and routine audits similar to EU-style fundamental-rights impact assessments for high-risk AI.
4. **Algorithmic accountability and due process:** Citizens should have a clear right to explanation and a right to appeal against automated decisions in welfare, policing, credit, employment or content moderation. There is need for regular bias-testing of “risky AI devices” to avoid discrimination.
5. **Tight data-protection norms:** Purpose limitation, minimal collection, storage limits and heavy penalties for abuse should be enforced in practice, not just on paper, drawing on principles already recognised in GDPR-style regimes.
6. **Digital literacy as constitutional empowerment:** People must understand how digital systems affect their rights. Citizens need skills to question, complain and organise against arbitrary digital power; otherwise, rights remain abstract.

Conclusion

Digital systems now hold enormous power over rights, identity, and opportunities. Without strong safeguards, they may create silent, unchecked forms of surveillance and discrimination. Digital constitutionalism ensures that technology remains accountable to democratic values. Strong laws, transparent systems, independent oversight, and empowered citizens are essential to protect freedom and dignity in an increasingly data-driven world.

Question for practice:

Examine how the rise of digital technologies has created the need for “digital constitutionalism” in India.

Source: [The Hindu](#)

India-Russia Relation

UPSC Syllabus Topic: GS Paper 2- Effect of policies and politics of developed and developing countries on India's interests.

Introduction

India–Russia relations are being re-energised after President Vladimir Putin's two-day state visit to New Delhi for the 23rd Annual Summit. The two leaders used the visit to deepen their Special and Privileged Strategic Partnership in trade, connectivity, defence and nuclear energy. This comes at a time of stalled India–US ties, shifting great-power equations, the Ukraine conflict, and renewed debate on how India can protect its long-term strategic autonomy.

Background and Changing Geopolitical Context

Indo-Soviet strategic partnership: India–Russia relations draw on the old Indo-Soviet strategic partnership. Earlier, both countries shared a common perception of threat from China. This, combined with US policies unfriendly to India on issues such as Jammu and Kashmir, created strong strategic alignment.

After the Cold War and the breakup of the Soviet Union, this equation changed. The earlier Chinese security “glue” faded for Russia. Yet, a large defence hardware relationship, built over three decades, continued to provide a floor to the partnership.

Post-Cold War Reordering: After the Soviet collapse, India diversified its defence sources, but this shift required time. Russia still remained important because many key Indian platforms depended on Russian systems. Russia also wanted to retain India as a major defence market. This legacy continues to shape ties today.

New Strains in India–US Relations: India–US ties have lost momentum under Donald Trump's second term. The US seems less focused on the Indo-Pacific and on countering China. India's place in the earlier Indo-Pacific strategy has reduced. The US has also imposed harsh tariffs on Indian goods and extra penal tariffs for buying Russian oil. India has limited ability to retaliate.

Key Highlights of the Recent 23rd India-Russia Annual Summit

1. Long-Term Economic Vision

- Both sides adopted the **Programme for the Development of Strategic Areas of India–Russia Economic Cooperation till 2030 (Programme 2030)**.
- They set a revised bilateral trade target of **USD 100 billion by 2030**, with emphasis on increasing India's exports and balanced trade.

2. Progress Toward a Trade Agreement

- India and the **Eurasian Economic Union** are working towards a Free Trade Agreement.
- They welcomed outcomes of the **25th and 26th IIRGC-TEC sessions**, the **India–Russia Business Forum** (New Delhi, November 2024; Moscow, August 2025), and the **India–Russia Business Dialogue**.
- Both reaffirmed support for a **WTO-centred** multilateral trading system.

Connectivity and Transport Corridors

- Both sides agreed to deepen cooperation on **International North-South Transport Corridor (INSTC)**, the

Chennai–Vladivostok Maritime Corridor, and the Northern Sea Route.

- They noted an **MoU on training specialists for ships in polar waters** and ongoing cooperation between railways through technology exchange.

Cooperation in the Russian Far East and Arctic

- They highlighted the **2024–2029 Programme of Cooperation in Trade, Economic and Investment Spheres** for the Russian Far East and Arctic.
- Priority sectors include **energy, mining, agriculture, manpower, pharmaceuticals, diamonds, and maritime transport**.
- Russia welcomed India's participation in the **6th International Arctic Forum, Murmansk (March 2025)**.

Payment Systems and Currency Use

- Both sides agreed to expand **bilateral settlements in national currencies**.
- They will continue discussions on **interoperability of national payment systems, financial messaging platforms, and central bank digital currencies**.

Defence and Nuclear Cooperation

- Russia remains a key partner for **nuclear submarines** and **anti-missile systems** such as the **S-400**, used effectively in **Operation Sindoor**.
- Russia also reaffirmed willingness to work with India on **small modular reactors (SMR)** and **floating nuclear power plants**.

Mobility, Fertilizers, and Critical Materials

- Both sides welcomed steps to ensure **long-term fertilizer supplies** and explore **joint ventures** in this sector.
- They noted agreements on **skilled worker mobility**.
- Russia acknowledged India's role in the **Saint Petersburg International Economic Forum (June 2025)** and **Eastern Economic Forum (September 2025)**.
- Both stressed trade in **energy, mineral resources, precious stones, metals, and critical raw materials** as vital for national security and supply chain stability.

Global Reactions and Geopolitical Impact

1. Russia's Domestic Gain: Warm reception in India provides Putin significant political value at home. It shows he is not isolated internationally despite sanctions and the war in Ukraine.

2. China's Mixed View: Some Chinese voices worry that stronger India–Russia defence ties may strengthen a regional competitor. However, China may also welcome shifts in India–US ties, as reduced India–US alignment lowers pressure on Beijing.

3. Europe's Discomfort but Strategic Convergence: Europe is unhappy with India's warm engagement with Putin while the war in Ukraine continues. Yet long-term strategic convergence with India is increasing due to concerns about US unpredictability and China's assertiveness. European leaders will attend India's next Republic Day as honoured guests.

4. India's Position on Ukraine: India supports early peace and stands for sovereignty and territorial integrity, while avoiding direct criticism of Russia. This reflects a balance between values and practical interests.

What are the Challenges in the relation?

1. Deepening of India-US relations-

- The India-US relations is rapidly deepening especially in the defense sector, which is exemplified in the India-US nuclear deal in 2008, US emerging as the top arms supplier to India by overtaking Russia and India-US Foundational agreements such LEMOA, COMCASA, BECA.
- Due to these developments, Russia changed their decades-old policy and start supplying China with weapon systems like Sukhoi 35 and the S-400 missile defence system.

2. Russia's growing dependence on China- Moscow and Beijing have forged the closest possible ties in their history. This has generated fears that Russia will become a subordinate partner given the growing economic, demographic and technological asymmetry between them. This could jeopardize Moscow's neutrality on Sino-Indian tensions.

3. Russia's increased engagement with Pakistan- Russia has been increasing its economic and defence cooperation with Pakistan, like conduction of bilateral exercise Friendship. The RCP axis (Russia, China, Pakistan) will be detrimental to India's national interest.

4. Trade Imbalances- Even though the bilateral trade between the two nations has increased in the face of crude oil imports, there is considerable trade imbalances between India and Russia. Of the total trade of \$65 billion, India's exports constitute less than \$5 billion.

5. Defense Delays- There have been considerable delays in the delivery of military spares and big-ticket weapon systems like the S-400 Triumf surface-to-air missile systems, to India due to the Ukraine War.

6. Ukraine Crisis- The continuing Russia-Ukraine war has put India into a diplomatic tightspot. India has been facing significant criticism for not condemning the invasion and continuing energy and economic cooperation with Moscow.

What Should be the Way Forward?

1. Neutral Player in the resolution of Ukraine Crisis- India must continue to maintain its positioning as a neutral player that could be a mediator between the two sides in the resolution of the Ukraine Crisis. India must continue to appeal to both sides to 'abide by the international rules and conventions'.

2. Addressing defense supply chain shocks- India and Russia must explore setting up joint venture partnerships to address the shortage of critical defense spare parts.

3. More diplomatic and financial investments- India and Russia must invest more diplomatic and financial resources to finish the pending works for the International North-South Transport Corridor. Both sides should expedite discussions on the Free Trade Agreement with the Eurasian Union for better trade and commerce.

4. Enhanced focus on Eurasia- India and Russia have to explore their opportunities in the Eurasian region. India can study the possibility of expanding Russia's idea of 'extensive Eurasian partnership' involving the EAEU(Eurasian Economic Union) and China, India, Pakistan, and Iran.

5. Unequivocal message to the Western countries- India must send unequivocal message to the West that Russia occupies a pivotal place in India's strategic calculations. It must be conveyed that the West needs India just as much as India needs the West.

Conclusion

India–Russia ties today rest on a legacy of strategic trust, new economic and connectivity initiatives, and sensitive defence and nuclear cooperation. At the same time, US pressure, Russia’s China tilt, the Ukraine war and trade imbalances create real constraints. India must use careful balancing and Programme 2030 to safeguard interests and strategic autonomy amid shifting global geopolitics.

Question for practice:

Discuss how recent geopolitical shifts and the outcomes of the 23rd India–Russia Annual Summit are reshaping the strategic partnership between India and Russia.

Source: [Indian Express](#), [DD News](#)

A black Friday for aviation safety in India

Source: The post “A black Friday for aviation safety in India” has been created, based on “A black Friday for aviation safety in India” published in “The Hindu” on 08th December 2025.

UPSC Syllabus: GS Paper-3- Economy

Context: The suspension of the DGCA’s revised Flight Duty Time Limitations (FDTL) on December 5, 2025, in order to address Indigo’s flight disruptions, highlights a systemic failure to prioritise aviation safety in India. This demonstrated how commercial and operational pressures continue to override essential safety regulations.

Dilution of Flight Safety Norms

1. The DGCA's 2007 Civil Aviation Requirement (CAR) on fatigue management was formulated as a strong safety measure, but it was repeatedly suspended due to pressure from airline owners.
2. The Ministry’s intervention in 2008 and again in 2025 shows that safety regulations are often diluted to address commercial concerns rather than operational realities.
3. Despite being aware for over a year that the new FDTL norms would take effect from November 1, 2025, both Indigo and the DGCA failed to prepare adequately, resulting in widespread disruptions and subsequent rollback of safety norms.

Commercial Interests Overriding Safety

1. The public statement by the Aviation Minister indicated that operational stability was being prioritised over essential fatigue management norms for pilots.
2. Indigo’s decision not to hire sufficient crew, despite knowing the upcoming requirements, reflects a deliberate focus on commercial savings at the cost of safety margins.
3. The dilution of FDTL directly increases the risk of fatigue-related errors, indicating that passenger safety is being compromised to maintain schedules and profitability.

Regulatory Apathy and Structural Weakness

1. The DGCA’s CAR Series C Part II (2022), which mandates only three sets of crew per aircraft, provides airlines with an opportunity to understaff operations while remaining formally compliant.

2. Safe domestic operations require at least six sets of pilots per aircraft, and long-haul operations require at least 12 sets, indicating that existing regulations are inadequate to ensure safety.
3. The DGCA has consistently demonstrated weak enforcement capacity and often acts according to ministerial directives rather than safety imperatives.
4. Judicial inconsistency—such as the Bombay High Court first criticizing and later upholding the dilution of safety norms—further weakens the aviation regulatory framework.

Challenges in India's Aviation Safety Framework

1. **Regulatory Challenges:** India faces regulatory capture because the DGCA functions under direct ministerial control, which compromises its autonomy and ability to enforce safety norms.
 - a. Airlines frequently operate with inadequate pilot and cabin crew strength, leading to chronic fatigue and degraded safety performance.
2. **Institutional Challenges:** India lacks a strong safety culture because operational pressures consistently take precedence over compliance with safety protocols.
 - a. Transparency is compromised when accident investigation reports, such as the AI 171 Ahmedabad report, are delayed, thereby preventing timely corrective action.
 - b. Legal oversight is weakened due to the absence of dedicated aviation expertise within the judiciary.
3. **International Compliance Challenges:** ICAO's recommendation for an independent civil aviation authority, made in 2006, has still not been implemented, indicating a long-standing gap in aligning with global best practices.

Implications for Aviation Safety

1. The dilution of fatigue management norms increases the likelihood of pilot error and raises the risk of major aviation accidents.
2. India risks damaging its international reputation as a safe aviation market, which could affect global partnerships and operational approvals.
3. Passenger confidence may decline due to frequent disruptions and perceptions of unsafe regulatory practices.
4. The long-term sustainability of India's rapidly expanding aviation sector is jeopardised if safety continues to be compromised.

Way Forward

1. **Strengthening Regulation:** India must establish an independent civil aviation safety authority that functions autonomously from the Ministry to ensure unbiased and safety-centric decision-making. The DGCA should reinstate and strictly enforce the revised FDTL norms, ensuring that fatigue management becomes non-negotiable.
2. **Improving Staffing and Operational Standards:** The regulations on minimum crew strength should be revised to mandate at least six sets of pilots for domestic operations and twelve sets for long-haul operations. Airlines must be required to conduct periodic fatigue risk assessments and demonstrate compliance through transparent operational audits.
3. **Enhancing Safety Culture:** A strong safety culture must be built by encouraging pilots and crew to report fatigue without fear of retribution. Regular training on fatigue risk management should be made mandatory for both operational and managerial personnel.

4. **Enhancing Accountability and Transparency:** Accident investigation reports must be published in a timely, transparent manner to enable the adoption of safety lessons. Penalties for non-compliance with safety norms should be strengthened to ensure that airlines cannot treat violations as mere operational costs.
5. **Strengthening Judicial and Oversight Mechanisms:** The judiciary should consider establishing specialised aviation benches or advisory panels to ensure informed adjudication of aviation-related cases.

Conclusion: The events of December 5, 2025 underscore a deeper crisis in India's aviation safety ecosystem, wherein commercial interests, regulatory weakness and institutional complacency continue to undermine passenger safety. India must adopt a decisive, reform-oriented approach to restore credibility, strengthen safety oversight and ensure that aviation safety is treated as an uncompromising national priority.

Question: The suspension of the revised Flight Duty Time Limitations (FDTL) norms in December 2025 exposes deep structural flaws in India's aviation safety governance. Discuss the factors leading to this situation, the challenges it highlights, and suggest a way forward.

The evolution of pension reforms in India

Source: The post "The evolution of pension reforms in India" has been created, based on "The evolution of pension reforms in India" published in "The Hindu" on 08th December 2025.

UPSC Syllabus: GS Paper-3- Economy

Context: India is undergoing a rapid demographic shift, with the elderly population of 153 million in 2025 expected to reach 347 million by 2050, creating a major pension and social security challenge. Pension reforms in India have gradually transitioned from welfare-based support to contributory and inclusion-focused frameworks, especially targeting informal sector workers.

Evolution of Pension Reforms in India

A. Welfare-Based Social Assistance Phase

1. The Indira Gandhi National Old Age Pension Scheme (IGNOAPS), introduced in 1995, was designed to provide a direct, regular income to persons above 65 living below the poverty line.
2. This scheme expanded over time, becoming the first nationwide financial support mechanism for elderly individuals in the unorganised sector.
3. The Old Pension Scheme (OPS) covered government employees by offering defined benefits, although it later became fiscally unsustainable.

B. Contributory and Financial Inclusion Phase

1. The New Pension Scheme (NPS), launched in 2004, replaced OPS and introduced a market-linked, contributory model for formal sector employees.
2. The corporate NPS model extended pension coverage to private sector workers by allowing them to open voluntary pension accounts.
3. The Atal Pension Yojana (APY), introduced in 2015-16, offered informal sector workers a contributory pension plan with flexible payment intervals to account for seasonal income fluctuations.

4. APY ensured a guaranteed minimum pension if investment returns fell short, encouraging formal savings behaviour among low-income households.

C. Recent Pension Innovations

1. The NPS 2.0 reform allowed subscribers to invest up to 100% in equity and introduced a flexible Multi-Scheme Framework, making it attractive for younger and higher-risk investors.
2. The new Labour Codes introduced a uniform definition of wages, ensuring that basic pay constitutes at least 50% of total salary, which increases pension and gratuity contributions and enhances long-term financial security for workers.

Inclusion Measures for Informal Sector Workers

1. The government launched the e-SHRAM portal to create a national database of informal sector workers and provide them with information about pension and social security schemes.
2. The Longitudinal Ageing Survey of India shows that 42% of people over 55 remain unaware of NPS eligibility criteria, which highlights the need for greater awareness.
3. The digital divide continues to pose challenges because 63% of elderly citizens do not know how to use the Internet, limiting their ability to register for schemes on their own.
4. Registration requirements such as Aadhaar-mobile linkage and bank accounts also create risks of exclusion for vulnerable groups.

Analytical Perspective

1. Pension reforms have progressed in a hierarchical manner, with each stage addressing gaps identified in earlier approaches to elderly welfare.
2. The early focus on welfare through IGNOAPS and OPS was followed by the introduction of savings-driven schemes such as NPS and APY, which aimed to strengthen financial inclusion.
3. Recent reforms, including e-SHRAM and NPS 2.0, show a shift towards a data-driven, participatory system that integrates informal workers into formal financial structures.

Key Challenges in India's Pension Framework

1. India continues to face low awareness about pension schemes among informal-sector and rural populations, which prevents eligible elderly individuals from enrolling.
2. The predominance of informal employment, where workers have irregular incomes, makes it difficult for them to commit to consistent contributions under schemes like APY.
3. Digital barriers and weak financial literacy hinder effective utilisation of technology-driven platforms such as e-SHRAM and NPS online services.
4. Administrative challenges such as errors in Aadhaar linkage, banking access, and verification processes create delays and exclusion from benefits.
5. Fragmented implementation across States leads to uneven coverage and inconsistent pension disbursements.
6. The guaranteed pension amounts under some schemes remain low relative to rising living costs, which reduces the adequacy of social protection.

Way Forward

1. The government should strengthen awareness campaigns through community workers, local bodies, and financial literacy programmes to ensure that all eligible groups understand pension schemes.
2. Pension contributions for informal-sector workers can be made more flexible by allowing micro-contributions and government co-contribution for the poorest households.
3. Digital infrastructure must be enhanced by providing assisted digital services at CSCs, panchayat offices, and post offices to overcome digital illiteracy barriers.
4. The e-SHRAM platform should be integrated with NPS and APY to create seamless enrolment, automatic eligibility verification, and timely benefit delivery.
5. Pension adequacy needs improvement through periodic revisions of benefit amounts based on inflation and elderly care costs.
6. Stronger monitoring mechanisms and grievance redressal systems should be instituted to prevent exclusion errors and ensure transparent disbursement.

Conclusion

The evolution of India's pension system marks a decisive movement from state-supported welfare schemes towards contributory and inclusion-based financial security models. Despite challenges such as limited awareness and digital exclusion, ongoing reforms offer a strong foundation for improving the dignity and economic security of India's rapidly growing elderly population. Ensuring widespread awareness, digital support, and effective last-mile delivery will be essential for achieving a universal and robust pension system.

Question: "The evolution of pension reforms in India reflects a shift from welfare-based social assistance towards a participatory financial inclusion framework." Discuss.

Why the Rupee Has a Capital Account Problem

Introduction

India's rupee is under pressure mainly because the capital account has weakened even though the current account deficit remains manageable. Merchandise trade deficits have widened, but rising invisibles have prevented a sharp external imbalance. The real stress today comes from declining foreign investment, persistent portfolio outflows, a strong global dollar, delayed trade decisions, high import demand, and reduced RBI intervention. These forces have lowered capital inflows, raised dollar demand, and pushed the rupee into a prolonged depreciation cycle.

What Is the Capital Account?

The capital account records cross-border money flows for **investment and financial purposes**. It covers foreign investment, external loans, banking capital, and changes in foreign assets and liabilities.

A capital account problem means these inflows are unstable, too small, or very volatile, making the economy dependent on uncertain foreign money.

Role in Financing and the Rupee: Capital inflows help finance the current account deficit and can add to foreign exchange reserves when they exceed this gap. When inflows are strong and steady, the supply of foreign currency rises, which supports the rupee.

Sensitivity to Global and Domestic Conditions: These flows react quickly to global interest rates, risk appetite, geopolitics, and domestic signals. Even high GDP growth cannot prevent outflows if investor sentiment turns cautious.

Why Does India Have a Capital Account Problem?

1. Steep Fall in Net Capital Inflows: Net capital inflows have dropped to **\$18 billion in 2024–25**, the lowest in sixteen years and below the **\$23.1-billion CAD**, creating a clear financing gap. When inflows fail to match the CAD, dollar demand exceeds supply, putting direct pressure on the rupee.

2. Sharp Decline in Foreign Investment

- Foreign investment has weakened sharply. Net inflows fell from **\$54.2 billion (2023–24)** to **\$4.5 billion (2024–25)** and further to **\$3.6 billion** in the first half of 2025–26.
- FDI also collapsed from **\$44 billion in 2020–21** to just **\$959 million in 2024–25**.
- Persistent FPI outflows across 2024–25 and 2025–26 have amplified this decline, reducing capital availability and weakening the currency.

3. Global Dollar Cycle and Risk Aversion: Higher US interest rates and geopolitical uncertainty have strengthened the dollar, pulling funds toward safe-haven assets. This global shift reduces flows to emerging markets, including India, leading to higher dollar demand despite strong domestic GDP growth.

4. Uncertainty Around the India-US Trade Deal: Repeated delays in the proposed trade agreement have created doubts about tariff outcomes. This uncertainty discourages foreign investors and adds to the weakness in capital inflows, intensifying pressure on the rupee.

What Is the Current Account Deficit?

The current account shows all economic transactions between a country and the rest of the world related to **trade, services, income, and transfers**.

In the **Balance of Payments**, the current account has two main parts: **merchandise trade (goods)** and **invisibles**, which include services, remittances, interest, dividends, and transfers.

A Current Account Deficit (CAD) occurs when **payments abroad exceed receipts**.

A persistent CAD means the country must rely on **foreign capital inflows or external borrowing** to meet this gap.

Why Does India Face a Persistent CAD?

1. Widening Goods Trade Deficit

- The goods trade deficit increased from **\$91.5 billion (2007–08)** to **\$286.9 billion (2024–25)**. The current fiscal may cross **\$300 billion**, as seen from April–September trends.

- The deficit widens because India imports large volumes of energy, electronics, and machinery, which increases dollar demand and contributes to CAD persistence.

2. Rising Import Demand During High Growth

- High growth increases demand for fuel, electronics, metals, and machinery. Elevated global metal and bullion prices raise the import bill further.
- This combination drives continuous outflows of foreign currency, tightening external balances and complicating rupee stability.

3. Invisibles Surpluses Offset but Do Not Eliminate Pressure

- Invisibles surpluses rose from **\$75.7 billion (2007–08)** to **\$263.9 billion (2024–25)** and may cross **\$280 billion** this year.
- These surpluses reduce CAD severity but cannot neutralise surges in goods imports. They prevent crisis-level CAD but do not fully shield the rupee when capital inflows weaken.

4. Structural nature of the CAD: India has recorded current account surpluses in only four years in more than two decades. Most fiscal years show deficits because imports of goods, services and payments exceed corresponding receipts. This long pattern shows that the CAD is structural and not limited to temporary economic shocks.

5. Limited relief from temporary improvements: Periods of narrower deficits, such as 2016-17 or 2020-21, did not result in a lasting change. The strong rebound in imports during recovery phases pushed the deficit back to high levels. This cyclical pattern reinforces the wider structural challenge in goods trade.

6. Role of external transfers and payments: India continues to make payments in interest, dividends, and royalty to foreign investors and lenders. These outflows place pressure on the current account, even though they are smaller than receipts from remittances and services. Spending by Indian students abroad also adds to this burden.

Why Is the Rupee Under Pressure?

1. Heavy Capital Outflows and Weak Inflows: Foreign portfolio investors sold **₹1.52 lakh crore** worth of equities in 2025 (up to December 3). This follows a year of weak inflows in 2024. FPI withdrawals reduce rupee demand and raise dollar demand, directly weakening the currency.

2. Dollar Strength and Safe-Haven Movements: A strong dollar cycle, driven by shifting expectations of US rate cuts and elevated geopolitical risks, weakens emerging-market currencies. India's rupee has depreciated from **84.73 to 90** against the dollar in one year, with similar declines against the euro, pound, yen, and yuan.

3. Trade Deficit Shock and CAD Repricing: In October, India recorded a **trade deficit of \$41 billion**, the highest ever for a single month. Before this, most economists thought the **CAD would be around 0.7% of GDP**. After seeing the October data, they **raised their CAD estimate to 1.2–1.4% of GDP**. Markets were not prepared for this jump, so the news **hurt rupee sentiment and made its fall faster**.

4. Reduced RBI Intervention and Tariff Link: RBI intervention has slowed. It sold **\$36.7 billion** during June–December 2024 but only **\$20 billion** during January–September 2025. Analysts suggest the RBI may be allowing gradual depreciation as a defensive response to the **50% US tariff** on Indian exports. This approach helps preserve reserves while smoothing volatility.

5. High US Tariffs and Export Concerns: India faces a **50% tariff** on goods sold to the US, far higher than China (30%), Vietnam (20%), Indonesia (19%), and Japan (15%). About **\$45 billion** of exports are affected. This hurts competitiveness, reduces expected inflows, and worsens rupee sentiment.

6. Structural Vulnerabilities and Import Dependence: India depends heavily on imported energy, electronics, gold, and intermediate goods. High import dependence increases dollar demand regardless of global conditions. This structural feature amplifies rupee pressures when capital inflows slow.

Conclusion

India's rupee weakness is driven mainly by a capital account slowdown rather than an overstretched current account. Declining foreign investment, large portfolio outflows, tariff uncertainty, dollar strength, and high import dependence have combined to weaken the currency. Strengthening capital flows, improving export competitiveness, and reducing structural vulnerabilities are essential to restore external balance and build long-term rupee resilience.

Question for practice

Examine why the rupee is facing pressure despite a manageable current account deficit.

Source: [Indian Express](#)

Surveillance apps in welfare, snake oil for accountability

UPSC Syllabus Topic: GS Paper 3 -e-Governance

Introduction

Digital tools are increasingly used in welfare programmes to monitor attendance, prevent fraud, and enforce discipline. They promise quick fixes to long-standing problems such as absenteeism, corruption, and weak accountability. Yet their growing use has shifted attention from real work to digital compliance. Many tools create new forms of exclusion, burden, and manipulation. This raises serious questions about whether surveillance-based systems truly strengthen welfare delivery or simply offer an illusion of accountability.

Why Did Digital Tools Become Popular for Accountability?

1. Perception of Digital Solutions as a Quick Fix: Digital systems were seen as a simple way to address absenteeism, delays, and corruption among government employees.

2. Shift in Focus From Work Quality to Compliance: Digital tools redirected attention from actual work to meeting the tool's requirements. Their priority became marking attendance, not completing meaningful tasks. **This shows that digital popularity grew because it provided a measurable but misleading sense of control**, even though it did not ensure better work.

3. Reasons Governments Linked Technology to Accountability: Tools appeared easy to implement and offered quick numbers and dashboards. These created an illusion of control, even though the real problems—poor work culture and social norms—remained untouched.

4. Absence of Parallel Efforts on Motivation: There was little attempt to build responsible behaviour or intrinsic motivation among workers. The emphasis remained on forcing compliance through devices.

What Has Been the Real Impact?

1. Fraud Continued Through New Digital Tricks: Digital tools did not stop manipulation. Fake attendance did not disappear; it only changed form. People uploaded random or recycled photographs to satisfy app requirements. **Fraud shifted from signatures to photos**, showing that digital checks could be easily bypassed.

2. Exclusion of People: Biometric and app-based systems excluded many genuine beneficiaries. Elderly people, persons with disabilities, or workers with poor connectivity faced denial of entitlements because they could not authenticate themselves or upload required photos. **Those who needed support the most were pushed out of the system.**

3. Extra Burden and Stress on Frontline Workers: Workers spent significant time dealing with app errors, low bandwidth, and geo-tagging demands. Their actual work became secondary to uploading proof. Some even received warnings when apps flagged technical mismatches. **This discouraged sincere workers and increased frustration.**

4. Weak Link Between Monitoring and Real Work Quality: Digital tools forced presence but not performance. Being photographed or marked as “present” did not ensure useful work. In some studies, even attendance fell over time after biometric systems were introduced. **Compliance improved on paper, not in practice.**

5. Reduction of Professional Autonomy and Trust: Surveillance-focused apps treated workers as potential defaulters. This constant monitoring weakened trust, limited autonomy, and reduced workers’ ability to respond to real field conditions. **Accountability rules overshadowed meaningful engagement and public service motivation.**

6. Rise of New Inefficiencies and Corruption Pathways: Digital systems created slow service delivery, long queues, and new forms of corruption—such as claiming “biometric failure” to hide under-provision. They also raised privacy concerns, especially when sensitive photographs were uploaded. **Technology introduced fresh problems instead of solving old ones.**

Way Forward

1. Move from control to responsibility: Accountability tools can force basic compliance, but they cannot create care for the public. Systems should encourage workers’ own sense of duty.

2. Stop treating technology as a magic cure: Digital tools are treated like a quick, neat solution to deep problems. This obsession hides issues of work culture, norms, and support. Technology should be used carefully and in a limited way. It should assist workers, not dominate welfare delivery or define what good work means.

3. Support and learn from sincere workers: Many nurses, teachers, and field staff already work well in difficult conditions. Reforms should ask what helps them, not just how to watch them.

4. Review digital systems honestly: When misuse, exclusion, or errors appear, governments should pause, study the damage, and change design or roll back tools instead of adding more layers.

5. Protect people from harm and vested interests: Surveillance tools have caused denial of benefits, delays, new corruption, and privacy risks. Reforms must reduce these harms and avoid punishing honest workers for technical failures.

6. Check Vested Interests and Manufactured Ignorance: The expansion of surveillance apps creates large markets for devices, servers, data, and authentication services. Tech companies benefit when governments ignore the harms of these systems. Decision-makers must resist such capture, question who gains from these tools, and stop cultivating ignorance about their negative effects.

Conclusion

Surveillance apps promise cleaner welfare systems but often deliver exclusion, new corruption, and demotivation. They record compliance without improving real work or public outcomes. Digital control cannot replace responsibility, trust, or supportive work environments. A better path requires honest review of failures, respect for frontline workers, and caution against vested interests. Without these shifts, technology will remain a superficial fix—*snake oil* for accountability.

Question for practice:

Discuss how the growing use of surveillance-based digital tools in welfare programmes affects accountability, exclusion, and the motivation of frontline workers.

Source: [The Hindu](#)

A New Step in the Dragon–Elephant Tango

UPSC Syllabus Topic: GS Paper 2 -International relations

Introduction

China and India are moving through important phases in their national development. China has approved the proposal for its 15th Five-Year Plan, which will guide its progress from 2026 to 2030. India is moving towards its Viksit Bharat 2047 goal. Both place development at the centre of their national vision. Their choices now influence regional stability, trade, technology, and global economic trends. These shifts open new possibilities for cooperation between the two neighbours.

China's Development Foundation

1. Centralised Leadership: China follows the unified leadership of the Communist Party of China (CPC). This leadership ensures policy stability and long-term planning. It links national goals with social and economic priorities.

2. Long-Term Planning Culture: China uses a planning system that builds change step by step. The approach of “drawing a blueprint until it becomes a reality” supports steady transformation across decades.

3. Domestic Adjustments: China now faces population changes, property-sector correction, and lower gains from large infrastructure investment. These changes demand new engines of growth.

4. Global Uncertainty: China sees more global volatility. Strategic risks and opportunities now exist together. This environment increases the need for stronger economic stability.

5. Technology Competition: Technology is now a major area of global rivalry. China aims to reduce vulnerabilities and strengthen innovation self-reliance. This shapes its development path.

6. Market-State Coordination: China blends market forces with state guidance. Top-level design and public consultation support broad participation and smooth implementation of reforms.

China's Progress in the 14th Five-Year Plan

1. Stable Growth: China grew at an average rate of 5.5% during 2021–25. Its economy is expected to reach Renminbi (RMB) 140 trillion this year.

2. Higher Per Capita Income: Per capita income has remained above \$13,000 for two years. China now stands among upper-middle-income countries.

3. Innovation Strength: China ranks among the top ten in the Global Innovation Index. Its research base and technology capacity have expanded.

4. Green Energy Shift: About 60% of China's installed power capacity now comes from renewable energy. Environmental quality has shown steady improvement.

5. Global Economic Role: China contributes about 30% to global economic growth. It is among the top three trading partners for 157 countries and regions.

6. Linked Domestic and External Growth: China has strengthened the connection between domestic upgrading and high-level opening up. This supports stable engagement with global partners.

The 15th Five-Year Plan: China's New Direction

1. Focus on Industrial Modernisation: The new plan places industrial modernisation first. It prioritises advanced manufacturing, semiconductors, aerospace, and next-generation information technology.

2. Innovation with Application: The plan shifts from early-stage breakthroughs to wide application. The goal is to turn research into products, services, and strong industrial ecosystems.

3. Selective Opening Up: China will promote high-standard opening up, but in a more targeted way. Cooperation will deepen in specific regions and sectors linked to long-term stability.

4. Stronger Domestic Demand: The plan links consumption with structural change. Policies on childcare, employment, education, and welfare support productivity and long-term growth.

5. Cluster-Based Regional Strategy: Greater attention will go to major regions such as the Yangtze River Delta and the Greater Bay Area. Inland regions will focus on work that enhances resilience and security.

6. Shift Toward Structural Resilience: The plan focuses less on high-speed expansion and more on stable, high-quality growth. It prepares China for a more complex global environment.

Global Impacts of China's New Path

1. Technology Landscape Changes: China's push in AI, aerospace, new energy, and advanced manufacturing will influence global technology networks. These areas may see new competition and cooperation.

2. Supply Chain Reorganisation: China's focus on resilience will shape supply-chain design. Trade may become more targeted as countries reassess interdependence.

3. Shift in Investment Patterns: High-quality growth emphasises advanced industries. Global investment may move toward sectors linked to China's industrial upgrading.

4. Stronger Role of China's Consumer Market: China's domestic market will continue to expand. Global consumer-facing firms will adjust their strategies to stay relevant in this space.

India-Specific Impacts

1. Expanding Trade Scope: China remains one of India's major trading partners. Bilateral trade reached \$138.46 billion in 2024. India's exports to China have grown, supported by multiple trade platforms.

2. Industrial Complementarity: China leads in manufacturing, electronics, new energy, and AI. India is strong in IT, software, and biopharma. These strengths complement each other and create scope for joint value-chain growth.

3. Revived Mobility: People-to-people exchanges are improving. China has resumed Indian pilgrimages, and India has restored tourist visas for Chinese citizens. More direct flights support tourism, education, and cultural exchange.

4. Shared Multilateral Role: Both countries engage through BRICS, SCO, and G20. They work together on climate change, food security, and public health. This cooperation supports a more balanced global order.

5. Aligned Development Visions: China's modernisation and India's Viksit Bharat 2047 vision share common goals. Both aim for technological progress, economic stability, and social improvement. This creates a natural basis for cooperation.

6. Deeper Economic Opportunities: As China strengthens high-quality development, opportunities open for India in services, technology, and niche manufacturing. Both sides can use these areas to build steady cooperation.

Conclusion

China's new development strategy focuses on resilience, innovation, and stable growth in a world marked by rising uncertainty. India is advancing its Viksit Bharat 2047 vision with similar goals of modernization and

long-term stability. Both countries can deepen cooperation in trade, technology, climate action, and multilateral platforms to support balanced regional growth. Their choices will shape supply chains, technology flows, and economic networks, influencing development across Asia and the wider global landscape.

Source: [The Hindu](#)

Carceral culture: On prisons and disability-related facilities

Source: The post “Carceral culture: On prisons and disability-related facilities” has been created, based on “Carceral culture: On prisons and disability-related facilities” published in “The Hindu” on 09th December 2025.

UPSC Syllabus: GS Paper-2- Governance

Context: Prisoners with disabilities in India face significant challenges in terms of **accessibility, healthcare, and dignity**. Despite the legal framework provided by the **Rights of Persons with Disabilities Act, 2016**, prisons have largely failed to ensure the necessary accommodations for disabled prisoners. The **Supreme Court of India** has recently addressed this issue, directing the implementation of disability-related support in prisons. The Court’s directions arose from the experiences of prisoners like **G.N. Saibaba** and **Stan Swamy**, who were denied reasonable accommodations leading to severe consequences.

Challenges Faced by Prisoners with Disabilities

1. Lack of Accessible Infrastructure

- Many prisons lack **wheelchair-accessible ramps, disability-friendly toilets**, and other basic accommodations for prisoners with mobility challenges.
- **Inaccessible healthcare and medical support** further exacerbate their conditions, particularly for those with chronic physical and mental illnesses.

2. Inadequate Training for Prison Staff

- **Prison staff** are often not trained to recognize or address the needs of prisoners with disabilities. This leads to **neglect or mistreatment** of disabled inmates.
- Staff may not be aware of how to assist prisoners in daily activities, such as accessing sanitary facilities or moving within the prison.

3. Carceral Austerity

- Prisons often prioritize **security and punitive measures** over the **rights and well-being** of prisoners, including those with disabilities.
- **Underfunding** of necessary services for disabled prisoners results in the neglect of **basic accommodations and medical care**.

4. Caste, Disability, and Discrimination

- **Caste-based segregation** continues to exist in Indian prisons, with **Dalit and Adivasi prisoners** often assigned degrading sanitation tasks. Disabled prisoners from these communities face compounded **discrimination**.
- The **intersectionality** of caste and disability is often ignored, resulting in a double burden on marginalized prisoners.

5. Absence of Data and Monitoring

- The absence of **disaggregated data** on prisoners with disabilities and their condition hinders effective policy formulation and monitoring of conditions inside prisons.

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- The **National Crime Records Bureau (NCRB)** does not consistently track **disability** data, making it difficult to assess the scale of the issue and create targeted solutions.

Role of the Judiciary

1. Judicial Interventions

- The **Supreme Court** has played a pivotal role in highlighting the issues faced by prisoners with disabilities. In response to petitions related to the conditions of prisoners like **G.N. Saibaba** and **Stan Swamy**, the Court directed the government to implement disability-related support.
 - The Court has also **censured prison authorities** for failing to comply with the **Rights of Persons with Disabilities Act, 2016** and called for specific provisions for disabled prisoners in prison manuals.
2. **Monitoring and Oversight:** The Court has taken **suo motu cognizance** of issues like **caste-based discrimination** and **disability discrimination** in prisons and has set directions to monitor such violations, which must be implemented by state authorities.

Role of Government Policies

1. Rights of Persons with Disabilities Act, 2016

- The **Rights of Persons with Disabilities Act** mandates that governments ensure that disabled individuals receive necessary accommodations in all public services, including prisons.
- This law has made it a legal obligation for governments to provide support services to disabled prisoners, including accessible infrastructure and medical care.

2. National Guidelines and Model Prison Manual

- The Union government has issued **national guidelines** that acknowledge the special needs of disabled prisoners, calling for accessible infrastructure and support systems.
- However, many **state prison manuals** still fail to reflect these needs and often lack provisions for accommodating prisoners with disabilities.

Prison Reforms for Disability Accommodation

1. Amendment of Prison Manuals

- Prison manuals must be **amended** to include clear **duties on disability-related accommodations**. This includes providing accessible infrastructure, medical support, and assistance for mobility-challenged prisoners.
- State and national authorities need to ensure that prison systems comply with the mandates of the **Rights of Persons with Disabilities Act**.

2. Comprehensive Screening and Support

- Prisons must establish **screening mechanisms** for identifying disabilities upon a prisoner's admission.

- **Necessary support** such as **medical care**, **assistive devices**, and **personal assistance** should be provided to prisoners with disabilities to ensure their dignity and equality.
3. **Increased Funding and Budget Reallocation**
- **Prison budgets** should be redesigned to prioritize **accessibility** and **non-discrimination**, ensuring that the basic needs of disabled prisoners are met.
 - States must allocate **adequate resources** for the development of disability-friendly facilities, including infrastructure and medical support.
4. **Independent Oversight and Data Collection**
- **Independent inspections** by external bodies should be conducted regularly to ensure the implementation of disability-related accommodations.
 - The government should **disaggregate data** on prisoners by disability, caste, and gender to ensure transparency and monitor violations effectively.
5. **Public Awareness and Accountability**
- Raising **public awareness** about the **rights of disabled prisoners** is crucial for promoting accountability and transparency in prison management.
 - Regular reports on **prison conditions** should be made publicly available to encourage **public oversight** and pressure the government to comply with judicial orders.

Conclusion: The challenges faced by prisoners with disabilities in India's prison system highlight the urgent need for structural reforms. The **Supreme Court's directives** provide a clear path forward, but they must be backed by **effective implementation** of policies, **adequate funding**, and **strong oversight mechanisms**. By ensuring the **rights** of disabled prisoners, India can create a **prison system** that upholds **equality, dignity**, and **justice** for all individuals, regardless of their physical or mental condition.

Questions: Critically examine the challenges faced by prisoners with disabilities in India's prison system and suggest measures for improving their conditions.

Circular Economy in Dairy Sector

Source: The post "Circular Economy in Dairy Sector" has been created, based on "Circular economy to boost dairy farmers' income by 20% in 5 years: Amit Shah" published in "The Hindu" on 09th December 2025.

UPSC Syllabus: GS Paper-3- Indian Economy

Context: The **circular economy** model focuses on maximizing the reuse of resources and minimizing waste. In the dairy sector, it involves innovative approaches such as converting **cattle dung** into **biogas** and **bio-fertilizers**, as well as producing **leather** from hides of cattle that die naturally. Recently, Union Home Minister Amit Shah expressed confidence that the implementation of this model will increase dairy farmers' income by **20%** over the next five years. This initiative is a part of broader efforts to strengthen India's dairy sector under the **White Revolution 2.0**.

Key Aspects of the Circular Economy in the Dairy Sector

1. **Cattle Dung to Biogas and Bio-fertilizers:** Cattle dung, a waste product in dairy farming, can be converted into **biogas** and **bio-fertilizers**. This reduces dependency on chemical fertilizers and promotes **sustainable farming practices**. By selling the biogas and bio-fertilizer, farmers can **earn additional income**, thereby increasing their overall earnings.

2. **Leather Production from Natural Death Cattle:** Another facet of the circular economy involves **producing leather** from cattle that die a natural death. This prevents the waste of hides and creates an opportunity for **value-added products**, offering farmers an alternative source of income.
3. **Global Market Potential:** The dairy sector can expand its product range beyond **traditional items** like milk, curd, and paneer. By focusing on **specialty dairy products**, the sector can tap into **global markets**, further increasing farmers' incomes.

Government Initiatives to Promote Circular Economy in Dairy

1. **Support for Dairy Cooperatives**
 - The government has worked to strengthen **cooperative dairies** across India, focusing on increasing the income of dairy farmers by providing better facilities and access to markets.
 - **Banas Dairy** in Gujarat is an example of how the circular economy model has been implemented successfully, with income generated from biogas and fertilizers being shared with the farmers.
 - The **Prime Minister's initiative**, under **White Revolution 2.0**, aims to ensure **finance and technology** for the adoption of circular economy practices in the dairy sector.
2. **Women Empowerment in the Dairy Sector**
 - The contribution of **women dairy farmers** has been recognized, particularly in regions like Gujarat, where women have played a key role in the sector's growth.
 - Women dairy farmers have been central to creating **direct bank account systems** for income distribution, thereby ensuring financial inclusion and empowerment.
3. **White Revolution 2.0**
 - The **White Revolution 2.0** focuses on increasing dairy production, improving the quality of dairy products, and ensuring better income for farmers.
 - By supporting **cooperatives** and the adoption of **new technologies**, the government aims to increase **milk production** and **farmers' earnings**.

Impact on Dairy Farmers' Income

1. **Additional Revenue Streams**
 - The **circular economy** model provides farmers with **additional income** streams through the sale of **biogas**, **bio-fertilizers**, and **leather products**.
 - By making use of waste materials such as cattle dung, farmers can diversify their income sources, reducing their reliance solely on milk production.
2. **Sustainability and Cost Reduction**
 - The shift to biogas as an energy source can **reduce energy costs** for dairy farms, while **bio-fertilizers** can help in reducing the need for costly chemical fertilizers, leading to better cost management.
 - The circular economy promotes a more **sustainable** and **resilient farming model**, making the sector more **future-proof**.
3. **Boosting the Local Economy:** By adopting **global best practices** in dairy production, Indian dairy farmers can tap into **international markets** for value-added products, which will further elevate their earnings.

Challenges and Considerations

1. Infrastructure and Investment

- Implementing the circular economy model requires significant **investment** in infrastructure, such as **biogas plants, fertilizer production units, and leather production facilities**.
- The initial investment required may be a barrier for small-scale farmers, and support from both the government and private sector is essential.

2. Training and Awareness

- Farmers need to be **trained** in the technologies and processes involved in the circular economy model, such as biogas production and the use of bio-fertilizers.
- There needs to be **awareness** about the potential financial benefits, which can be facilitated through government outreach programs.

3. Market Access for Leather and Other Products

- The circular economy model's success in generating leather products from cattle that die naturally depends on **market access** and demand for such products.
- Establishing **market linkages** for leather and other value-added products is critical for ensuring farmers' financial success.

Conclusion: The **circular economy** model offers a significant opportunity to increase dairy farmers' income in India by providing them with additional revenue sources beyond traditional dairy products. The **government initiatives** under **White Revolution 2.0**, the promotion of **dairy cooperatives**, and the focus on **sustainability** are steps in the right direction. However, for successful implementation, **infrastructure development, training, and market access** must be prioritized, with continued support from both the government and the private sector.

Questions: Discuss the concept of the circular economy in the context of the dairy sector. How can its implementation improve the income of dairy farmers in India? Highlight the role of government initiatives, particularly the White Revolution 2.0, in promoting this model.

What Indians Eat, and How Being Unhealthy Is Easier and Cheaper

UPSC Syllabus Topic: GS Paper 3 -Indian economy- issues of buffer stocks and food security

Introduction

India has moved from famine to food surplus, yet nutrition security remains weak. People spend more on diverse foods, but diets still depend on low-quality carbohydrates. Processed food intake is rising fast because it is cheap, convenient, and widely available. These shifts are driving obesity, diabetes, and a growing disease burden. India now faces a mix of undernutrition, excess calorie intake, and micronutrient gaps, showing that abundance has not led to better health.

How Are Food Consumption Patterns Changing in India?

1. Shift Toward Higher Food Expenditure:

- Food spending has increased in real terms across households. People now spend more on dairy, eggs, meat, fruits, vegetables, and nuts.
- According to the **Household Consumption Expenditure Survey (HCES) 2022-23**, average spending on **animal-sourced foods has risen by about ₹40 since 1999**, and **spending on fruits and vegetables is now almost twice the 1999 level**. This shift shows a move toward greater dietary variety as incomes rise..
- **However, nutrition security has not improved in the same way**, because the quality of what people eat has not kept pace with higher spending.

2. Drop in Expenditure on Cereals but Higher Intake:

- Spending on cereals has fallen sharply since 1999, even though most Indians still eat large amounts of cereals.
- **The Indian Council of Medical Research (ICMR)-INDIAB study** shows that **62% of dietary energy comes from low-quality carbohydrates**, mainly refined cereals and sugar.

3. Large Inequalities in Food Expenditure: The top 5% of rural households spend almost eight times more on food than the bottom 5%. In urban areas, the difference is almost ten times. **Poor households remain locked into cereal-heavy diets**, while wealthier households seek more variety.

4. Urban Diet Diversification: Urban consumers are choosing better quality and more diverse foods. **Lifestyle changes and evolving food habits** have **increased demand for non-cereal foods**. Yet this **shift has not reduced consumption of refined cereals**, which continue to supply most dietary calories.

5. Cereal-Centric Policies: Policies such as the **National Food Security Act** encourage high cereal intake. This keeps cereals central to Indian diets even when people spend more on other foods.

6. Steep Rise in Spending on Processed Foods: Spending on processed foods has increased by **353% in rural areas** and **222% in urban areas** since 1999. Price elasticity dropped by **90%**, showing that processed foods have shifted from luxury to necessity.

Why Is Processed Food Consumption Increasing?

- 1. Convenience for Busy Households:** People prefer ready-to-eat meals because of long working hours and reduced time for home-cooked food. This shift is linked to changes in work-life balance and less availability of unpaid domestic labour by women, which earlier supported home cooking.
- 2. Lower Prices:** Ultra-processed foods are cheaper than nutritious fresh foods.
- 3. Aggressive Marketing and Easy Access:** Food companies market high-fat, sugar, and salt foods aggressively. These foods are promoted as enjoyable, modern, and affordable. Easy access through shops, supermarkets, and online platforms increases consumption.
- 4. Dependence Created by Food Systems:** The food environment makes unhealthy choices the simplest options. Fresh foods often cost more and are harder to access, especially in rural areas. **More than 75% of**

Indians cannot afford a diet meeting nutrient adequacy standards, increasing dependence on cheaper processed foods.

5. Cultural Preferences Supporting High-Carb Diets: Many cultural food habits reinforce high-carbohydrate diets. Even when incomes rise, people continue to depend on cereal-heavy meals, supplemented by processed snacks.

What Are the Consequences of These Dietary Shifts?

A. Impact on Health

1. Rise of Obesity and Metabolic Diseases: Low-quality carbohydrates supply most of the energy in Indian diets, and this is a major driver of obesity and metabolic problems. India is now part of a global rise in obesity, with the **World Obesity Atlas 2025** showing that **one in eight people worldwide lives with obesity**.

2. Growing Burden of Non-Communicable Diseases (NCDs): The **Global Burden of Disease 2023** shows that **poor diets are the largest contributor to years of life lost**. Diet-related NCDs are rising sharply, including cancer, Type-2 diabetes, and respiratory diseases. By 2050, cancer cases may rise by **148%**, Type-2 diabetes by **229%**, and respiratory diseases by **40%**.

3. Increase in Years of Life Lost (YLL):

- A study supported by the **Food Systems Economics Commission** for India projects a sharp rise in years of life lost due to poor diets.
- It estimates that YLL from diet-related risks in India will increase from **50 million in 2020 to 72 million by 2050**.

4. Triple Burden of Malnutrition: India faces **undernutrition, excess calorie intake, and hidden hunger**. **More than half of women are anaemic**, while **obesity among women has nearly doubled in 15 years**. Men show similar trends. This mix highlights severe imbalances in diet quality.

5. Weak Immunity and Lower Productivity: Poor diets weaken immunity and reduce overall well-being. People fall sick more often, which lowers productivity and limits their ability to work. **This creates a cycle where poor nutrition leads to lower incomes, which then reduces access to diverse foods.**

6. Low Diet Diversity Among Children: Fewer than one in ten children receive the Minimum Adequate Diet. Low diversity affects growth, immunity, and long-term health. It also increases the risk of future NCDs.

B. Impact on Economy

1. Higher Healthcare Costs: The rise in obesity, diabetes, and other NCDs directly increases healthcare spending. Families face higher medical bills, and the health system carries a greater burden. Since diet-related diseases are long-term, these costs continue to grow over time.

2. Loss of Productivity and Working Years:

- Weak immunity, more frequent illness, and rising YLL reduce the number of productive years people can work.
- Lower productivity affects household income and slows economic growth. Poor nutrition keeps many families trapped in a cycle of low earnings and limited opportunities.

What Actions Are Needed to Correct Dietary Trends?

1. Shift Production Incentives Toward Nutritious Foods: Support should move from cereals to pulses, fruits, vegetables, and millets. These crops improve nutrition and climate resilience.

2. Strengthen Farmer Producer Organisations (FPO): FPOs can improve market linkages and reduce prices of diverse foods. This can make nutrient-rich foods more accessible.

3. Increase Support for Climate-Smart Agriculture: Projects like **RESILIENCE in Odisha and Assam** and the **Mission Organic Value Chain Development for the North-Eastern region** show how crop diversification and climate-smart practices can raise farmer incomes. They also improve local access to healthy foods.

4. Introduce Strong Food-Environment Regulations:

- Clear front-of-pack labelling and limits on marketing **HFSS (High-Fat, Sugar, Salt)** foods can guide consumers toward healthier choices.
- Regulatory standards can push companies to make healthier products.

5. Improve Public Food Programmes: Programmes like **PM Poshan, Anganwadi nutrition, and PDS** should include diverse foods to build steady demand for healthy items.

6. Use Social-Protection Models for Behaviour Change: The **RajPusht model in Rajasthan**, combining **cash transfers to pregnant and lactating women** with **behaviour change communication**, shows how social protection combined with targeted messaging can improve household food choices.

7. Expand Infrastructure for Perishables: Cold storage and better processing facilities for fruits and vegetables can reduce prices and losses, making healthy foods more affordable.

8. Promote Underutilised Protein Sources: Aquatic and marine protein sources should be expanded to improve protein access at low cost.

Conclusion

India's food choices are changing, but unhealthy options remain cheaper and easier than nutritious ones. Rising incomes have not corrected the core imbalance in diets. Correcting this needs coordinated action across policies, markets, communities, and food systems. India can achieve true nutrition security only when healthy foods become accessible, affordable, and desirable for every household.

Question for practice:

Discuss how changing food consumption patterns in India are contributing to rising health risks and widening nutritional imbalances.

Source: [Indian Express](#)

Delhi–Moscow ties have a logic of their own

UPSC Syllabus Topic: GS Paper 2 -International Relation .

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Introduction

India and Russia have held a long and steady partnership that continues to evolve despite global tensions. The recent summit showed how both sides see value in each other at a time of shifting power balances, sanctions, and uncertainty. Their cooperation now covers defence, energy, trade, and strategic engagement, and reflects a shared belief in a stable and balanced global order.

India–Russia Strategic Vision in a Multipolar World

- 1. Stated Vision of Peace and Stability:** Both sides expressed an **objective of “global peace and stability in a multipolar world and a multipolar Asia”**. They said this should **rest on “equal and indivisible security”**, challenging exclusive power arrangements and supporting a balanced global order.
- 2. India’s Stand on the Ukraine Conflict:** India stated that it is **“not neutral, but on the side of peace” in Ukraine**. This allowed India to protect its diplomatic space and keep dialogue at the centre while continuing structured engagement with Russia.
- 3. Rejection of a G2 Order:** The summit opposed the idea of dividing the world into fixed spheres of influence. It indirectly **criticised attempts to shape a G2-style order built by the US and China**. This approach underlines India’s interest in ensuring that no single pairing shapes global decisions.
- 4. Russia’s Need to Demonstrate Wider Partnerships:** Russia used the summit to show that it retains major partners despite Western sanctions. Strong **engagement with India helps Moscow counter isolation**.
- 5. India’s Space in Global Politics:** India signalled that its choices flow from strategic autonomy. **Engagement with Russia is part of its wider approach to shape a stable multipolar environment**.

Defence Cooperation and India’s Technological Sovereignty

- 1. Established Defence Foundation:** Defence cooperation remains central to the relationship. Joint platforms like Su-30MKI and BrahMos performed effectively during Operation Sindoor, reinforcing the value of long-term collaboration.
- 2. Make in India as a Shared Space:** Russian participation in Make in India has created new opportunities for Indian workers. **The AK-203 rifle project shows how joint production can build skills and strengthen India’s manufacturing capacity**. It also demonstrates Russia’s willingness to co-produce and transfer know-how.
- 3. Contrasts with Western Partners:** Russia’s approach to technology transfer stands in contrast to the caution shown by some Western partners. The summit highlighted this difference. It showed why defence ties with Russia retain strategic weight even as India diversifies defence imports.
- 4. High-End Platforms and Strategic Value:** The **nuclear attack submarine leasing agreement** reinforced the depth of the partnership. Such a platform gives India significant underwater endurance and deterrence. Very few states access these technologies, making the decision an important marker of strategic trust.

Economic Lifeline and India’s Energy Security Needs

1. Importance of Russian Oil: India became a major Russian energy customer, with **36% of its crude oil sourced from Russia last year**. This supported domestic stability and helped manage inflation.

2. Sharp Growth in Trade: Bilateral trade rose nearly six times from pre-pandemic levels to **\$68.7 billion**, reflecting the expansion of energy and economic engagement.

3. Impact of US Sanctions and Tariffs: India recently reduced its crude purchases because of US sanctions and tariff pressures. These pressures created uncertainties for India. **Russia reassured India that it would continue uninterrupted fuel supplies, helping India balance its external pressures with domestic needs.**

4. Civilian Nuclear Energy Cooperation: Russia remains India's only foreign partner in clean nuclear energy. This cooperation supports India's long-term energy goals. The summit stressed the significance of continued collaboration in nuclear infrastructure.

Note: Currently, Kudankulam is the only foreign-built nuclear power plant producing electricity in India, a contrast to stalled projects involving American and French companies which remain on paper due to pricing and liability disagreements.

5. Trade in National Currencies: Both sides increased the **use of national currencies, which now cover 96 percent of bilateral trade**. This shift reduces exposure to sanctions and currency risks. It also reflects a broader goal to stabilise economic ties in an uncertain global environment.

Geopolitical Balancing Between the US, Russia, China

1. India's Multi-Vector Foreign Policy: India seeks stability through multiple partnerships. It uses **engagement with Russia for energy, defence, and technology, while working with the US for markets and support against China**. This approach strengthens India's strategic autonomy.

2. Russia's Need to Broaden Partnerships: Russia benefits from India's engagement because it **prevents excessive dependence on China**. The summit displayed Russia's intent to keep important ties beyond Beijing. This **helps Moscow diversify its options under sanctions**.

3. China's Concerns About India-Russia Proximity: China closely watches India's defence ties with Russia. **Sensitive military transfers and potential India-US cooperation create concerns for Beijing**. These trends could influence regional balances and limit China's strategic advantage.

4. India as a Rising Power Centre: India presented itself as a growing power that shapes its own choices. Its active engagement with major powers reinforces this image. Its ability to **maintain balanced ties is part of its wider strategic identity**.

Future Challenges in India-Russia Relations

1. US Pressure and Strategic Shifts: If the US continues using tariffs and sanctions, India may deepen ties with Russia. **A shift is possible if the US offers better access, technology, or co-production.**

2. Technology Transfer and Regional Effects: Technology transfer in maritime and missile areas may pose challenges. **Such cooperation could affect the Indo-Pacific balance.** China will observe these developments closely, and India will seek to manage them with care.

3. Balancing Rival Major Powers: The **rise of competing blocs will test India's ability to sustain its "third way"**. India must manage engagement with Russia while negotiating major agreements with the US.

Way Forward for the India–Russia Partnership

1. Strengthening Joint Defence Production: Both sides can expand research and co-development. This approach supports India's self-reliance and offers Russia long-term collaboration.

2. Securing Energy Supplies and Reducing Risks: India can diversify within its Russian energy engagement and manage external pressures. Continued cooperation in nuclear energy will provide stability.

3. Expanding Trade Beyond Energy: Both sides can correct trade imbalance by widening cooperation in infrastructure and technology. Stable payment systems will support smoother exchanges.

4. Managing Triangular Dynamics with the US and China: India can maintain its balanced approach. Clear communication and separate tracks for each partnership will protect its strategic space.

Conclusion

India and Russia continue to find strong value in each other despite global shifts. Their cooperation covers defence, energy, and strategic engagement. They share a belief in a balanced global order. The relationship will face pressures from great-power rivalry, but both sides appear ready to preserve a stable and practical partnership that supports their long-term interests.

Question for practice:

Evaluate how recent developments have shaped the strategic relevance of the India–Russia partnership.

Source: [Indian Express](#)

India's small enterprises hold key to job growth

Source: The post “**India's small enterprises hold key to job growth**” has been created, based on “**India's small enterprises hold key to job growth**” published in “**Indian Express**” on **10th December 2025**.

UPSC Syllabus: GS Paper-3- Economy

Context: India's small enterprises are pivotal to job growth, yet their potential for generating employment remains severely constrained. The country's workforce, primarily engaged in small, unincorporated household enterprises, faces a fundamental challenge: most workers are self-employed in businesses that lack capital, productivity, and technology adoption. These enterprises, which form the backbone of India's labor market, require targeted interventions to enable them to scale, improve productivity, and ultimately create jobs.

Current State of Small Enterprises

1. The majority of India's non-agricultural enterprises are Own Account Enterprises (OAEs), which do not hire any workers.
2. These OAEs make up 87% of all non-agricultural enterprises and contribute to low productivity levels.
3. A minority of Hired Worker Enterprises (HWEs) employ workers and generate significantly more value than OAEs.
4. However, a large portion of these businesses operate at a subsistence level, earning just enough to sustain the business and family.
5. These enterprises mostly operate in the services sector, which makes up about 74% of non-agricultural establishments. Many are located in rural areas, where educational levels are low, and there is limited technical or vocational training among proprietors.
6. The lack of capital and capability limits their ability to grow and create meaningful employment.

The Role of Productivity in Job Creation

1. Increasing the productivity of these small enterprises is essential for job creation. Data from the Annual Survey of Unincorporated Enterprises (ASUSE) shows that a 10% increase in Gross Value Added (GVA) is associated with a 4.5% increase in the number of hired workers.
2. Therefore, improving productivity not only helps businesses grow but also creates job opportunities. This shift from subsistence entrepreneurship to high-productivity, job-creating enterprises is crucial for India's economic transformation.
3. Although services dominate the sector, manufacturing remains more labor-intensive and continues to add jobs even during periods of economic slowdown. This sector's potential for job creation should be tapped more effectively.

Challenges Confronting Small Enterprises

Several key factors hinder the growth of small enterprises:

a. Non-recovery of Dues: A significant problem facing small enterprises is the non-recovery of dues. The Reserve Bank of India (RBI) identified this as a key issue in its 2019 report on MSMEs, and ASUSE data reveals that many enterprises face this challenge. Recent amendments to the Finance Act in 2024 aim to address delayed payments, but the effectiveness of this move remains to be seen.

b. Unregistered Status: Many small businesses choose to remain unregistered, seeing it as a survival strategy rather than a liability. This self-imposed limitation prevents them from accessing formal credit, legal protections, and growth opportunities.

c. Access to Credit: Access to formal credit is another critical barrier. Only about 10-12% of unincorporated enterprises have outstanding loans, limiting their ability to invest in capital and technology. Studies show that access to formal credit significantly boosts GVA, especially for medium and large enterprises. However, credit must be coupled with training, market access, and managerial support for it to be transformative.

d. Technology Adoption: Small enterprises in India have low rates of technology adoption. Only 5-6% use computers, and less than 26% use the internet. Enterprises that adopt basic ICT tools experience higher GVA across all sizes. By integrating digital tools—such as e-commerce platforms and digital payment systems—

these enterprises can increase efficiency and expand their markets, creating new opportunities for growth and employment.

Policy Recommendations for Supporting Small Enterprises

To unlock the potential of small enterprises for employment growth, India must focus on the following:

a. Improving Credit Access: The government must tailor credit policies to address the specific needs of small enterprises. This means providing access to working capital for stabilization and growth capital for expansion, not just microcredit for survival. Non-performing assets (NPAs) and excessive documentation requirements must be reduced to make credit more accessible.

b. Promoting Technology Adoption: Initiatives like Digital MSME, UPI incentives, and e-commerce platforms need to be better implemented to facilitate the adoption of technology by small enterprises. Businesses need more than just digital payments; they require training, handholding support, and market linkages to fully leverage the potential of digital tools.

c. Vocational Training and Skill Development: With a significant portion of small business owners lacking formal education or vocational skills, there is a need for targeted training programs that enhance their managerial capabilities and technological proficiency. Such training will help boost productivity and enable businesses to expand and hire more workers.

Conclusion: India's employment future lies not in a few large factories but in the millions of small enterprises that already drive the economy. To harness this potential, the government must create an ecosystem that supports these enterprises through easier access to credit, better technology adoption, and targeted skill development. By helping small businesses scale and transition from subsistence to high-productivity ventures, India can create the quality jobs needed for its growing workforce. The entrepreneurship story is already unfolding in small shops, home-run units, and local service establishments; what it requires is multi-pronged support to reach its full potential.

Question: Discuss the challenges faced by small enterprises in India and suggest policy measures to enhance their role in job creation.

Neurotechnology in Focus: Emerging Opportunities and Regulatory Challenges

Source: The post "Neurotechnology in Focus: Emerging Opportunities and Regulatory Challenges" has been created, based on "Neurotechnology in Focus: Emerging Opportunities and Regulatory Challenges" published in "The Hindu" on 10th December 2025.

UPSC Syllabus: GS Paper-3- Science and technology

Context: Neurotechnology, including Brain-Computer Interfaces (BCIs), offers transformative possibilities for healthcare, human enhancement, and various other sectors. Here's how India can benefit from these technologies:

Importance of Neurotechnology for India

1. **Neurological Disease Burden:** India faces a growing prevalence of neurological diseases such as stroke, spinal cord injuries, Parkinson's disease, and mental health disorders. Neurotechnology can provide solutions for these challenges.
2. **Impact on Healthcare:** Neuroprosthetics can restore mobility and communication for paralysed patients. Neural stimulation can reduce long-term dependence on medication for mental health conditions like depression.
3. **Economic Opportunity:** Neurotechnology intersects AI, biotechnology, and engineering—sectors where India is developing global competence, offering an opportunity for economic growth.

Current Developments in India

1. **Research Initiatives:** IIT Kanpur researchers have developed a BCI-based robotic hand to aid stroke patients. The National Brain Research Centre (NBRC) and IISc, Bangalore, are leading research in neuroscience and neurotechnology.
2. **Startup Innovations:** Dognition, a startup, uses neurotechnology to study brain signals in dogs, potentially revolutionizing cancer screening for humans.

Global Advances in Neurotechnology

1. **United States:** The BRAIN Initiative accelerates the development of neurotechnologies, with Neuralink receiving FDA approval for human trials of BCIs to restore motor function in paralysed patients.
2. **China:** The China Brain Project focuses on understanding cognition, developing brain-inspired AI, and treating neurological disorders.
3. **European Union & Chile:** These regions are pioneering laws to regulate BCIs and neurorights, focusing on ethical and legal issues surrounding neurotechnology.

Opportunities for India

1. **Global Positioning:** India's growing expertise in AI, biotechnology, and engineering positions it to become a hub for neurotechnology development.
2. **Genomic Diversity:** India's diverse genetic makeup and increasing awareness of brain research provide a unique advantage for advancing neurotechnology.
3. **Economic Growth:** As neurotechnology becomes more integral to healthcare, gaming, and other industries, it can drive economic growth and innovation in India.

Challenges Facing India

1. **Lack of Regulatory Support:** Inadequate regulation hampers the development and adoption of BCIs in India.
2. **Ethical Concerns:** The potential for human enhancement and military applications of BCIs raises ethical issues that require careful consideration.
3. **Infrastructure Gaps:** The current infrastructure for supporting neurotechnology research and development needs strengthening.

Policy Recommendations

1. **Tailored Regulatory Frameworks:** India should develop separate regulations for different types of BCIs, considering their risks, benefits, and applications.
2. **Public Engagement:** Open discussions on the risks and benefits of BCIs can help address public concerns and increase acceptance of the technology.
3. **Increased Investment in Research:** Focusing on funding for neurotechnology research, especially in healthcare and AI, will help India stay competitive globally.
4. **Ethical Oversight:** Establish clear guidelines for ethical use, focusing on data privacy, user autonomy, and ensuring the technology is used for beneficial purposes.

Conclusion: Neurotechnology presents significant opportunities for India, particularly in addressing its neurological disease burden and boosting technological innovation. By implementing strong regulations, investing in research, and promoting ethical use, India can harness the full potential of neurotechnology to lead in global innovation.

Question: Discuss the potential benefits and challenges of neurotechnology for India and suggest policy measures for its development.

Satellites, Science, and the New Fight for Spectrum in Space

UPSC Syllabus Topic: GS Paper 3 -Science and technology

Introduction

A rapid expansion of satellites, especially megaconstellations, has created intense competition for radio frequencies and orbital slots. These resources are limited, yet they are essential for communication, navigation, and scientific activity in space. As more nations and private companies enter this domain, the pressure on spectrum, orbital safety, and governance frameworks has increased. This expanding activity now shapes global technological competition, economic opportunities, connectivity goals, and national security strategies across the world.

Spectrum, Orbits and the Megaconstellation Boom

1. Spectrum Matters: Satellite communication depends on radio frequencies that enable data transmission between satellites and ground stations. Important bands such as the Ku, Ka, and L bands support high-speed internet and navigation. Because these bands are limited, operators must coordinate to avoid interference.

2. Orbital Slots Are Important: Satellites also need specific orbital positions to provide consistent coverage. Low-Earth orbit offers low latency, while geostationary orbit offers constant visibility. As more satellites enter orbit, the competition for these locations has intensified.

3. Unprecedented Scale of Deployment

- Megaconstellations have grown rapidly. Large constellations now dominate activity in low-Earth orbit.
- Starlink operates **over 8,000 satellites** and plans up to **42,000**. OneWeb, Kuiper, and GuoWang are also expanding. This growth is driven by falling launch costs and rising demand.

- The market is projected to rise from **\$4.27 billion in 2024** to **\$27.31 billion by 2032**. For many states, such networks also support goals of technological autonomy in space communications.

4. Strategic Dimensions: For many countries, megaconstellations are not just commercial tools. They represent an effort to build independent space-communication capabilities and reduce dependence on foreign systems.

Global Governance: ITU and the Coordination Challenge

1. ITU's Mandate and Principles

- The International Telecommunication Union (ITU), a UN agency with 194 member states, governs global satellite spectrum and orbital slots.
- It treats these resources as limited assets that must be used rationally and efficiently. Operators must file frequency applications and coordinate with others before receiving recognition.

2. First-Come, First-Served System

The ITU's process gives a natural advantage to early applicants who have the capital and expertise to navigate complex filings. This favours established spacefaring nations and companies. Late entrants may find desirable combinations of spectrum and orbital positions already taken.

3. Reforms Through Resolution (2023)

- To prevent companies from reserving orbits without using them, the **World Radiocommunication Conference 2023 introduced Resolution 8**.
- It requires operators to match declared plans with actual deployments and to meet milestones of **10% in two years, 50% in five years**, and full deployment in **seven years**. These rules bring more transparency but do not fully remove capacity pressures.
- The ITU's 2023 resolution on sustainable use requires satellites to be removed within 25 years of mission completion. This aims to limit debris and protect orbital space for future use.

4. Mounting Pressure on ITU Systems

The ITU framework was designed decades ago for a small number of satellites. Today, it faces enormous strain as thousands of satellites are launched every year. Its 2025-2029 plan identifies spectrum and orbital management as its highest priority due to this growing complexity.

Digital Divide and the Promise and Limits of LEO Satellites

1. Persistent Global Connectivity Gap

- Despite major technological progress, a very large share of the world remains offline. The Global Connectivity Index shows clear inequality: **Switzerland scores 34.41**, while **India scores only 8.59**, reflecting a wide gap in digital readiness.

- At the start of **2025, about 2.6 billion people** still lacked internet access, with most of the unconnected population living in **South Asia, Africa, and Latin America**.

2. Technical Benefits of LEO Satellites: Low-Earth orbit satellites offer much lower latency compared to geostationary satellites, making applications like online education and telemedicine more practical in areas without terrestrial networks.

3. Affordability Barriers

- High equipment cost remains a major obstacle. The **Starlink user terminal costs around \$600 (₹53,168)**, which is too expensive for most rural households. Monthly fees further increase the burden.

- The ITU's **Connecting Humanity Action Blueprint** estimates that **closing the digital divide globally by 2030 will require \$2.6–2.8 trillion in investments**.

India's Evolving Space Policy

1. Shift from Developmental Focus to Prestige and Security:

- India began with a development-oriented programme but now also pursues exploration and security goals.
- Successes such as Chandrayaan-3, Mangalyaan, Gaganyaan, and Aditya-L1 mark this shift. India plans a national space station by 2035, reflecting rising ambitions.

2. Growing Private Sector Participation:

- Policies now support private involvement across the value chain. IN-SPACe and NSIL guide commercial activity. India's space economy may rise to **\$44 billion by 2033**.
- FDI liberalisation and private missions like Vikram-S show growing capacity. Agreements with Starlink, Jio, and Airtel signal expanding commercial partnerships.

3. Strengthening Military Capabilities

- India uses space for surveillance, communication, and navigation. NavIC, GAGAN, and dedicated military satellites support defence operations.
- Mission Shakti showed India's ASAT capability, though conducted with measures to limit debris.
- New institutions such as the **Defence Space Agency and Defence Space Research Organisation** deepen military integration.

4. Space as a Foreign Policy Tool: India uses satellites to support neighbours and the Global South. The South Asia Satellite offers public goods to regional partners. A G20 climate-observation mission proposal reflects this role.

5. Selective Approach to Global Space Governance

- India supports sustainability guidelines and participates in **United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS)**.
- It backs legally binding agreements like **Prevention of an Arms Race in Outer Space (PAROS)** but remains cautious about voluntary norms that lack inclusive rulemaking.
- India's choices balance autonomy with cooperation, especially with the U.S., including through **Artemis Accords and the TRUST initiative**.

Conclusion

The rapid growth of megaconstellations has intensified competition for limited spectrum and orbital slots, placing heavy strain on global coordination systems and increasing risks from congestion and debris. Connectivity benefits are real, but uneven access, affordability barriers, and weak governance deepen inequality. A sustainable and inclusive global framework is essential to keep space accessible for future needs.

Question for practice:

Discuss how the rise of megaconstellations has intensified competition for spectrum and orbital slots and the implications this has for global governance and digital inclusion.

Source: [The Hindu](#)

Drug Abuse Among School children

Source: The post “**Drug Abuse Among School children**” has been created, based on “**Kids as young as 11 dabbling in drugs, shows 10-city survey**” published in “**Times of India**” on **11th December 2025**.

UPSC Syllabus: GS Paper-2- Social Justice

Context: The multi-city survey shows that substance use among schoolchildren begins at an average age of 12.9 years. The findings indicate a growing public-health challenge that needs urgent and coordinated action. The study covered 5,920 students across 10 cities, capturing a broad national pattern.

Key Findings of the Survey

1. **Lifetime Prevalence:** The survey found that 15.1% of students had used a psychoactive substance at least once. It reported that 10.3% had used substances in the past year and 7.2% in the past month.
2. **Common Substances:** Tobacco (4%) and alcohol (3.8%) were the most used, followed by opioids (2.8%), cannabis (2%), and inhalants (1.9%). Most opioid use originated from non-prescribed pharmaceutical pills, showing easy access.
3. **Age Variation:** Students in Classes XI–XII were nearly twice as likely to use substances compared to Class VIII students.
4. **Gender Differences:** Boys reported higher use of tobacco and cannabis, whereas girls reported higher use of inhalants and pharmaceutical opioids.
5. **Under-Reporting Risk:** Over 50% of students admitted they would hide their substance use if questioned, suggesting concealed prevalence.

6. **Mental-Health Link:** Past-year users reported higher psychological difficulties (31%) compared to non-users (25%). Users showed greater conduct problems, hyperactivity, and emotional distress.
7. **Family and Peer Influence:** Around 40% of students reported substance use within their homes, normalizing the behaviour. Students with substance-using peers were significantly more likely to consume substances themselves.
8. **Low Help-Seeking:** Only 1% of young users sought help, indicating a severe treatment gap.

Associated Risk Factors

1. **Easy Availability:** Substances like tobacco, alcohol, inhalants, and opioids are easily accessible to adolescents.
2. **Emotional Distress:** Lack of mental-health support pushes children to use substances as coping mechanisms.
3. **Family Normalisation:** Substance use at home reduces perceived risk and encourages experimentation.
4. **Peer Pressure:** Peer groups strongly influence early initiation and continued use.
5. **Weak Regulation:** Poor control over pharmaceutical sales allows minors to access prescription opioids.
6. **Brain Vulnerability:** The adolescent brain's sensitivity increases the risk of addiction and long-term harm.

Implications

1. **Higher Addiction Risk:** Early initiation significantly increases the likelihood of long-term dependence.
2. **Academic Deterioration:** Substance use contributes to falling grades, absenteeism, and poor school engagement.
3. **Mental-Health Decline:** Emotional instability, anxiety, depression, and behavioural issues intensify.
4. **Gendered Vulnerabilities:** Rising substance use among girls reflects hidden self-medication and secrecy.
5. **Social Impact:** Family conflict, secrecy, and risky behaviours escalate, affecting long-term social functioning.

Measures Needed

1. **School-Based Measures**
 - a. **Early Prevention:** Programmes should begin before middle school to delay experimentation.
 - b. **Counselling Strengthening:** Schools must build robust counselling and mental-health support systems.
 - c. **Regular Screening:** Routine mental-health assessments should identify at-risk children early.
2. **Family-Level Measures**
 - a. **Open Communication:** Parents must initiate honest conversations about substance risks and emotions.
 - b. **Warning Sign Recognition:** Families should be trained to spot mood changes, secrecy, and falling academic performance.
3. **Community & Regulatory Measures**
 - a. **Stricter Enforcement:** Stronger laws must restrict the sale of substances to minors.
 - b. **Pharmacy Oversight:** Monitoring is needed to prevent the sale of non-prescribed opioids.

- c. **Awareness Campaigns:** Community programmes should educate both parents and adolescents.

4. Health-System Measures

- a. **Adolescent Services:** More adolescent-friendly treatment and counselling centres are needed.
- b. **Integrated Education:** Substance-use awareness should be included in school health programmes.

5. Research & Monitoring

- a. **Regular Surveys:** Continuous data collection is essential to track emerging trends.
- b. **Targeted Strategies:** Gender- and age-specific interventions must be developed.

Conclusion: The survey signals dangerously early substance initiation among schoolchildren. Effective response requires integrated action from schools, families, communities, and health systems.

Question: Early substance use among schoolchildren is emerging as a major public-health concern in India. Examine the key risk factors behind this trend and suggest multi-level measures to address it.

For AI, India can build on the Aadhaar-UPI model

Source: The post “For AI, India can build on the Aadhaar-UPI model” has been created, based on “For AI, India can build on the Aadhaar-UPI model” published in “Indian express” on 11th December 2025.

UPSC Syllabus: GS Paper-3- Science and technology

Context: India has demonstrated its ability to deploy technology at a population scale through initiatives like **Aadhaar and UPI**, which provided secure digital identity and payment systems to millions of citizens. Artificial Intelligence (AI) now offers India an opportunity to **leapfrog into a knowledge-driven, inclusive, and green economy**, provided the country undertakes the right measures.

Challenges in Building India’s AI Ecosystem:

1. **Data Privacy and Security Risks:** Handling sensitive citizen data while ensuring privacy and avoiding misuse remains a significant challenge.
2. **Infrastructure Limitations:** Rapidly expanding AI-ready computing infrastructure, particularly with **green energy sources**, requires heavy investment and long-term planning.
3. **Skilled Workforce Gap:** There is a shortage of professionals trained in AI, machine learning, and related technologies, which could slow adoption.
4. **Regulatory and Governance Issues:** Ensuring compliance with laws, preventing monopolistic practices, and maintaining accountability of AI systems can be complex.
5. **Digital Inclusion:** Making AI tools accessible and usable by citizens in **rural areas and regional languages** is challenging but essential for inclusivity.

Key Measures for India’s AI Leadership:

1. **Digital Sovereignty and Regulation:** India must ensure that AI systems operate under **Indian laws and strategic priorities**.
 - a. Foundation models should be **trained, hosted, and regulated within the country** to maintain **data security, algorithmic accountability, and national security**.

- b. This approach balances **corporate innovation seen in the West** and **state-controlled AI models like China**.
2. **Green AI Infrastructure:** India should rapidly expand its **computing capacity** to host large AI models.
 - a. Development of **data centres powered by renewable energy** such as solar, wind, and green hydrogen can anchor new investment and reduce carbon emissions.
 - b. This will promote **green industrial growth**, including innovation in **semiconductors, power electronics, and cooling technologies**, and position India at the **green frontier** of AI development.
3. **Inclusive AI Access for Citizens:** Every Indian should have a **multilingual AI agent** that they control, which can assist them in daily life.
 - a. For example, farmers can use it for **weather and crop advice**, students for **learning support**, and patients for **healthcare management**.
 - b. These agents must be **private, transparent, and accountable**, with data securely stored under user control.
 - c. Building these systems will require **open standards, privacy safeguards, and collaboration between government, academia, and startups**.
4. **Economic and Workforce Implications:** While AI may **automate some service, coding, and back-office roles**, it will also create new opportunities in **data infrastructure, model development, and domain-specific AI applications**.
 - a. Early investment can allow India to **capture higher-value AI services**, similar to how China leveraged the clean-energy revolution to dominate global supply chains.

Conclusion: By focusing on **AI under Indian law, green infrastructure, inclusive citizen access, and workforce readiness**, India can create a **sustainable, globally competitive, and inclusive AI economy**. The principles that made Aadhaar and UPI successful **scalability, inclusion, and reliability** can serve as a guiding framework for developing India's AI ecosystem while addressing challenges.

Question: India has the potential to become a global leader in artificial intelligence by building on its digital infrastructure experience. Discuss the key measures needed to achieve this, the challenges involved, and their implications for inclusive growth and sustainability.

Is the falling rupee a cause for alarm?

Source: The post "Is the falling rupee a cause for alarm?" has been created, based on "Is the falling rupee a cause for alarm?" published in "Times of India" on 12th December 2025.

UPSC Syllabus: GS Paper-3- Indian Economy

Context: The Indian rupee has recently slipped below the ₹90 per dollar mark, prompting concerns about external stability and macroeconomic fundamentals. Such currency movements, however, reflect multiple factors including global conditions, investor behaviour, and domestic economic parameters rather than a single structural weakness.

Reasons Behind the Fall of the Rupee

A. Weakening External Fundamentals

1. The trade deficit has widened because India's import growth has been consistently higher than export growth.
2. The current account deficit has expanded due to higher import bills and weak global demand for exports.
3. Foreign Portfolio Investors (FPIs) have withdrawn funds as they expect better short-term returns in other economies.
4. Foreign exchange reserves have declined slightly, which indicates that the RBI's interventions have remained limited.

B. Policy and Sentiment Factors

1. Uncertainty surrounding the India-U.S. tariff agreement has adversely affected investor sentiment.
2. Elevated valuations in domestic equity markets have encouraged foreign investors to book profits and exit.
3. Global currency trends have favoured the U.S. dollar in the short term, putting additional pressure on emerging market currencies including the rupee.

Whether the Falling Rupee Indicates Weakness in the Economy

1. The depreciation of the rupee does not indicate structural weakness because India continues to record robust GDP growth.
2. Inflation in India remains moderate, supported by an accommodative monetary policy stance.
3. India's foreign exchange reserves still cover around 11 months of imports, indicating a strong external buffer.
4. Fiscal consolidation is progressing as planned, and capital expenditure remains strong, which shows that macroeconomic fundamentals are stable.
5. The fall of the rupee is driven mostly by transient global and sentiment-driven factors rather than domestic economic deterioration.

Benefits of a Depreciating Rupee

1. The depreciation of the rupee increases the price competitiveness of Indian goods, thereby helping exports gain market share.
2. The weaker rupee partially offsets the tariff-related disadvantages arising from recent U.S. policy measures.
3. Services exporters, especially IT and business-process firms, gain higher rupee realisation on dollar earnings.
4. Increased profitability in the services sector may translate into higher employee bonuses and support domestic consumption.
5. The inflationary impact of depreciation remains modest, as a 5% fall contributes only 0.3%–0.4% to the Consumer Price Index.

Downsides of a Depreciating Rupee

1. Import costs rise significantly, especially for crude oil, electronics, fertilisers, and heavy machinery, as more rupees are needed to buy the same dollar value.

2. Rupee volatility creates uncertainty for exporters and importers, complicating hedging strategies and long-term business contracts.
3. The government faces higher subsidy bills, particularly on fertilisers and fuel, which may exert pressure on fiscal balances.
4. Sectors dependent on imported inputs face compressed margins due to increased operational costs.

Challenges Arising from the Rupee's Fall

1. The rising import bill increases the cost burden on industries and the government, especially in energy and fertiliser sectors.
2. Imported inflation could gradually rise if depreciation continues, affecting fuel, metals, and essential commodities.
3. Fiscal stress may increase as subsidy expenditure rises, making fiscal consolidation more difficult to achieve.
4. Currency volatility disrupts business planning for exporters and importers and enhances financial risks.
5. India remains vulnerable to shifts in global investor sentiment because of reliance on volatile FPI flows.
6. A persistent trade imbalance threatens to widen the current account deficit further.
7. The RBI has limited flexibility because excessive intervention may drain reserves while minimal intervention may permit undue volatility.
8. Companies with dollar-denominated loans face higher repayment burdens, thereby increasing financial stress.

Way Forward

1. India must strengthen its external sector by diversifying exports, enhancing competitiveness in high-value manufacturing, and deepening services exports.
2. The government should work to attract more stable long-term Foreign Direct Investment (FDI) by improving the ease of doing business and ensuring policy consistency.
3. Reducing import dependence through domestic production of critical items such as semiconductors, electronics, and defence equipment is essential.
4. Expanding renewable energy capacity will help reduce oil imports and ease pressure on the rupee.
5. The RBI should continue to intervene only to curb excessive volatility rather than defend a specific exchange rate level.
6. Macroeconomic stability should be maintained by adhering to fiscal consolidation targets and keeping inflation within the target band.
7. Exporters and importers, especially MSMEs, should be encouraged to use hedging instruments to manage currency risks more effectively.
8. The government and RBI must improve communication and provide policy clarity to reduce speculation and maintain investor confidence.
9. Fast-tracking pending trade agreements can help stabilise investor sentiment and boost long-term export prospects.

Conclusion

The recent fall of the rupee is largely driven by global portfolio movements and temporary sentiment-related factors rather than fundamental economic weakness. Although depreciation offers some export advantages, it also brings challenges related to higher import costs, fiscal pressures, and business uncertainty. With strong

macroeconomic fundamentals and prudent RBI interventions, the situation calls for careful monitoring rather than alarm, supported by structural reforms and stable long-term policies.

Question: The recent fall of the rupee below ₹90 per dollar has triggered debates on economic stability. Discuss the reasons behind the depreciation, its impact on the Indian economy, associated challenges, and the way forward.

Parenting in the AI-age

Source: The post “Parenting in the AI-age?” has been created, based on “Parenting in the AI-age” published in “Times of India” on 12th December 2025.

UPSC Syllabus: GS Paper-3- Science and Technology- Developments and their Applications and Effects in Everyday Life

Context: The rise of advanced AI tools such as ChatGPT has begun influencing everyday parenting practices across the world. Public figures like Sam Altman have highlighted how AI provides instant guidance, reassurance, and personalised support to new parents navigating early childhood challenges.

Changing Nature of Parenting in the AI Age

A. Instant Information and Support

1. AI tools provide quick, accessible answers to routine parenting questions, reducing anxiety and helping parents make informed decisions.
2. Personalised guidance helps new parents feel more confident, especially during uncertain moments related to child growth and behaviour.

B. Reduction in Stress and Isolation

1. New parents often lack immediate human support; AI acts as a 24/7 companion to clarify doubts.
2. Real-time reassurance, such as confirming normal developmental differences, helps prevent unnecessary panic.

Opportunities Created by AI in Parenting

1. **Personalised Parenting Assistance:** AI systems adapt to user inputs and offer contextual advice tailored to individual parenting styles and concerns.
2. **Enhanced Access to Knowledge:** Parents get evidence-based insights without needing extensive reading or specialist consultations for everyday concerns.
3. **Emotional Support and Confidence-Building:** AI tools reduce parental overthinking by offering calm, balanced responses that normalise variations in child development.
4. **Bridging Information Gaps:** AI can be especially useful for first-time parents, nuclear families, and working parents with limited support systems.

Concerns and Risks in AI-Assisted Parenting

1. **Overdependence on Technology:** Excessive reliance may weaken natural intuition and experiential learning that are central to parenting.

2. Accuracy and Quality of Advice: AI tools, if misused, may give generalised or incorrect suggestions without understanding deeper medical or emotional contexts.

3. Privacy and Data Concerns: Sensitive information about children might be stored or processed, raising ethical and data-protection issues.

4. Risk of Replacing Human Connection: Parenting requires empathy, lived experiences, and community support, which AI cannot fully replicate.

5. Unrealistic Expectations from Children: AI-driven comparisons may pressure parents to expect accelerated milestones, affecting children's emotional well-being.

Ethical and Social Implications

1. AI alters traditional parenting roles, potentially reshaping family dynamics and decision-making patterns.

2. Unequal access to AI tools may deepen digital divides between urban and rural households.

3. Children growing up with AI may experience shifts in cognitive development, behaviour, and social interactions.

Way Forward

1. Parents must treat AI as a supportive tool and not as a substitute for human judgment or medical advice.

2. Governments and platforms should create clear guidelines for safe and responsible AI use in family settings.

3. Awareness must be raised on verifying AI-generated recommendations, especially for health-related issues.

4. AI literacy programmes can help parents understand limitations, biases, and best practices.

5. Developers should ensure strong privacy safeguards to protect children's data.

Conclusion: Parenting in the AI age offers immense support, accessibility, and reassurance to families, particularly first-time parents. However, it requires balanced use, ethical safeguards, and a continued emphasis on human intuition and emotional connections. AI should complement, not replace the sensitivity, judgment, and care that define the parent-child relationship.

Question: Discuss the opportunities and risks associated with the use of AI in parenting, as highlighted in the context of the rise of advanced AI tools like ChatGPT. How can AI complement, rather than replace, traditional parenting practices?

From Licence Raj to Jan Vishwas: Freeing India's Entrepreneurs

UPSC Syllabus- GS 3-Inclusive growth and issues arising from it.

Introduction- India's entrepreneurial ecosystem has been shaped by its regulatory state—from the restrictive Licence Raj to the partial liberalisation of 1991. However, deregulation remains incomplete. The proposed Jan Vishwas Siddhant promises a shift from permission-based control to trust-based governance, with the potential to boost entrepreneurship, scale enterprises, and create mass employment.

Structural Constraints: Six Regulatory Pathologies

1. Culture of Prior Approval

- Entrepreneurship is inherently **permissionless**, yet businesses confront thousands of licences, NOCs, and approvals.
- This undermines **Article 19(1)(g)** of the Constitution and discourages innovation at inception.

2. **Proliferation of Regulatory Instruments**

- In addition to Acts and Rules, compliance extends to circulars, guidelines, SOPs, FAQs, and office orders—often unnotified but enforceable.
- Entrepreneurs face a compliance maze of **12,000+ non-law instruments**, creating uncertainty and discretion.

3. **Compliance Blind Spot**

- Policymaking emphasises legislative intent but ignores the **aggregate compliance burden**.
- As of early 2025, India had **over 69,000 compliances**, though labour code reforms demonstrated that rationalisation can reduce burdens by **up to 75%**.

4. **Enforcing the Unenforceable**

- Regulatory ambition often exceeds state capacity, leading to selective enforcement and corruption.
- Unenforceable laws become a substitute for institutional reform and effective governance.

5. **Process as Punishment**

- Criminal provisions in economic laws are rarely enforced but widely used as threats.
- The criminalisation of cheque-bounce disputes alone has resulted in **43 lakh cases**, nearly **10% of total court pendency**.

6. **Absence of a Single Source of Truth**

- Entrepreneurs lack access to an authoritative, updated database of applicable laws and compliances.
- This opacity fuels rent-seeking, litigation, and compliance anxiety.

Jan Vishwas Siddhant: Key Provisions

- **Perpetual self-registration for all activities** except those linked to national security, public safety, human health, and the environment.
- **“Everything is permitted unless prohibited”** as the default regulatory principle.
- Risk-based, random, and third-party inspections replacing inspector raj.
- **Decriminalisation of minor offences** with proportionate civil penalties, in line with DPIIT principles.
- Predictable regulation, with mandatory consultation, adequate transition time, and fixed annual implementation dates.
- **Complete digitisation of filings and restriction** of penal provisions strictly to Acts and Rules.
- **Annual Regulatory Impact Assessments (RIA)** by all ministries focusing on compliance costs and enforcement outcomes.

Why it Matters for Growth and Employment

- Despite having **6.3 crore enterprises**, India has only **around 30,000 companies** with paid-up capital above ₹10 crore. This reflects not a deficit of entrepreneurial ambition, but a regulatory ecosystem that discourages scale and risk-taking.
- Over-regulation keeps firms perpetually small, limits capital formation, and constrains labour productivity—directly affecting non-farm job creation and economic transformation.

Way Forward

- **Institutionalise trust-based regulation** across states and sectors, beyond central legislation.
- **Expand compliance rationalisation** beyond labour laws to land, environment, and municipal regulations.

- **Strengthen administrative capacity** to enforce fewer, clearer, and outcome-based laws.
- **Align judicial reforms** with economic decriminalisation to reduce pendency and uncertainty.
- **Monitor implementation** through periodic parliamentary and public review of regulatory impact.

Conclusion

The **Jan Vishwas Siddhant** signals a shift from control to trust, empowering citizens over subjects. By treating entrepreneurship as experimentation rather than planning, it can boost enterprise scale, jobs, and growth—freeing entrepreneurs to focus on effort, not permissions.

Question- India's transition from the Licence Raj to a trust-based regulatory framework remains incomplete." In this context, critically examine the structural regulatory constraints faced by Indian entrepreneurs and discuss how the proposed Jan Vishwas Siddhant can address these challenges to promote enterprise scaling, inclusive growth, and non-farm employment.

Supreme Court Rules Forced Narco Tests Unconstitutional

UPSC Syllabus- GS 2- Judiciary: Functions and powers of the Supreme Court and High Courts; Judicial review; Fundamental rights enforcement.

Introduction- The **Supreme Court of India** has ruled that **compulsory or involuntary narco tests are unconstitutional**, overturning a Patna High Court judgment in *Amlesh Kumar v. State of Bihar* (2025). The Court highlighted that the High Court disregarded the principles laid down in *Selvi v. State of Karnataka* (2010) regarding the protection of fundamental rights during investigative procedures.

What Are Narco Tests?

Narco tests involve administering a **sedative such as Sodium Pentothal** to an accused, lowering inhibitions and encouraging disclosure of information. While non-violent, these tests are similar in nature to **polygraphs or brain-mapping techniques** and are used to aid investigations.

Constitutional Safeguards

The judgment emphasized **Article 20(3)**, which guarantees protection **against self-incrimination**, ensuring no individual can be compelled to testify against themselves without voluntary consent. This aligns with broader constitutional protections:

- **Clause (1):** Prohibition on ex-post facto laws
- **Clause (2):** Protection against double jeopardy
- **Clause (3):** Right against self-incrimination

Additionally, **Article 21** (Right to Life and Personal Liberty) and the **Right to Privacy** were central to the Court's reasoning, stressing that non-consensual testing violates fundamental human rights.

Balancing Rights in Criminal Justice

The Court reinforced that democratic criminal justice requires balancing the **rights of victims** with the **rights of the accused**. Any investigative method must preserve personal liberty, human dignity, and constitutional protections.

The 'Golden Triangle'

The ruling referenced the **Golden Triangle** of Articles **14, 19, and 21** (Maneka Gandhi v. Union of India, 1978), noting that infringements of privacy inherently compromise the Right to Life and Personal Liberty.

Judicial Precedents and Procedural Requirements

- Past rulings, including Manoj Kumar Saini v. State of MP (2023) and Vinobhai v. State of Kerala (2025), clarify that **narco test results alone cannot establish guilt**; corroborative evidence is essential.
- The Court emphasized **informed consent**, to be recorded before a magistrate, with **medical, legal, and procedural safeguards** strictly maintained.

Conclusion

The Supreme Court's ruling affirms that **informed consent, autonomy, and dignity** are paramount, and no investigative method can override **fundamental rights**, reinforcing the balance between law enforcement and individual freedoms in a democratic system.

Question- Examine the Supreme Court ruling declaring forced narco tests unconstitutional and its constitutional implications.

Courts must protect, not regulate free speech

UPSC Syllabus Topic: GS Paper 3-Fundamental Rights

Introduction

Freedom of speech is central to democracy and individual liberty. Threats to this right usually come from the executive or legislature. Recent judicial proceedings have raised concern that courts themselves may begin shaping regulation. When courts move from protecting speech to suggesting regulatory frameworks, it raises serious constitutional and democratic questions about institutional roles and limits.

What is Freedom of Speech and Expression?

- Freedom of speech and expression is broadly understood as the **notion that every person has the natural right to freely express themselves through any media and without outside interference**, such as censorship, and **without fear of reprisal**, such as threats and persecutions.
- Freedom of expression is a complex right as **freedom of expression is not absolute**.
- It carries with it **special duties and responsibilities** therefore it may be subject to **certain restrictions provided by law**.

Constitutional and Legal Backing of Free Speech

1. Constitutional backing

Article 19(1)(a) and its protection: The Constitution guarantees freedom of speech and expression under Article 19(1)(a). This right forms part of the basic framework of democratic participation and accountability.

Exhaustive limits under Article 19(2): Restrictions on free speech are strictly limited to grounds listed in Article 19(2), such as sovereignty, security of the State, public order, defamation, and morality. These grounds are exhaustive and not illustrative.

2. Existing statutory regulation of speech

Information Technology Act, 2000

Section 67 penalises the publication or transmission of obscene content in electronic form.

Section 66 addresses computer-related offences such as hacking.

Section 66E penalises the publication of personal images without consent.

Section 66F deals with cyber terrorism.

Bharatiya Nyaya Sanhita, 2023

Sections 294, 295, and 296 penalise obscene acts and content in public spaces.

3. Intermediary Rules and concerns

The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 create an oversight mechanism and impose obligations on publishers..

Judicial Interpretation of Free Speech in India

1. **Courts as constitutional umpires:** The Constitution assigns courts the role of examining whether restrictions on free speech are reasonable. During the Constituent Assembly debates, it was clearly stated that the Supreme Court must act as the final arbiter on the validity of restrictions, not as a law-maker.

2. **Judicial self-restraint as a guiding principle:** The Court has earlier shown restraint in matters affecting expression. In **Adarsh Co-operative Housing Society Ltd. vs Union of India (2018)**, it refused to direct filmmakers to add disclaimers. It held that such decisions lie with statutory authorities and must follow due process.

3. **Exhaustive nature of Article 19(2):** In *Kaushal Kishor vs State of Uttar Pradesh (2023)*, a five-judge Bench clearly held that the grounds listed in Article 19(2) are exhaustive. It ruled that no additional restrictions can be imposed under the guise of competing fundamental rights.

4. **Regulation versus unlawful restraint:** In *Sahara India Real Estate Corp. Ltd. vs SEBI (2012)*, the Court examined media regulation in detail. It warned against blanket prohibitions and held that pre-censorship must be avoided. Any postponement of publication must be a last resort and meet a high standard of reasonableness.

5. **Caution against judicial overreach:** In *Common Cause vs Union of India (2008)*, the Court cautioned itself against entering areas beyond its institutional competence. It acknowledged that many policy problems are better addressed by the legislature, especially where technical expertise is required.

Challenges in Regulating Free Speech in India

1. **Risk of prior restraint:** Broad and preventive regulatory measures can silence speech even before any legal violation occurs. This undermines democratic debate and contradicts the Court's caution against pre-censorship, as stressed in *Sahara India Real Estate Corp. Ltd. vs SEBI (2012)*.

2. **Vague and subjective standards:** Terms such as "morality," "offensiveness," or "well-known moral standards of society" lack clear definition. Such indeterminate standards allow arbitrary enforcement and create uncertainty for speakers.

3. **Chilling effect on legitimate speech:** Fear of FIRs, prosecution, takedowns, or sanctions discourages citizens, journalists, and creators from expressing criticism or unpopular views. This indirect suppression weakens the marketplace of ideas.

4. **Overlap with existing statutory controls:** India already has multiple legal provisions regulating speech under the IT Act and the Bharatiya Nyaya Sanhita. Additional regulation risks duplication and excessive control rather than better enforcement.

5. **Judicial expansion beyond case limits:** When courts extend the scope of individual cases to examine broader regulatory needs, they risk entering the policy domain. This concern echoes the Court's own warning in *Common Cause vs Union of India (2008)*.

6. **Erosion of constitutional boundaries:** Judicial involvement in designing regulatory frameworks blurs the separation of powers. The Constitution assigns law-making to the legislature and review of reasonableness to courts.

7. **Technical complexity of digital speech:** Online platforms operate at massive scale and speed, involving algorithms and evolving technologies. Courts face institutional limits in handling such technical regulation.

8. **Risk of normalising stricter controls:** Repeated judicial calls for stringent laws, coupled with executive readiness, may normalise statutory gags. This risks shrinking constitutional freedoms beyond Article 19(2), contrary to *Kaushal Kishor (2023)*.

Comparative Global Practices

1. Democratic model:

- Major democracies mainly follow a takedown-based approach. The **EU's Digital Services Act, 2022** sets content removal protocols.
- **Germany's Network Enforcement Act, 2017** pushes prompt action on harmful content without harming free speech.
- The **UK Online Safety Act, 2023** and **Australia's Online Safety Act, 2021** focus on removal duties and fines for non-compliance.

2. **Authoritarian model: China and Russia** rely more on surveillance and pre-censorship, using harsh laws to restrict online speech.

Way Forward

1. **Stay within Article 19(2):** Courts should test restrictions only on the expressly listed grounds and avoid adding new limits. It should not be judged by shifting moral standards
2. **Do not widen cases into policy:** In FIR-challenge matters, when the Court says it will "extend the scope" to decide what regulation is needed, it crosses into the legislative space. Even suggestions like publishing draft guidelines and inviting comments show this policy drift, which should be avoided.
3. **Avoid pre-censorship:** Any prior restraint should be shunned; postponement or similar orders must be a last resort with a high reasonableness threshold.
4. **Use existing laws first:** Enforce current provisions on obscenity and cyber offences under the IT Act and BNS, instead of seeking fresh controls.
5. **Review the 2021 IT Rules strictly:** Oversight and "due caution" clauses should be examined for overreach and penal excess.
6. **Prefer removal-based compliance** Follow democratic practice that focuses on takedown protocols and penalties for non-compliance, not statutory gags.
7. **Preserve institutional separations:** Legislatures should debate and frame laws, executives should implement them, and courts should review them for constitutionality.

Conclusion

Freedom of speech survives only when courts respect their constitutional role as guardians, not regulators. The Constitution clearly limits restrictions under Article 19(2), and existing laws already address misuse. Judicial expansion into regulation risks prior restraint and democratic erosion. Courts must protect liberty through constitutional review, not policy design.

Question for practice:

Discuss how judicial intervention in regulating free speech can blur constitutional boundaries and affect democratic freedoms in India.

Source: [The Hindu](#)

A people-led climate intelligence movement

UPSC Syllabus Topic: GS Paper 3 -Environment

Introduction

Climate action now depends on how well countries track what is happening on the ground. Monitoring, reporting and verification systems shape climate transparency, finance access, and trust. Yet most systems remain distant from people who face climate impacts daily. A people-led climate intelligence movement seeks to correct this gap by placing communities at the centre of climate data, decision-making, and governance, while strengthening national and global climate commitments.

What is MRV?

Measurement, Reporting, and Verification (MRV) is a multi-step process used to measure how much greenhouse gas emissions are reduced by a specific mitigation activity over a period of time. These results are then reported to an accredited third party. The third party verifies the report so the results can be certified and carbon credits can be issued..

Significance of MRV

1. **Tracking climate commitments:** MRV allows governments to show measurable progress on mitigation, adaptation, and finance goals. It helps link policies and actions with actual climate outcomes.
2. **Access to climate finance:** Strong MRV systems are necessary to unlock climate finance and results-based payments. Reliable data builds confidence among funders and international partners.
3. **Ensuring accountability and trust:** MRV improves credibility by using verifiable data rather than claims. This supports transparency at national and international levels.

What is CbMRV?

- **Community-based MRV (CbMRV)** allows villages to generate systematic and science-ready environmental data. It values local observation as a formal source of climate intelligence.
- **Blending knowledge systems:** CbMRV combines traditional ecological knowledge with field-based monitoring of rainfall, temperature, soil, water, biodiversity, fisheries, crops, livelihoods, and carbon stocks. This creates a fuller picture of climate change at local scales.
- **From data collection to governance:** Community-generated data feeds into a digital dashboard used at village, district, and State levels. This shifts governance from a top-down model to a shared partnership.

About Tamil Nadu's CbMRV

Origin and purpose

Tamil Nadu's community-based environmental MRV (CbMRV) was started in **2023** under the **UK PACT programme** to pilot a community-based MRV system that could support **just transition goals**. It was developed with **Keystone Foundation** and other scientific partners in three pilot landscapes: **Aracode (Nilgiris), Vellode (Erode), and Killai (Cuddalore)**.

Significance

1. **Brings local climate signals into governance:** It makes community observations a formal part of climate decision-making, instead of relying only on coarse datasets.
2. **Creates science-ready village data:** Villages generate systematic data on rainfall, temperature, soil and water health, biodiversity, fish catch, cropping patterns, livelihoods, and carbon stocks and emissions.
3. **Blends traditional and field monitoring knowledge:** It weaves generational ecological knowledge with field instruments and monitoring protocols.
4. **Improves decision-making across levels:** Data goes into a digital dashboard that informs decisions from village to district and State levels.
5. **Builds climate leadership in communities:** It trained **35 Key Community Stakeholders** as climate stewards who collect, interpret, and explain trends.
6. **Supports local planning and programmes:** It can strengthen Gram Panchayat Development Plans and efforts like Climate Resilient Village, crop choices, and natural resource management.
7. **Strengthens State climate pathways:** It can add evidence for the Tamil Nadu Climate Tracker, State climate planning, Green Tamil Nadu Mission, coastal adaptation, and investment pathways under the Tamil Nadu Green Climate Company.
8. **Prepares for long-term scale and jobs:** Tools and training are proposed for integration into colleges, ITIs, and training centres to create a permanent green workforce and maintain long-term baselines.

Way forward

1. **Build political will** to formally include community forest monitoring in national MRV systems and link it with Nationally Determined Contributions (NDCs).
2. **Create early consensus** among all stakeholders on goals, roles, indicators, and basic rules of monitoring before field work starts.
3. **Select indicators that matter to both sides** so the information is useful for communities as well as government planning and reporting.
4. **Use community-friendly methods** so data collection is practical, locally relevant, and possible with available skills and tools.
5. **Define clear end use of data** so everyone knows how the data will be applied in decisions, programmes, and reporting.

6. **Fix benefit-sharing terms in advance** so communities gain direct and agreed benefits for their monitoring work.

7. **Set a simple feedback loop** so communities also receive results and can use findings for local action.

Conclusion

A people-led climate intelligence movement strengthens climate action by placing communities at the centre of monitoring and decision-making. Tamil Nadu's CbMRV shows how local knowledge can become reliable climate data. When community observations guide planning, finance, and governance, climate systems become more transparent, responsive, and resilient at every level.

Question for practice

Discuss how a people-led climate intelligence movement, through community-based MRV, can strengthen climate governance and transparency in India.

Source: [The Hindu](#)

New Insurance Bill: What's in & what's left out?

Source: The post "New Insurance Bill: What's in & what's left out?" has been created, based on "New Insurance Bill: What's in & what's left out?" published in "Indian Express" on 15th December 2025.

UPSC Syllabus: GS Paper-2- Polity

Context: The Union Cabinet approved the Sabka Bima Sabki Raksha (Amendment of Insurance Laws) Bill, 2025 on 12 December 2025. The Bill aims to revamp India's insurance framework, modernize regulations, expand coverage, and strengthen regulatory oversight. It proposes amendments to the Insurance Act, 1938, the Life Insurance Corporation (LIC) Act, 1956, and the IRDAI Act, 1999.

Key Provisions in the Bill

- 1. 100% FDI in Insurance:** The Bill raises the foreign direct investment (FDI) limit in Indian insurance companies from 74% to 100%. This is expected to attract long-term global capital, promote technology transfer, improve insurance penetration, and enhance underwriting, risk management, and customer service.
- 2. Sops for Foreign Reinsurers:** The requirement for Net Owned Funds for foreign reinsurers has been reduced from ₹5,000 crore to ₹1,000 crore. This measure is intended to attract smaller and new-age reinsurers, increase competition, and strengthen reinsurance capacity in India.
- 3. Enhanced Powers for IRDAI:** The Insurance Regulatory and Development Authority of India (IRDAI) will have the authority to disgorge wrongful gains earned by insurers or intermediaries. The Bill also introduces one-time registration for intermediaries, raises the approval threshold for equity transfers from 1% to 5%, and establishes structured procedures for rule-making and penalty enforcement to ensure transparency and accountability.

4. Greater Operational Freedom for LIC: LIC will be allowed to establish new zonal offices without prior government approval and can restructure overseas operations in accordance with foreign regulations. These measures are aimed at making LIC more agile, competitive, and globally aligned.

5.Regulatory Improvements: The Bill aims to strengthen the insurance regulatory framework by streamlining compliance processes, reducing unnecessary administrative burdens, and improving transparency and policyholder protection.

Provisions Likely Excluded or Missed

1. Composite Licence: The Bill does not include provisions for composite licences, which would allow a single insurer to operate across both life and non-life insurance segments. The absence of this reform maintains the existing segregation of life and general insurers and limits the ability to offer bundled insurance products.

2. Reduced Capital Norms and New Entrants: The Bill does not lower the minimum paid-up capital requirement of ₹100 crore for insurers and ₹200 crore for reinsurers. This omission restricts the entry of smaller, specialised, or regional insurers, thereby limiting financial inclusion and market diversity.

3. Other Missed Proposals: The Bill is also silent on earlier proposals such as allowing insurers to sell other financial products like mutual funds and loans, permitting agents to sell policies of multiple companies, and enabling large corporations to establish captive insurance subsidiaries. These omissions leave several opportunities for modernisation and market expansion unaddressed.

Significance of the Bill

1. The Bill is an important step toward modernising India's insurance sector.
2. It facilitates foreign investment, encourages technology adoption, strengthens regulatory oversight, and provides LIC with greater operational flexibility.
3. At the same time, the exclusion of key reforms such as composite licensing, reduced capital norms, and captive insurers limits the Bill's transformative impact on the structural issues in the insurance sector.

Way Forward

1. **Introduce Composite Licences:** Allow insurers to operate across both life and non-life segments to enable bundled insurance products and enhance market flexibility.
2. **Reduce Capital Requirements for New Entrants:** Lower minimum paid-up capital for insurers and reinsurers to encourage smaller, specialised, and regional players, promoting competition and financial inclusion.
3. **Permit Diversification of Financial Services:** Enable insurers to sell other financial products like mutual funds and loans to offer integrated financial solutions to customers.
4. **Facilitate Captive Insurance Subsidiaries:** Allow large corporations to establish captive insurance units to improve risk management and reduce dependence on external insurers.
5. **Strengthen Technology Adoption and Innovation:** Promote digitalisation, insurtech partnerships, and advanced risk modelling to enhance operational efficiency and customer service.
6. **Enhance Policyholder Protection Measures:** Continue to strengthen IRDAI's powers to ensure transparency, timely grievance redressal, and accountability of insurers and intermediaries.

The Sabka Bima Sabki Raksha Bill, 2025 marks a significant step toward modernising India's insurance sector by facilitating foreign investment, enhancing regulatory oversight, and granting LIC greater operational flexibility. While it strengthens transparency, competition, and policyholder protection, the exclusion of reforms like composite licensing, reduced capital norms, and captive insurance limits its transformative potential. To fully realise the sector's growth and financial inclusion objectives, further measures are needed to encourage innovation, diversify financial offerings, and attract new entrants.

Question: Examine the key features and limitations of the Sabka Bima Sabki Raksha (Amendment of Insurance Laws) Bill, 2025, and suggest measures to strengthen India's insurance sector.

The right moment to boost India-Ethiopia ties

Source: The post “The right moment to boost India-Ethiopia ties” has been created, based on “The right moment to boost India-Ethiopia ties” published in “The Hindu” on 15th December 2025.

UPSC Syllabus: GS Paper-2- International Relations

Context: Ethiopia is one of Africa's fastest-growing economies and a strategically important country in the Horn of Africa. As Ethiopia emerges from internal conflict and works towards building a new national consensus, the current phase provides a timely opportunity to strengthen India-Ethiopia relations.

Strategic Importance of Ethiopia

1. Ethiopia has a population of about 109 million, providing a large domestic market and workforce.
2. The country hosts the headquarters of the African Union, giving it significant diplomatic influence across Africa.
3. Ethiopia plays a key role in regional security and stability, including peace operations in Somalia.
4. The country has immense renewable energy potential, particularly in hydropower, positioning it as a future regional energy exporter.
5. Ethiopia is seeking to diversify its access to the Red Sea to enhance trade security and strategic autonomy.

Historical and People-to-People Ties

1. India and Ethiopia share deep historical ties, especially in the field of education, spanning more than a century.
2. Indian teachers and professors played a foundational role in building Ethiopia's modern education system.
3. Ethiopia was the pilot country for the Pan-African e-Network project, reflecting early technological cooperation with India.
4. Ethiopia sends one of the largest numbers of African students to India, including the highest number of PhD scholars.
5. The Indian diaspora in Ethiopia contributes significantly to trade, investment, and bilateral goodwill.

Economic and Investment Cooperation

1. Indian investment in Ethiopia has exceeded 4 billion US dollars, supported by Indian Lines of Credit since 2006.

2. While earlier investments were concentrated in agriculture, current opportunities lie in manufacturing, pharmaceuticals, and agro-processing.
3. Mining, particularly in gold, critical minerals, and rare earth elements, offers strong potential for strategic cooperation.
4. Joint mining ventures can help secure inputs for India's renewable energy, battery, and semiconductor industries.
5. Ethiopian leadership continues to value Indian investment for its long-term and development-oriented approach.

Defence and Security Cooperation

1. Defence cooperation dates back to 1956 with India's assistance in establishing the Harar Military Academy.
2. Indian defence teams have been training Ethiopian armed forces since 2009.
3. The Ethiopian military requires modernisation after prolonged internal and regional deployments.
4. India's affordable and battle-tested defence equipment is well suited to Ethiopia's requirements.
5. A new MoU on defence cooperation and the Joint Defence Cooperation Committee provide a formal framework for expanding engagement.

Multilateral and Regional Cooperation

1. Ethiopia's membership in BRICS creates new avenues for strategic and economic coordination with India.
2. Cooperation through G-20 and South-South platforms strengthens political convergence.
3. Under the African Continental Free Trade Area, Ethiopia can serve as a manufacturing and export hub for Indian companies.
4. India's duty-free tariff preference scheme remains important for Ethiopian exports amid global trade uncertainty.

Challenges in the Partnership

1. Ethiopia faces foreign exchange shortages that constrain business operations and investor confidence.
2. Regulatory uncertainty, taxation issues, and delays in approvals affect the investment climate.
3. Infrastructure and logistics constraints increase costs, particularly in mining and manufacturing.
4. Post-conflict political transition creates short-term uncertainties for long-term investment planning.

Way Forward

1. Ethiopia should address foreign exchange availability and ensure regulatory consistency to improve investor confidence.
2. India and Ethiopia should update the Double Taxation Avoidance Agreement and the Bilateral Investment Treaty.
3. Cooperation in education should be expanded through digital learning, vocational training, and university linkages.
4. Joint mining projects should be prioritised to secure critical mineral supply chains.
5. Defence cooperation should be deepened through training, capacity building, and defence exports.
6. Multilateral platforms such as BRICS, G-20, and AfCFTA should be effectively leveraged.

Conclusion

The present moment is opportune due to Ethiopia's political transition and India's expanding engagement with Africa. With renewed political will, targeted reforms, and strategic alignment, India-Ethiopia relations can evolve into a dynamic and mutually beneficial partnership in the coming decade.

Question: Discuss the significance of India-Ethiopia relations and explain why the present moment is opportune to deepen bilateral cooperation.

India-Oman Ties

UPSC Syllabus Topic: GS Paper 2 -international relation

Introduction

India and Oman share one of the **oldest and most stable partnerships in the Gulf region**. Prime Minister Narendra Modi's visit to Oman in **December 2025** comes at a time of **regional uncertainty, global trade tensions, and energy transition**. The visit marks **70 years of diplomatic relations** and aims to strengthen **strategic, economic, defence, and people-centric cooperation** between the two countries.

India-Oman Shared History

- 1. Ancient maritime trade links:** India and Oman have been connected since **Harappan times** through the **Indian Ocean trade network**. Ships from **Lothal and Dholavira** sailed to ancient **Magan**, carrying beads, pottery, cotton, and rice.
- 2. Exchange of goods and skills:** Oman supplied **copper, frankincense, stones, and dates**, while its ports acted as **trans-shipment centres** for Indian goods bound for Mesopotamia. **Seals, weights, and measures** show organised trade systems.
- 3. Navigation and global trade role:** Omani sailors mastered **monsoon winds and dhow shipbuilding**. They linked India with the **Roman world**, helping Indian spices reach global markets.
- 4. Cultural and people contacts:** **Gujarati traders** settled in Oman, while **Omani Muslims** lived along India's western coast. Religious travel and commerce kept people moving across centuries.
- 5. Joint resistance to colonial powers:** Indian and Omani rulers cooperated to **counter Portuguese dominance**, strengthening political and commercial ties.

Significance of the India-Oman Relationship

1. Oman's Strategic Importance for India

Trusted partner in West Asia: Oman maintained friendly ties with India even when the region leaned towards Pakistan. Its policy of **moderation and mediation** makes it a stable partner.

Pillar of India's West Asia Policy: India signed a **strategic partnership agreement in 2008**. Oman was also invited as a **guest nation during India's G-20 Presidency in 2023**.

Neutral foreign policy role: Oman's **deliberate neutrality** helps India maintain balanced relations in a conflict-prone region, especially during West Asian tensions.

2. Defence and Maritime Security Cooperation

Institutional defence framework: Defence ties are guided by a **2005 MoU on military cooperation**. Oman is the **first Gulf country** to hold joint exercises with **all three Indian defence services**.

Maritime security collaboration: Since **2012–13**, Indian naval ships have been deployed in the **Gulf of Oman for anti-piracy duties**. Both sides cooperate in the **Indian Ocean Region**.

Strategic access and logistics: The **Duqm Port logistics agreement (2018)** allows basing and turnaround facilities for the **Indian Navy**.

Overflight and transit support: Oman has allowed **overflight and transit facilities** for Indian military aircraft.

Defence procurement milestone (INSAS): Oman became the **first Gulf country** to purchase India's **INSAS assault rifle in 2010**.

Security and surveillance value: Oman's location near the **Gulf of Oman and the Arabian Sea** helps India monitor regional naval activity, including **growing Chinese presence**.

3. Economic, Investment and Digital Cooperation

Bilateral trade growth: India–Oman trade reached **USD 10.613 billion in FY 2024–25**. Oman is **India's third-largest export destination** among GCC countries.

Trade structure and key goods: India's imports are dominated by **petroleum products and urea (over 70%)**, along with polymers, pet coke, gypsum, chemicals, iron and steel, and aluminium.

India's exports to Oman: Exports include **mineral fuels, chemicals, precious metals, iron and steel, cereals, ships and boats, electrical machinery, boilers, tea, coffee, spices, and apparel**.

Foreign direct investment flows: Cumulative FDI from Oman to India stood at **USD 605.57 million (April 2000–March 2025)**.

Oman–India Joint Investment Fund (OIJIF): The **50–50 SBI–Oman Investment Authority JV** has invested **USD 600 million**, including a **USD 300 million tranche announced in 2023**.

Digital payments and fintech cooperation: In **October 2022**, the Central Bank of Oman and **NPCI** signed an MoU, leading to the **launch of RuPay debit cards in Oman** and expansion of **India's Digital Public Infrastructure**.

4. Emerging Areas of Cooperation

Comprehensive Economic Partnership Agreement (CEPA): The India–Oman CEPA aims to **reduce tariffs, boost services trade, and attract investment**. Oman will be India's **second CEPA partner in the Gulf after the UAE**.

Energy transition and green sectors: Cooperation is expanding into **green hydrogen, renewable energy, and critical minerals**.

Connectivity and corridors: Oman may play a role in the **India–Middle East–Europe Economic Corridor (IMEC)** announced at the **G-20 Summit 2023**.

Technology and space cooperation: **Space cooperation** and **joint defence production** in aircraft, naval platforms, and radar systems are under discussion.

5. Education, Health and People-to-People Links

Education cooperation: There is likely to be close cooperation in education, including the **setting up of offshore campuses of IIT and IIM in Oman**.

Health cooperation: **Education and health** are both expected to see closer cooperation during and after the visit.

Indian diaspora: The **Indian diaspora has contributed immensely** to Oman's development and has strengthened the bilateral partnership.

CBSE link in Oman: The **CBSE education system completing 50 years in Oman** is expected to be part of discussions.

What Are the Challenges in the Relationship?

1. **Omanisation policy hurdle:** Oman's Omanisation policy affects CEPA talks due to fixed employment quotas. India seeks a **freeze on current quotas** to protect opportunities for Indian professionals.

2. **Trade heavily oil-linked:** Over **70% of India's imports** from Oman are oil and petroleum products, limiting diversification.

3. **Energy transition impact:** India's move away from fossil fuels may alter trade patterns and requires diversification.

4. **Slow progress of joint projects:** Projects like the **Middle East to India Deepwater Pipeline (MEIDP)** have progressed slowly.

5. **China factor and strategic competition:** China's economic role, port access, and naval presence in the region pose a **strategic challenge for India**.

Conclusion

India–Oman relations rest on **deep history, trust, and strategic alignment**. With **CEPA, defence cooperation, energy transition, and connectivity projects**, the partnership is entering a new phase. Oman remains a **key anchor of India's Gulf engagement**, offering stability and long-term strategic value in a rapidly changing regional order.

Question for practice:

Discuss the key dimensions of the India–Oman strategic partnership and how the recent developments are shaping their future cooperation.

Source: [The Hindu](#)

India need to upgrade its biosecurity measures

Source: The post “**India need to upgrade its biosecurity measures**” has been created, based on “**India need to upgrade its biosecurity measures**” published in “**The Hindu**” on 16th December 2025.

UPSC Syllabus: GS Paper-3- Technology

Context: Biosecurity refers to the systems and practices aimed at preventing the deliberate misuse of biological agents, toxins, and biotechnologies that can harm humans, animals, or plants. With rapid advances in biotechnology and growing global bio-threats, India needs to upgrade its biosecurity measures to safeguard public health and national security.

Why India Needs to Upgrade Its Biosecurity Measures

1. **Advances in Biotechnology:** Emerging technologies such as synthetic biology, gene editing, and artificial intelligence have increased the possibility of biological agents being misused for malicious purposes.
2. **Threat from Non-State Actors:** Reports of toxins like ricin being prepared for potential terror attacks indicate that non-state actors are exploring biological tools, increasing internal security risks.
3. **Geographical and Ecological Vulnerability:** India’s diverse ecology, long borders, and exposure to transboundary diseases make it vulnerable to cross-border biological threats.
4. **High Population Density and Agricultural Dependence:** India’s large population and reliance on agriculture amplify the social and economic impact of any biological incident.
5. **Fragmented Biosecurity Architecture:** Multiple ministries and agencies handle biosecurity-related issues, but the lack of a unified national framework hampers coordination and rapid response.
6. **Declining Global Health Security Preparedness:** Despite improvements in detection, India’s ability to respond effectively to biological threats has weakened, as reflected in global health security assessments.

International Context and Lessons

1. The United States integrates biosecurity under a National Biodefense Strategy with DNA synthesis screening.
2. The European Union adopts a One Health approach linking human, animal, and environmental health.
3. China treats biotechnology as a national security issue through a comprehensive Biosecurity Law.
4. Australia and the United Kingdom follow unified and forward-looking biosecurity strategies.

Challenges in Strengthening Biosecurity in India

1. **Institutional Fragmentation:** Overlapping responsibilities among health, agriculture, biotechnology, and disaster management agencies create coordination gaps.

2. **Outdated Legal Frameworks:** Many existing laws and guidelines were framed before the emergence of modern biotechnologies and do not adequately address dual-use research and synthetic biology risks.
3. **Capacity and Infrastructure Gaps:** Limited biosurveillance infrastructure, shortage of trained personnel, and uneven laboratory standards across States weaken preparedness.
4. **Balancing Innovation and Regulation:** Over-regulation may stifle scientific research and innovation, while under-regulation increases the risk of misuse.
5. **Surveillance and Privacy Concerns:** New tools such as digital surveillance and social media monitoring raise ethical and privacy-related challenges.
6. **Limited Public Awareness and Training:** Biosecurity remains a niche policy area, with low awareness among local authorities, researchers, and **frontline health workers**.

Way Forward

1. India should establish a **comprehensive national biosecurity framework** integrating human, animal, plant, and environmental health under a One Health approach.
2. Legal and regulatory systems should be **updated to address emerging technologies and dual-use risks**.
3. Investment in **biosurveillance, early-warning systems, and microbial forensics** should be increased.
4. **Inter-agency coordination and capacity-building** at the Centre and State levels must be strengthened.
5. International cooperation through platforms like the **Biological Weapons Convention** should be deepened.

Conclusion: India urgently needs to upgrade its biosecurity measures in response to evolving biological threats and technological advances. While significant challenges exist in terms of coordination, capacity, and regulation, a modern, integrated, and forward-looking biosecurity framework is essential to protect lives, livelihoods, and national security.

Question: Does India need to upgrade its biosecurity measures? Explain, highlighting the challenges involved.

50 years of RRBs: A story of reform and transformation in rural India

Source: The post “50 years of RRBs: A story of reform and transformation in rural India” has been created, based on “50 years of RRBs: A story of reform and transformation in rural India” published in “**Business Standard**” on 16th December 2025.

UPSC Syllabus: GS Paper-3- Indian Economy

Context: Regional Rural Banks (RRBs) were established in 1975 to promote financial inclusion and provide affordable credit to rural and semi-urban populations, especially small and marginal farmers, artisans, and rural entrepreneurs. Over the last five decades, RRBs have emerged as a critical pillar of India’s rural credit system.

Role of RRBs in Rural Development

1. **Financial Inclusion:** RRBs have provided first-time access to formal banking for millions of rural households, reducing dependence on informal moneylenders.
2. **Support to Agriculture and MSMEs:** A large share of RRB lending is directed towards agriculture, allied activities, and small rural enterprises, supporting local livelihoods.
3. **Implementation of Government Schemes:** RRBs play a key role in schemes such as PM Jan Dhan Yojana, PMJJBY, MUDRA loans, and SHG-Bank linkage programmes.
4. **Localised Banking Model:** Locally recruited staff and region-specific operations help RRBs overcome language and cultural barriers.
5. **Recycling of Rural Savings:** High credit-deposit ratios indicate that local deposits are reinvested in local development.

Reforms and Transformation Over Time

1. RRBs have undergone multiple phases of consolidation to address inefficiencies and improve scale.
2. The number of RRBs has reduced from 196 in 2005 to 28 at present.
3. Technological upgrades such as Core Banking Solutions, digital payments, and RuPay cards have modernised operations.
4. Periodic recapitalisation has improved capital adequacy and profitability.

Challenges Faced by RRBs

1. **Competition from Commercial Banks and Fintechs:** Increased rural penetration by public and private sector banks has reduced RRBs' traditional niche.
2. **Governance Constraints:** Sponsor bank influence sometimes limits autonomy and slows decision-making.
3. **Asset Quality Issues:** Dependence on agriculture exposes RRBs to climate risks and income volatility, leading to NPAs.
4. **Limited Product Diversification:** RRBs largely rely on traditional credit products and struggle to attract bulk deposits.
5. **Technology and Skill Gaps:** While digitisation has improved, advanced analytics and AI-based credit assessment are still limited.

Way Forward

1. A **National Rural Bank Holding Company** can be created as an apex body to oversee governance, capital support, and technology integration across RRBs.
2. RRBs should adopt **data analytics and AI-driven credit scoring** to improve lending efficiency.
3. **Fintech collaborations** can help expand microcredit and digital financial services.
4. Continued **recapitalisation and capacity-building** is needed to improve resilience.
5. Modernisation should preserve the core values of proximity, trust, and empathy in rural banking.

Conclusion: As RRBs complete 50 years, they remain central to India's financial inclusion and rural development agenda. While consolidation and digitisation have strengthened their foundations, sustained reforms in governance, technology, and business models are essential to ensure their relevance in a competitive, digital-first financial ecosystem.

Question: As Regional Rural Banks (RRBs) complete 50 years, critically examine their role in rural development and the challenges they face. Suggest reforms for their future relevance.

Stepping stone: On nuclear policy, the SHANTI Bill

UPSC Syllabus Topic: GS Paper 3 -Infrastructure (Energy).

Introduction

Nuclear power remains a small but critical part of India's energy mix, contributing **around 3% of electricity generation**. To meet long-term clean energy and climate goals, India plans a major expansion of nuclear capacity. The **SHANTI Bill** marks a structural shift in nuclear policy by opening the sector to private participation, revising liability rules, and restructuring regulation, while keeping **sensitive nuclear activities under state control**.

Current status of India's nuclear power sector

1. Present contribution and installed capacity

- Nuclear power contributes **about 3% of India's electricity** and **around 1.5% of installed power capacity**.
- India currently operates **22 reactors** with an installed capacity of **about 6.8–8.8 GW**, dominated by **Pressurised Heavy Water Reactors (PHWRs)**.

2. Existing legal and institutional framework

- The sector has been governed by the **Atomic Energy Act, 1962**, and the **Civil Liability for Nuclear Damage Act, 2010**.
- Only public entities, the **Nuclear Power Corporation of India**, were allowed to own and operate nuclear plants.

3. Long-term expansion targets and missions

- India aims to scale nuclear capacity to **100 GW by 2047** to support **grid stability and decarbonisation**.
- This includes a **₹20,000 crore mission for Small Modular Reactors** and plans for **indigenous Bharat Small Modular Reactors**.

What is the SHANTI Bill?

The **Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Bill, 2025**, was introduced in the Lok Sabha. The Bill seeks to reform India's nuclear energy framework to support the government's goal of achieving **100 GW of nuclear power capacity by 2047**.

Key Provisions of the SHANTI Bill

1. Repeal of existing nuclear laws

- The Bill proposes the repeal of the **Atomic Energy Act, 1962**, which currently governs nuclear activities in India.

- It also seeks to repeal the **Civil Liability for Nuclear Damage Act, 2010**, which regulates liability in case of nuclear accidents.

2. New unified legal framework: The Bill establishes a **single framework** to govern the production, use, and regulation of **nuclear energy and ionising radiation** in India.

3. Entry of the private sector

- For the first time, **private companies, joint ventures, and other eligible entities** will be allowed to apply for licences to set up and operate nuclear power facilities.
- Private entities will also be permitted to **transport nuclear fuel**, subject to regulatory approval.
- This marks a **major departure from the public sector monopoly** in civil nuclear power.

4. Activities reserved for the government: Sensitive activities such as **uranium enrichment, spent nuclear fuel management, and heavy water production** will remain under the **exclusive control of the Union government**.

5. Licensing and regulatory oversight

- All nuclear and radiation-related activities will require a **licence from the Central government**.
- Operators must obtain **safety authorisation from the Atomic Energy Regulatory Board (AERB)**.
- The Bill grants **statutory status to the AERB** and clearly defines its regulatory powers.

6. Strengthening nuclear safety regulation

- The AERB is empowered to regulate **radiation exposure, waste management, safety inspections, and emergency preparedness**.
- The Centre can take control of radioactive substances or radiation-generating equipment in situations involving radiation hazards.
- The cost of safe disposal may be recovered from the authorised entity.

7. Liability in case of nuclear accidents

- The **operator** of a nuclear installation will be primarily liable for nuclear damage.
- Exceptions apply in cases of **grave natural disasters, armed conflict, war, civil unrest, or terrorism**.
- If compensation exceeds the operator's liability limit, the **Central government assumes additional liability**.

8. Insurance and financial security

- Nuclear operators must maintain **insurance or other financial security** to cover potential damage.

- The Bill provides for a **Nuclear Damage Claims Commission**, replacing the earlier liability framework.

9. Research and innovation: Research and innovation activities are largely **exempt from licensing**, except where **national security or reserved activities** are involved.

Significance of the SHANTI Bill

1. **Unlocks large capital mobilisation** by expanding the pool of eligible operators for the **100 GW by 2047** target.
2. **Shares construction and commissioning risk** beyond a single public operator.
3. **Ends the operating monopoly** of the Nuclear Power Corporation of India.
4. **Creates a clear licensing pathway** for government entities, joint ventures, and companies.
5. **Retains state control over sensitive fuel cycles**, limiting proliferation risks.
6. **Reduces legal ambiguity** by consolidating safety, enforcement, and dispute resolution in one statute.
7. **Lowers transaction costs and timelines** for site approval and commissioning.

Major concerns related to the SHANTI Bill

1. **Adequacy of liability caps:** The maximum operator liability is capped at **₹3,000 crore**, raising concerns about victim compensation and environmental remediation.
2. **Shift of burden to the State:** Liability beyond the cap shifts to the Centre, transferring long-term financial risk to the State.
3. **Reduced supplier accountability:** Supplier liability is removed except where explicitly provided in contracts or in cases of deliberate intent.
4. **Restricted judicial remedies:** Civil court jurisdiction over nuclear damage claims is barred, limiting legal options for victims.
5. **Regulatory independence concerns:** Despite statutory status, appointments remain Centre-driven, affecting trust and confidence.
6. **Controlled private participation:** Private role is confined to non-sensitive segments.

Way forward

1. **Strengthen regulatory independence** through greater insulation from executive influence.
2. **Review liability caps periodically** to align them with real damage risks.
3. **Standardise supplier contracts** to ensure uniform accountability.

4. Enhance transparency and public participation in safety and compensation systems.

Conclusion

The **SHANTI Bill** represents a decisive shift in India's nuclear policy by enabling private participation, simplifying liability, and consolidating regulation. It supports long-term clean energy goals and capital mobilisation while retaining state control over sensitive activities. Addressing concerns related to liability adequacy, supplier accountability, judicial remedies, and regulatory independence is essential for **safe, trusted, and sustainable nuclear expansion**.

Question for practice:

Evaluate the significance and major concerns of the SHANTI Bill, 2025 in helping India achieve its target of 100 GW nuclear power capacity by 2047.

Source: [The Hindu](#)

The Trump National Security Strategy, Europe's Existential Crisis

UPSC Syllabus Topic: GS Paper2 -International Relation

Introduction

The **Trump Administration's second-term National Security Strategy** signals a **sharp break from past U.S. thinking on Europe**. It treats Europe **less as a partner and more as a problem** shaped by **cultural decline, political choices, and dependence on American power**. This shift forces Europe to confront doubts about **U.S. reliability, its own security capacity, and its role in sustaining the post-war international order**.

About Trump Administration's National Security Strategy (NSS)

1. Nature and purpose of the NSS: The **National Security Strategy** is a **Congress-mandated document** that sets the **broad thinking of an administration on threats, allies, and interests**. It guides **defence planning and foreign policy tone**, even though it is **not a binding policy document**.

2. Clear break from earlier Trump term: The **second-term NSS** reflects Trump's worldview more directly than the **2017 version**. Unlike the first term, it is **less shaped by the traditional U.S. strategic establishment** and more aligned with **America First politics**.

3. America First and mercantilist outlook: The NSS promotes **America First approach** focused on **trade imbalances, reindustrialisation, and national sovereignty**. It **rejects global leadership through institutions and treaties** in favour of **narrow national interest**.

4. Geographic focus and blind spots: The document **largely ignores Africa, Australia, and New Zealand**, and gives **limited attention to Asia beyond China**. Its main concern is the **Western Hemisphere**, with **Europe portrayed as declining and problematic**.

Core Message of the NSS on Europe

1. Europe as a civilizational problem: The NSS warns of Europe's "civilizational erasure", blaming migration policies, restrictions on free speech, suppression of opposition, and loss of national identity. Cultural decay, not Russian aggression, is framed as the main threat.

2. Migration and identity fears: The document claims that some NATO countries could become majority non-European in the future. This framing suggests that demographic change itself is treated as a security issue.

3. Political intervention concerns: The U.S. promises to support "patriotic European parties" to restore Europe's greatness. Many Europeans see this as interference in domestic politics and even as a form of regime change.

4. Reduced role for NATO expansion: The NSS states that NATO cannot be a perpetually expanding alliance. This implicitly warns Ukraine and overlooks the recent accession of Sweden and Finland after Russia's invasion of Ukraine.

5. Call for Europe to manage Russia: Europe is urged to assume primary responsibility for its defence and to restore strategic stability with Russia. Russia is treated as a future partner rather than a primary threat.

Europe's Strategic Dilemma

1. False comfort in past assumptions: European leaders long hoped that Trump's statements were tactical and that the U.S. would still stand by Europe. The NSS removes this ambiguity and exposes the limits of that hope.

2. Three response options for Europe: Europe can ignore the NSS, flatter Trump to retain U.S. support, or accept that America may no longer be a reliable ally. Each option carries costs and risks.

3. Continued dependence despite warnings: After earlier U.S. criticism, Europe chose flattery and reassurance over autonomy. Germany reversed talk of strategic independence and ordered more U.S. military equipment dependent on American intelligence.

4. Rising defence spending without autonomy: European states agreed to raise defence spending to 5% of GDP at the NATO summit. This move strengthens NATO budgets but does not solve Europe's reliance on U.S. capabilities.

5. Limits of European defence integration: Europe has never defended itself as a single entity. So, even if it wants to rely less on the U.S., joint defence projects still move slowly, as seen in the stalled Franco-German sixth-generation fighter jet project.

6. Manpower and nuclear challenges: A U.S. troop withdrawal would leave Europe with serious manpower shortages. Voluntary conscription and unresolved nuclear deterrence issues further complicate autonomy, especially after Brexit.

Impact on the Global Order

1. Attack on transnational institutions: The NSS criticises **international organisations** for **undermining sovereignty and political liberty**. It supports reform **only when institutions directly serve U.S. interests**.

2. Retreat from post-war leadership: The U.S. signals **withdrawal from maintaining the global order it once built**. It rejects the role of **global stabiliser** and **shifts responsibility to regional powers**.

3. Risk of power vacuums: A U.S. retreat into its **western hemisphere** may leave space for **China and Russia to expand influence elsewhere**. This **weakens restraints on authoritarian behaviour**.

4. Erosion of rules-based order: The post-war system is **imperfect and outdated**, but it still **limits unchecked power**. Its weakening risks a world where **force replaces rules**.

5. Europe's choice with global consequences: Europe's response will shape whether **liberal rules survive** or give way to **transactional power politics**. The decision affects **global peace, trade, and security norms**.

Conclusion

The **Trump NSS confronts Europe with a hard reality** about **American priorities and reliability**. Europe must decide whether to **depend on a shifting ally** or **build credible autonomy**. This choice will determine **not only Europe's security** but also the **future of the rules-based international order** that has shaped global stability for decades.

Question for practice:

Examine how the Trump Administration's second-term National Security Strategy reshapes U.S. expectations of Europe's defence role and affects the rules-based global order.

Source: [The Hindu](#)

A bill that takes us back to the days before MGNREGA

Source: The post "A Bill that takes us back to the days before MGNREGA" has been created, based on "A Bill that takes us back to the days before MGNREGA" published in "Indian Express" on 17th December 2025.

UPSC Syllabus: GS Paper-3- Indian Economy

Context: The VB-G RAM G Bill, 2025 seeks to replace the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) by aligning rural employment with the vision of *Viksit Bharat @2047*. While the Bill introduces certain administrative and technological changes aimed at efficiency and convergence, it also raises serious concerns regarding dilution of rights, federal balance, and accountability.

Key Provisions

- **Shift From Demand-Driven to Supply-Driven Model:** The Bill marks a fundamental shift from a demand-driven employment guarantee to a supply-driven rural jobs scheme.
- Employment generation under the new framework will be limited by pre-fixed budgetary allocations rather than actual demand from rural households. Unlike MGNREGA, workers will no longer have an enforceable right to demand employment.

- **Increase in Guaranteed Workdays:** The Bill increases the number of guaranteed workdays per rural household from 100 days to 125 days per financial year. However, this increase is subject to budgetary ceilings determined by the Union government.
- **Increased Financial Burden on States:** The financial contribution required from States will rise significantly under the new Bill.
 - For most States and Union Territories with legislatures, the cost-sharing ratio will shift to 60:40 between the Centre and the States.
 - For north-eastern States, Himalayan States, and certain Union Territories, the cost-sharing ratio will remain at 90:10.
 - Under MGNREGA, the effective cost-sharing was approximately 90:10 for all States.
- **Centralised Budget Allocation:** The Bill empowers the Union government to determine State-wise normative allocations for each financial year.
 - These allocations will be based on “objective parameters” that will be prescribed by the Central government.
 - States will no longer be able to seek additional funds based on increased demand for work.
- **Restricted Geographic Coverage:** The Union government will have the authority to notify specific rural areas within States where the scheme will be implemented. This represents a departure from the universal coverage model of MGNREGA, which applied to all rural areas.
- **Control Over Timing of Work:** The Bill allows the programme to be paused during peak agricultural seasons. This provision is intended to ensure the availability of labour for agricultural activities but may reduce employment security for rural workers.
- **Codification of Technological Measures:** Technological interventions previously introduced administratively under MGNREGA are formally incorporated into the new law. These include mobile app-based attendance systems, Aadhaar-based wage payments, and geotagging of worksite

Positive Intentions of the Bill

1. Alignment with Changing Rural Economy: The Bill recognises **socio-economic transformation in rural India**, such as improved connectivity, electrification, housing, and digital access. It seeks to move beyond subsistence employment towards **livelihood creation, infrastructure development, and climate resilience**.

2. Use of Technology for Transparency: Codification of **Aadhaar-based payments, mobile attendance, and geotagging** aims to reduce leakages and ghost beneficiaries. Digital monitoring can potentially improve efficiency and outcome tracking.

3. Higher Notional Employment Days: The proposed **125 days of employment**, compared to 100 days under MGNREGA, signals intent to enhance income support, at least in principle.

Key Challenges

1. Dilution of Rights-based Framework: The Bill replaces a **legal right to demand work** with an allocation-based scheme. Absence of unemployment allowance removes enforceable accountability of the State.

2. Excessive Centralisation: Section 4(5) empowers the Centre to determine **State-wise allocations**, while Section 5(1) allows it to notify specific rural areas. This departs from MGNREGA's **universal and demand-driven nature**, reducing beneficiary agency.

3. Increased Fiscal Burden on States: The **60:40 funding pattern** (90:10 for Himalayan States) shifts significant responsibility to States. States may lack fiscal capacity, leading to uneven implementation and reduced coverage.

4. Technocratic Surveillance and Work Blackout Periods: Pausing employment during peak agricultural seasons may hurt **landless labourers** who depend on MGNREGA as a safety net. Excessive reliance on technology risks **exclusion of digitally marginalised workers**.

Way Forward

1. Retain the Rights-based Core: The **right to demand work and unemployment allowance** must be preserved to ensure accountability.

2. Reform, Not Repeal: Strengthen MGNREGA by enhancing workdays to **125 days**, increasing wages, and linking works to **climate adaptation and asset creation**.

3. Cooperative Federalism: Ensure predictable central funding and greater **state flexibility** in design and implementation.

4. Balanced Use of Technology: Technology should aid transparency without becoming a tool for exclusion; offline safeguards must be ensured.

Conclusion: While the VB-G RAM G Bill reflects aspirations of a transforming rural India, it risks undermining hard-won democratic and constitutional guarantees. A truly *Viksit Bharat* requires strengthening the rights-based employment framework through reform, inclusion, and cooperative governance rather than replacing it with a centrally controlled, budget-capped scheme.

Question: “The proposed VB-G RAM G Bill, 2025 represents a significant shift in India’s rural employment framework.” Critically examine the concerns associated with it, and suggest a balanced way forward.

Sabka Bima Sabki Raksha (Amendment of Insurance Laws) Bill, 2025

Source: The post “Sabka Bima Sabki Raksha (Amendment of Insurance Laws) Bill, 2025” has been created, based on “Explained | New Insurance Bill: What’s in & what’s left out?” published in “Indian Express” on **17th December 2025**.

UPSC Syllabus: GS Paper-2- Polity and Governance

Context: The Sabka Bima Sabki Raksha (Amendment of Insurance Laws) Bill, 2025 seeks to modernise India’s insurance framework by amending the Insurance Act, 1938, the LIC Act, 1956, and the IRDAI Act, 1999. The Bill aims to **expand insurance coverage**, attract investment, and strengthen regulatory oversight, but it also leaves out several long-pending structural reforms.

Key Provisions of the Bill

1. Increase in FDI Limit to 100%: The Bill raises the Foreign Direct Investment limit in insurance companies from 74% to 100%. This is expected to attract long-term foreign capital, facilitate technology transfer, enhance

competition, and support the goal of “Insurance for All by 2047.” It will also bring global best practices in underwriting, risk assessment, and claims management.

2. Incentives for Foreign Reinsurers: The Bill reduces the Net Owned Funds requirement for foreign reinsurers from ₹5,000 crore to ₹1,000 crore. This measure is intended to attract more global and niche reinsurers, deepen domestic reinsurance capacity, and reduce excessive dependence on the public sector reinsurer, GIC Re.

3. Enhanced Powers for IRDAI: The Insurance Regulatory and Development Authority of India (IRDAI) is granted stronger enforcement powers, including the authority to disgorge wrongful gains made by insurers or intermediaries. This aligns IRDAI’s regulatory strength with that of SEBI and improves policyholder protection.

4. Simplification of Regulatory Procedures: The Bill introduces a one-time registration system for insurance intermediaries, reducing repetitive approvals and compliance burden. It also raises the threshold for IRDAI approval for transfer of paid-up equity capital from 1% to 5%, easing routine business transactions.

5. Improved Regulatory Governance: A formal Standard Operating Procedure for regulation-making is proposed to be incorporated into the Act. Clear criteria for penalties are introduced, improving transparency, predictability, and consistency in regulatory enforcement.

6. Greater Operational Autonomy for LIC: The Bill empowers LIC to open new zonal offices without prior government approval and allows restructuring of overseas operations in line with host country regulations. This enhances LIC’s administrative efficiency, competitiveness, and global operational flexibility.

Limitations

1. Absence of Composite Licensing: The Bill does not provide for composite licences that would allow insurers to operate in both life and non-life segments. This maintains rigid segmentation, limits product bundling, and prevents insurers from offering integrated insurance solutions under one roof.

2. No Reduction in Capital Requirements: The Bill retains the existing high minimum paid-up capital requirements for insurers and reinsurers. This discourages small, regional, and niche players, especially those targeting rural areas, micro-insurance, gig workers, and low-income households.

3. No Push for New Entrants and Innovation: By not lowering entry barriers, the Bill misses an opportunity to encourage specialised insurers such as health-only, agriculture-focused, or micro-insurance firms that could improve insurance penetration and financial inclusion.

4. Exclusion of Multi-Product Distribution: Proposals allowing insurers to distribute other financial products like mutual funds, loans, and credit cards have been dropped. This limits integrated financial service delivery and alternative revenue streams for insurers.

5. Restrictions on Insurance Agents Remain: The Bill does not allow individual insurance agents to sell products of multiple insurers. This continues to restrict consumer choice and agent flexibility.

6. No Provision for Captive Insurance Companies: The Bill is silent on permitting large corporations to set up captive insurance entities. This limits advanced risk-management options for Indian corporates and keeps India behind global practices.

Way Forward

1. Introduction of Composite Licensing: The government should consider allowing composite licences to enable insurers to offer life, health, and general insurance products under one umbrella. This would promote integrated insurance solutions, enhance consumer convenience, and align India's insurance framework with global best practices.

2. Rationalisation of Capital Requirements: Minimum paid-up capital norms for insurers and reinsurers should be reviewed and rationalised to encourage the entry of small, regional, and niche players. Lower entry barriers would help expand insurance coverage in underserved and rural areas.

3. Promotion of Specialised and Inclusive Insurers: Policy support should be extended to specialised insurers such as health-only, agriculture-focused, and micro-insurance companies. This would help address the protection gaps faced by informal workers, gig economy participants, and low-income households.

4. Enabling Captive Insurance Companies: The legal framework should permit large corporations to establish captive insurance entities. This would modernise India's risk-management ecosystem, reduce dependence on overseas captives, and retain insurance capital within the country.

5. Greater Flexibility for Insurance Distribution: Insurance agents should be allowed to sell policies of multiple insurers to improve competition, expand consumer choice, and enhance last-mile insurance penetration.

6. Integration with Broader Financial Services: Insurers may be permitted to distribute select financial products such as mutual funds and pension products under a regulated framework. This would promote integrated financial solutions and improve financial inclusion.

7. Strengthening Consumer Protection and Awareness: Alongside regulatory reforms, greater emphasis should be placed on financial literacy, digital grievance redressal, and faster claims settlement to build trust and increase insurance adoption.

8. Phased and Consultative Reform Approach: Future amendments should be introduced in a phased manner after wider stakeholder consultations to balance industry growth, consumer protection, and systemic stability.

Conclusion: The Sabka Bima Sabki Raksha Bill, 2025 marks an important step towards liberalisation and regulatory strengthening of India's insurance sector, particularly through 100% FDI and enhanced IRDAI powers. However, the exclusion of composite licences, capital norm rationalisation, and captive insurance reflects a cautious reform approach. To truly deepen insurance penetration and promote inclusive growth, these structural reforms may need to be revisited in future amendments.

Question: "The Sabka Bima Sabki Raksha (Amendment of Insurance Laws) Bill, 2025 seeks to modernise India's insurance sector but stops short of key structural reforms." Discuss the major provisions of the Bill and critically examine its limitations in achieving inclusive insurance growth.

About Overseas Mobility (Facilitation and Welfare) Bill, 2025

UPSC Syllabus Topic: GS Paper 2 -Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Introduction

India's overseas labour migration has expanded rapidly, driven by **limited domestic opportunities** and **strong demand for low-skilled workers abroad**. Millions of Indian workers migrate to the **Gulf, Southeast Asia, and other regions**, often facing **unsafe recruitment, weak legal protection, and exploitation**. The **Overseas Mobility (Facilitation and Welfare) Bill, 2025** seeks to replace the **Emigration Act, 1983**, but raises concerns about whether **facilitation is being prioritised over migrant welfare**.

About Overseas Mobility (Facilitation and Welfare) Bill, 2025

The **Overseas Mobility (Facilitation and Welfare) Bill, 2025** is proposed by the **Ministry of External Affairs** to replace the **Emigration Act, 1983**. It aims to establish a **comprehensive framework for managing overseas employment of Indian nationals**. The Bill focuses on **safe and orderly migration** while **promoting overseas opportunities**. It also seeks to ensure **policy coordination** and **welfare-related actions across ministries**.

Key Features

- 1. Overseas Mobility and Welfare Council:** The Bill proposes the establishment of an **Overseas Mobility and Welfare Council**. The council aims to ensure **greater convergence among ministries** involved in migration and overseas employment policy.
- 2. Balancing opportunities and protection:** The Bill seeks to strike a **balance** between **promoting overseas opportunities** and establishing a **regulatory framework for protection and welfare of vulnerable categories**.
- 3. Oversight of international migration agreements:** The Bill creates a mechanism to oversee the **administration and implementation of international agreements** on migration and mobility.
- 4. Data-driven policy management:** The Bill emphasises **data-driven policymaking** based on **labour studies** and **coordinated actions across different ministries and departments**.

Major Concerns Related to the Proposed Bill

- 1. Weakening of enforceable migrant rights:** The Bill removes provisions that allowed migrants to **directly initiate legal action** against exploitative recruiters or employers. This increases **dependence on state authorities** and weakens **access to timely justice**.
- 2. Dilution of protections for women and children:** Specific safeguards and **higher penalties for crimes against women and children** are replaced by a broad reference to **"vulnerable classes."** This reduces **legal clarity** and weakens **enforcement**.
- 3. Absence of a clear framework on human trafficking:** The Bill remains **silent on labour-related human trafficking** despite **high-risk migration corridors**. This creates space for exploitation that can slide into **modern-day slavery**.

4. **Removal of recruitment fee transparency:** Earlier requirements for **transparent disclosure of recruitment fees** are dropped. This exposes migrants to **debt bondage before departure**.
5. **Reduced accountability of recruitment agencies:** Responsibilities such as **post-arrival support, dispute resolution, and document renewal** are no longer clearly imposed on recruitment agencies. These duties are shifted to **government bodies** that may be **overburdened and under-resourced**.
6. **Over-centralisation of migration governance:** The Bill concentrates authority at the **central level** and sidelines **state governments**. States with **high levels of overseas migration** have **no formal role** in the Overseas Mobility and Welfare Council.
7. **Exclusion of civil society and trade unions:** The Bill does not include **trade unions, migrant organisations, or rights groups** in decision-making bodies. This removes **ground-level oversight** and weakens **feedback from affected communities**.
8. **Surveillance risks linked to data systems:** The **Integrated Information System** collects **extensive migrant data** without clear safeguards for **consent and use**. While monitoring increases, **direct welfare benefits** for migrants remain unclear.
9. **Neglect of illegal online recruitment:** The Bill does not address **fraudulent online recruitment** through social media and messaging platforms. Migrants remain exposed to **fake job offers** and **digital scams**.
10. **Inadequate reintegration and return support:** Reintegration measures such as **skill training, counselling, and livelihood support** are weakly addressed. Migrants deported or forced to return within **182 days** are excluded from **returnee benefits**.
11. **Weak penalties for serious violations:** Penalties mainly target **recruitment agencies through fines**. **Traffickers, abusive foreign employers, and overseas exploiters** remain largely outside the law's **effective reach**.

Way Forward

1. **Restore migrant self-advocacy rights:** Allow migrants to **directly initiate legal proceedings** against exploiters through a **clear and time-bound process**.
2. **Reinstate strict recruitment fee regulation:** Make **fee disclosure mandatory** and enforce limits to prevent **debt bondage** and **contract substitution**.
3. **Define trafficking and address modern-day slavery:** Explicitly define **labour trafficking** and link it to **strong penalties** and **compensation mechanisms**.
4. **Strengthen federal and participatory governance:** Include **migrant-sending states, trade unions, and civil society organisations** in key decision-making bodies.
5. **Provide universal and funded reintegration support:** Ensure **skill training, counselling, and livelihood assistance** for **all returning migrants** without restrictive cut-offs.

Conclusion

The **Overseas Mobility (Facilitation and Welfare) Bill, 2025** prioritises **administrative facilitation over worker protection**. By **weakening enforceable rights, centralising authority, and limiting accountability**, it risks **deepening migrant vulnerability**. A **rights-based framework with federal participation, clear action against trafficking, recruitment transparency, and assured reintegration support** is necessary to protect the **dignity, safety, and livelihoods** of Indian labour migrants abroad.

Question for practice:

Examine how the Overseas Mobility (Facilitation and Welfare) Bill, 2025 may prioritise facilitation over migrant welfare, and discuss the key concerns and way forward.

Source: [The Hindu](#)

The Changing Patterns of India's Student Migration

UPSC Syllabus Topic: GS Paper 2 - Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

Introduction

India's student migration has moved beyond **elite universities or programmes that are fully funded** to become a **mass, self-financed movement** driven by **middle-class aspirations**. Students now migrate not only for education but also for **social mobility, global exposure, and permanent settlement**. While rising numbers suggest **wider access to foreign education**, this shift also exposes **serious risks** related to **education quality, employment outcomes, financial stress, and long-term economic consequences**.

Current Status of Indian Student Migration

1. **Rapid growth in student numbers:** Indian students abroad crossed **13.2 lakh in 2023**, increased to **13.35 lakh in 2024**, and are projected to reach **13.8 lakh in 2025**, spread across **more than 70 countries**.
2. **Major destination countries:** The **United States and Canada** together host about **40%** of Indian students, followed by the **United Kingdom, Australia, and Germany** as preferred destinations.
3. **Recognition as a diaspora category:** Students are now formally recognised as a major part of India's diaspora, as reflected in the **Parliamentary Committee on the Welfare of Indian Diaspora (2022)**.
4. **Shift towards self-financed migration:** Student migration is no longer limited to **funded programmes**. It is increasingly supported by **family savings, loans, and private financing**.

Reasons for the Changing Pattern in India's Student Migration

1. **Middle-class aspirations and social mobility:** Foreign education is seen as a pathway to **better wages, higher status, and improved living standards** for middle-class households.

2. **Education as a route to settlement:** For many students, studying in **OECD countries** is closely linked to hopes of **permanent residency and long-term security**.
3. **Limited domestic opportunities:** Concerns about **education quality** and **well-paid employment within India** push students to look for opportunities abroad.
4. **Influence of recruitment agents:** Education agents play a central role in guiding student choices, often directing them towards institutions with **easier entry requirements**.
5. **Expansion of an unregulated education market:** The foreign education industry has grown rapidly with **limited oversight**, enabling **profit-driven admissions** rather than outcome-based selection.

Major Concerns Related to Indian Student Migration

1. **Entry into lower-tier institutions:** Many students are channelled into **lower-ranked universities or vocational colleges** instead of strong academic institutions.
2. **Mismatch between courses and skills:** Students often enrol in programmes **unrelated to their academic background**, reducing their employability after graduation.
3. **Commission-driven admissions:** Tie-ups between recruitment networks and less credible colleges are driven mainly by **commissions** rather than student outcomes.
4. **Deskilling and weak career progression:** A large number of graduates fail to move into **skilled employment**, resulting in **underemployment** and wasted qualifications.
5. **Declining academic standards in some destinations:** In the U.K., what were once polytechnics have become universities post **1992** that cater primarily to **international students**, sometimes waiving entry requirements and triggering controversy due to **declining academic standards**.
6. **Poor transition to skilled visas:** In the U.K., reports suggest that approximately **only one in four** Indian postgraduates secures a **sponsored skilled visa**.

Living, Work and Visa-Related Challenges

1. **High cost of overseas education:** Students often spend **₹40–50 lakh** on tuition and living expenses, creating **long-term financial pressure** on families.
2. **Rising living costs and restricted work hours:** **High rents, limited work hours, and visa caps** make it difficult for students to manage daily expenses.
3. **Dependence on low-wage employment:** Many students take up **unskilled and low-paid jobs**, often juggling **multiple part-time roles** to survive.
4. **Risk of exploitation and informality:** **Long working hours, weak protections, and undocumented work** expose students to exploitation and stress.

5. **Shrinking visa pathways:** In the U.K., the **student-to-care visa route** that existed until 2024 has been closed, reducing short-term survival options.

Impacts of the Changing Student Migration Pattern

1. **Reverse remittances and household burden:** Many students fail to recover education costs and return in debt, leading to **reverse remittances** where Indian households subsidise foreign economies.
2. **State-level impact:**
 - The **Kerala Migration Survey 2023** shows student migration doubling from **1.29 lakh in 2018 to 2.5 lakh in 2023**, forming **11.3% of total emigrants**.
 - Outward student remittances from Kerala are estimated at **₹43,378 crore**, nearly **20% of inward remittances** from labour migrants.
3. **Economic gains for host countries:** International students contributed **\$30.9 billion** to Canada's GDP in 2022 and supported over **3.61 lakh jobs**, while Indian students formed about **45% of enrolments in 2023**.
4. **Creation of a new low-cost labour pool:** Student migration has become a source of **cheap labour** for OECD economies, funded through **debt** rather than employer demand.

Way forward

1. **Stronger regulation of education agents:** Education agents need stricter regulation to stop **misleading practices** and unchecked recruitment.
2. **Pre-departure counselling for students:** Students should receive clear guidance before migration on **education quality, costs, and realistic outcomes**.
3. **Bilateral frameworks for institutional accountability:** India needs agreements with destination countries to ensure foreign institutions remain accountable for **student welfare and outcomes**.
4. Encourage every student to register on the **MEA student registration system** and use **MADAD** for support and grievance redressal
5. **Verify accreditation and recognition before admission:** Make accreditation checks a compulsory step so students do not land in **low-quality institutions** with weak outcomes.
6. Update counselling regularly because rules on **dependants and work hours** can change and directly affect survival strategies and finances.

Conclusion

India's student migration reflects **strong aspirations but weak outcomes**. Rising numbers conceal **deskilling, debt, and reverse remittances** that benefit host economies more than families at home. Without **better regulation, counselling, and institutional accountability**, this trend risks deepening **brain waste** instead of delivering genuine social mobility or national benefit.

Question for practice:

Discuss the changing nature of India's student migration and the key concerns, challenges, and impacts associated with it.

Source: [The Hindu](#)

Demographic Dividend' of Elders

Source: The post “**Demographic Dividend' of Elders**” has been created, based on ‘**Demographic Dividend' of Elders**” published in “**The Hindu Business**” on 18th December 2025.

UPSC Syllabus: GS Paper-2-Governance

Context: India's demographic policy has largely focused on the youth dividend, while neglecting the potential contribution of experienced and capable elderly citizens. A subset of retirees, termed “rewirees,” represents an untapped demographic dividend as they seek meaningful and productive engagement after retirement.

Meaning and Significance of Rewirees

1. Rewirees are retired individuals who wish to reorient their lives by undertaking work that is different from their earlier careers.
2. Rewirees possess valuable experience, maturity, and problem-solving ability, which distinguishes them from younger workers.
3. The engagement of rewirees does not reduce employment opportunities for the youth because their skills, expectations, and work roles differ significantly.
4. Many rewirees are willing to work for lower wages or even voluntarily, especially in socially meaningful roles.
5. The primary limitation of rewirees is their reluctance to accept rigid and physically punishing work schedules.

Retired Defence Personnel as a Key Resource

1. Retired Defence personnel form a highly prepared and immediately usable group of rewirees.
2. Senior retired officers have expressed willingness to work on civilian-led social impact initiatives in collaboration with civilians.
3. These senior officers can mobilise large numbers of retired Junior Commissioned Officers (JCOs) and Non-Commissioned Officers (NCOs).
4. Many JCOs and NCOs retire at relatively young ages ranging from 45 to 54 years, which is too early for complete withdrawal from productive work.
5. Retired Defence personnel are widely distributed across small towns and villages, increasing their relevance for grassroots development.

Limitations of Existing Rehabilitation Mechanisms

1. Existing pre-retirement training and job fairs organised by the Defence forces mainly connect retirees with urban corporate employment.

2. Such initiatives fail to reach retired JCOs and NCOs living in small towns and rural areas where corporate jobs are scarce.
3. Therefore, alternative mechanisms are required to utilise the productive potential of rural Defence rewirees.

Rewirees as Agents of Local Change

1. Social impact organisations can engage Defence rewirees as agents of social, economic, and technical transformation in their local areas.
2. The participation of family members, especially women, can significantly enhance the developmental impact of such initiatives.
3. Rewirees require practical and hands-on training tailored to local needs and organisational objectives.
4. The involvement and endorsement of senior Defence rewirees would assure legitimacy and motivate participation at the grassroots level.
5. Senior officers can provide guidance remotely while making periodic field visits to maintain trust and effectiveness.

Implementation Strategy

1. The integration of rewirees should begin with small-scale and low-cost pilot projects.
2. Such initiatives can be gradually expanded with necessary modifications based on experience and local conditions.
3. The disciplined background of Defence personnel can ensure accountability and sustainability of these efforts.

Conclusion: By productively engaging retired Defence personnel, India can effectively harness a neglected rewiree demographic dividend. This approach can accelerate inclusive economic and social development without undermining youth employment. Success in this model can pave the way for systematically utilising the broader civilian rewiree population.

How is the Aravalli range to be protected?

Source: The post “How is the Aravalli range to be protected?” has been created, based on ‘How is the Aravalli range to be protected?’ published in “**The Hindu**” on **18th December 2025**.

UPSC Syllabus: GS Paper-3-Environment

Context: The Aravalli range is India’s oldest mountain system and plays a critical ecological role in preventing desertification and maintaining environmental stability. The Supreme Court has recently intervened to ensure uniform identification and sustainable protection of the Aravalli hills across multiple States.

Ecological Significance of the Aravalli Range

1. The Aravalli hills act as a natural barrier that prevents the eastward expansion of the Thar Desert into the Indo-Gangetic plains.
2. The range helps regulate local climate, supports rich biodiversity, and aids in groundwater recharge.
3. The Aravallis are the source of important rivers such as the Chambal, Sabarmati, and Luni.

4. The hills contain key aquifer recharge zones that sustain agriculture and drinking water needs in surrounding regions.
5. India is internationally obligated under the UN Convention to Combat Desertification to protect ecosystems such as the Aravalli range.

Threats to the Aravalli Range

1. Excessive and often illegal mining of stone and sand over the past four decades has severely degraded the hills.
2. Mining has contributed to declining groundwater levels, increased air pollution, and habitat fragmentation.
3. Weak enforcement of environmental regulations has allowed continued ecological damage.

Recommendations of the Central Empowered Committee

1. The CEC recommended comprehensive scientific mapping of the Aravalli range across all States.
2. It proposed a macro-level environmental impact assessment of cumulative mining activities.
3. The committee advised a strict ban on mining in ecologically sensitive zones such as protected forests, water bodies, tiger corridors, aquifer recharge areas, and the National Capital Region.
4. It recommended stringent regulation of stone-crushing units.
5. The committee advised that no new mining leases or renewals should be allowed until mapping and assessments were completed.

Need for a Uniform Definition of the Aravalli Hills

1. States were using inconsistent and selective criteria to define the Aravalli hills, enabling mining in ecologically fragile areas.
2. Expert bodies, including the Forest Survey of India, had differing definitions based on slope, buffers, and valley width.
3. To resolve this confusion, the Supreme Court constituted a multi-agency committee to arrive at a scientifically sound definition.
4. The committee concluded that hills above 100 metres should be classified as part of the Aravalli range.
5. While concerns were raised that this definition could allow mining in lower hills, the Court accepted it as more inclusive and administratively workable.

Other Directions Issued by the Supreme Court

1. The Court directed the preparation of a comprehensive Management Plan for Sustainable Mining (MPSM).
2. The plan must identify no-go zones where mining is permanently prohibited.
3. It must also identify areas where limited and strictly regulated mining may be allowed.
4. The plan must assess cumulative ecological impacts and define restoration and rehabilitation measures.

Conclusion: The protection of the Aravalli range requires a science-based, coordinated, and regulated approach rather than absolute prohibition. The Supreme Court's directions aim to balance ecological conservation with controlled economic activity. Effective implementation of these measures is essential to prevent desertification and ensure long-term environmental sustainability.

A Bold Step Amid an Ambitious Nuclear Energy Target

UPSC Syllabus Topic: GS Paper 3 -Infrastructure (Energy)

Introduction

A bold step amid an ambitious nuclear energy target reflects India's effort to align **human development goals** with **long-term energy security**. Human development rises with energy use, and India's aspiration to reach high development levels requires **massive, reliable, and clean energy generation**. **Decarbonisation pressures, limits of renewables, and rising digital and industrial demand** make **nuclear energy central** to India's future energy strategy.

Why energy matters for development?

- 1. Energy and development link:** In early stages, humans needed energy only for food. With hunting, agriculture, industry, and transport, **energy demand expanded steadily**.
- 2. Digital era energy demand:** The present phase of development is driven by **digital technologies**. Digitalisation increases **electricity demand across services, industry, and infrastructure**.
- 3. HDI as a yardstick:** The **Human Development Index** combines **income, education, and health**. Higher HDI levels require **higher per capita final energy consumption**.
- 4. HDI-energy correlation:** Using the correlation between **HDI and final energy consumption**, energy needs can be estimated for **specific development levels**.

India's Energy Gap and Decarbonisation Challenge

1. High Development Requires Massive Energy Generation:

- To reach an **HDI of 0.9**, India needs to generate about **24,000 Terra-Watt-Hours (TWh) per annum**, a level associated with **very high human development**.
- About **60%** of this energy will be used as **electricity**, while the rest will be used to produce **hydrogen in electrolyzers**.
- Hydrogen is required to decarbonise sectors such as **steel, fertilisers, and plastics**, although future technologies may reduce electricity needs.

2. Large gap between current and required generation: India generated about **1,950 TWh in 2023-24**, with a recent growth rate of **~4.8% Compound Annual Growth Rate (CAGR)**. At this pace, reaching **24,000 TWh** will take **four to five decades**, making **long-term energy planning essential**.

3. Decarbonisation alongside expansion: Electricity generation must expand while **carbon emissions decline**. This requires **end-use electrification** and a shift away from a **fossil-fuel-heavy energy mix** towards **cleaner sources**.

4. Low role of electricity in energy use: Electricity is only about **22% of India's final energy consumption** today. This share must rise because India has to **electrify end uses** and also **redesign its energy mix** away from fossil fuels towards **hydro, nuclear, solar, and wind** to reduce carbon emissions.

Why Renewables Alone Are Not Enough

1. **Physical and geographical limits:** India has **limited hydro and wind potential**. Its **dense population** makes it difficult to divert large areas of land for **solar photovoltaic deployment**.
2. **Inadequate energy supply for high development:** Even if the full potential of **hydro, solar, and wind** is used, these sources cannot provide the energy level needed to achieve an **HDI above 0.9**. Until **nuclear capacity is expanded, fossil fuels will continue** to be used.
3. **Intermittent nature of renewable power:** Electricity from solar and wind varies with **time of day and season**. This makes it difficult to match electricity supply with demand.
4. **High cost of large-scale storage:** Balancing variable renewable generation requires storage. Storage is **expensive**, and providing storage for **seasonal variations** is **prohibitively costly**.
5. **Need for reliable baseload generation:** To provide **affordable electricity**, the power mix must include generation that is not dependent on seasons or time of day. **Nuclear power plants provide such baseload electricity** and are therefore essential for a **decarbonised energy mix**.

Nuclear Energy as the Development Anchor

1. **Need for Baseload:** A reliable energy system needs generation that runs continuously. **Baseload power keeps electricity affordable**.
2. **Stable Power Supply:** Nuclear plants operate independent of weather or time of day. They provide **steady electricity supply**.
3. **Clean Growth Support:** Nuclear power reduces emissions while meeting rising demand. It allows development without energy shortages.
4. **Fossil Bridge Needed:** Until nuclear capacity expands, **fossil fuels will continue** to bridge the gap between demand and clean energy.

India's Nuclear Readiness and Policy Push

1. Indigenous capability and reactor readiness

- **Indigenous supply chain:** India has indigenised the nuclear supply chain. Only **uranium is imported** due to limited domestic availability.
- **PHWR capability (700 MW):** India has mastered **Pressurised Heavy Water Reactor (PHWR)** design and operation up to **700 MW**. **Three units are working** and more are under construction.
- **Expansion sanctioned (2017):** The government sanctioned **ten 700 MW PHWRs** in **2017**. Work on these units is progressing.

2. Regulation, safety, and waste handling capacity

- **Regulatory strength:** A regulatory body exists since the **1980s**. It has the capacity to regulate nuclear plants.
- **Fuel reprocessing:** India has developed technologies to reprocess spent fuel. This helps recover valuable materials.

- **Waste management:** Systems exist to handle nuclear waste. This supports safe nuclear operations.

3. Fuel security and long-term sustainability

- **New uranium discovery and Jaduguda:** New discoveries improve fuel security. A major find extends **Jaduguda mine life by over 50 years**.
- **Closed fuel cycle and PFBR:** Progress in the closed fuel cycle has been made. **Prototype Fast Breeder Reactor (PFBR)** milestones support sustainable fuel supply.

4. Policy target and enabling law

- **100 GW target:** The government targets **100 GW nuclear installed capacity by mid-century**. This reflects scale-up ambition.
- **SHANTI Bill, 2025:** The **Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Bill, 2025** merges key provisions of earlier nuclear laws. It provides an overarching legal framework.
- **AERB legal status:** **Atomic Energy Regulatory Board (AERB)** is deemed constituted under the new Act. This gives legal clarity to regulation.
- **Licensee responsibility:** **Safety, security, and safeguards** are assigned to the licensee. This fixes responsibility clearly.

5. Institutional mechanism for faster expansion

- **ASHVINI joint venture:** **Nuclear Power Corporation of India Limited (NPCIL)** and **NTPC** formed **ASHVINI**. It aims to develop nuclear power plants within the existing legal framework.

Conclusion

India's development goals need a huge rise in **clean and reliable energy**. Renewable sources alone cannot meet this scale due to **land limits** and **intermittency**, and storage is costly. Nuclear power gives **steady baseload electricity** and supports **decarbonisation**. India's proven **PHWR capability** and the **SHANTI Bill** strengthen the push towards the **100 GW target by mid-century**.

Question for practice:

Discuss why nuclear energy is essential for India's long-term development and clean energy transition.

Source: [The Hindu](#)

India–Russia Logistics Agreement, with Eye on Arctic and Indo-Pacific

UPSC Syllabus Topic: GS Paper 2 -International Relation

Introduction

India and Russia have moved to institutionalise their long-standing defence cooperation through the **Reciprocal Exchange of Logistics Support (RELOS)** agreement. Signed into Russian federal law days after

President Vladimir Putin's December 4–5 visit to New Delhi, the agreement establishes a formal framework for mutual logistical support. Beyond routine military cooperation, RELOS strengthens India's operational reach across the Indo-Pacific and Arctic regions while reinforcing Russia's presence in the Indian Ocean.

Understanding RELOS

RELOS is a formal logistics arrangement between India and Russia that tells both militaries **how they can support each other during military activities**.

It creates a clear system for **moving troops, warships, and military aircraft** between the two countries and for giving **basic operational support** when one side's forces are operating on the other side's territory.

Under RELOS, both countries can provide **refuelling, repairs, maintenance, and other support services** to each other's forces.

It also lays down rules for the **mutual use of airspace** by military aircraft and for **port calls** by warships. This means Indian and Russian forces do not have to depend only on informal arrangements each time they need such support.

The agreement is meant to be used mainly during **joint military exercises and training**. It also applies during **humanitarian assistance and disaster relief operations**.

At the same time, RELOS is flexible, because it allows both sides to use its provisions in other situations too, but only when **both countries agree**.

Strategic Significance for India

1. Access to Russian military bases: RELOS provides India with institutional access to Russian air and naval bases. These extend **from Vladivostok in the Pacific to Murmansk in the Arctic**.

2. Extended operational reach: Access to **more than 40 Russian bases** allows Indian naval and air forces to operate farther from home. This supports long-range deployments and sustained operations.

3. Support for Russian-origin platforms: A large share of India's military inventory is of Russian origin. RELOS **ensures refuelling, repairs, and maintenance support** for these platforms during overseas operations.

4. Indo-Pacific and Arctic linkage: The agreement strengthens **India's Indo-Pacific strategy by leveraging Russia's geographic reach**. It also opens **pathways towards Arctic operations and northern maritime routes**.

5. Operational readiness and continuity: By formalising logistics support, **RELOS boosts readiness and reduces uncertainty during deployments**. It replaces informal arrangements with predictable institutional mechanisms.

Strategic Significance for Russia

1. Access to Indian ports and airfields: Russian forces gain access to Indian ports and airfields for refuelling, repairs, and operational support. This strengthens Russia's military footprint in the Indian Ocean.

2. Institutionalised presence in the Indian Ocean: RELOS formalises logistical backing for Russian naval operations in the region. It allows sustained engagement rather than ad hoc arrangements.

3. Reinforcing multipolar positioning: The agreement supports Russia's effort to strengthen defence partnerships outside Western alliances. It aligns with Russia's pursuit of a multipolar global order.

India's Wider Logistics Agreement Network

1. Multiple logistics partners

- India has signed logistics agreements with the **United States, France, Singapore, South Korea, Australia, and Japan**. India has also **nearly finalised** a similar agreement with the **United Kingdom**.

- This wider set of agreements shows **India is building logistics access with several partners**, so it can support deployments through more than one set of facilities.

2. India's Strategic Autonomy: India maintains logistics agreements with several countries while avoiding formal alliances. **RELOS fits into this broader strategy of diversified partnerships.**

RELOS in Relation to India's US Defence Agreements

Comparison : RELOS is often compared with India's agreements with the United States because all of them support military operations in different ways. However, the purpose of each agreement is different.

COMCASA: The Communications Compatibility and Security Agreement (COMCASA) allows the US to provide India encrypted communication equipment and systems. It helps Indian and US military leaders, ships, and aircraft communicate through secure networks in peace and conflict.

BECA: The Basic Exchange and Cooperation Agreement (BECA) supports information sharing linked to high-end military technology. It includes access to United States geospatial, satellite, and drone data.

RELOS: The Reciprocal Exchange of Logistics Support (RELOS) sets procedures for the movement of troops, warships, and military aircraft between India and Russia. It provides a framework for refuelling, repairs, maintenance, mutual use of airspace, and port calls, based on the India–Russia defence relationship.

Key difference: The United States agreements strengthen India as a key United States partner in the Quadrilateral Security Dialogue (QUAD) to balance Chinese influence in the Indo-Pacific. RELOS is tailored to the India–Russia dynamic and focuses on institutional logistics support between the two sides.

Conclusion

RELOS represents a decisive step in formalising India–Russia defence logistics cooperation. It expands India's operational reach from the Indo-Pacific to the Arctic while ensuring sustained support for Russian-origin military platforms. For Russia, it institutionalises access to the Indian Ocean and strengthens its role in a

multipolar global order. The agreement reflects India's strategy of maintaining strategic autonomy through diversified defence partnerships.

Question for practice:

Evaluate the strategic significance of the India–Russia Reciprocal Exchange of Logistics Support (RELOS) agreement in the context of India's wider logistics partnerships and its approach to strategic autonomy.

Source: [Indian Express](#)

Demographic Dividend' of Elders'

Source: The post 'Demographic Dividend of Elders' has been created, based on "Demographic Dividend of Elders" published in "The Hindu Business" on 18th December 2025.

UPSC Syllabus: GS Paper-2-Governance

Context: India's demographic policy has largely focused on the youth dividend, while neglecting the potential contribution of experienced and capable elderly citizens. A subset of retirees, termed "rewirees," represents an untapped demographic dividend as they seek meaningful and productive engagement after retirement.

Meaning and Significance of Rewirees

1. Rewirees are retired individuals who wish to reorient their lives by undertaking work that is different from their earlier careers.
2. Rewirees possess valuable experience, maturity, and problem-solving ability, which distinguishes them from younger workers.
3. The engagement of rewirees does not reduce employment opportunities for the youth because their skills, expectations, and work roles differ significantly.
4. Many rewirees are willing to work for lower wages or even voluntarily, especially in socially meaningful roles.
5. The primary limitation of rewirees is their reluctance to accept rigid and physically punishing work schedules.

Retired Defence Personnel as a Key Resource

1. Retired Defence personnel form a highly prepared and immediately usable group of rewirees.
2. Senior retired officers have expressed willingness to work on civilian-led social impact initiatives in collaboration with civilians.
3. These senior officers can mobilise large numbers of retired Junior Commissioned Officers (JCOs) and Non-Commissioned Officers (NCOs).
4. Many JCOs and NCOs retire at relatively young ages ranging from 45 to 54 years, which is too early for complete withdrawal from productive work.
5. Retired Defence personnel are widely distributed across small towns and villages, increasing their relevance for grassroots development.

Limitations of Existing Rehabilitation Mechanisms

1. Existing pre-retirement training and job fairs organised by the Defence forces mainly connect retirees with urban corporate employment.
2. Such initiatives fail to reach retired JCOs and NCOs living in small towns and rural areas where corporate jobs are scarce.
3. Therefore, alternative mechanisms are required to utilise the productive potential of rural Defence rewires.

Rewirees as Agents of Local Change

1. Social impact organisations can engage Defence rewirees as agents of social, economic, and technical transformation in their local areas.
2. The participation of family members, especially women, can significantly enhance the developmental impact of such initiatives.
3. Rewirees require practical and hands-on training tailored to local needs and organisational objectives.
4. The involvement and endorsement of senior Defence rewirees would assure legitimacy and motivate participation at the grassroots level.
5. Senior officers can provide guidance remotely while making periodic field visits to maintain trust and effectiveness.

Implementation Strategy

1. The integration of rewirees should begin with small-scale and low-cost pilot projects.
2. Such initiatives can be gradually expanded with necessary modifications based on experience and local conditions.
3. The disciplined background of Defence personnel can ensure accountability and sustainability of these efforts.

Conclusion: By productively engaging retired Defence personnel, India can effectively harness a neglected rewiree demographic dividend. This approach can accelerate inclusive economic and social development without undermining youth employment. Success in this model can pave the way for systematically utilising the broader civilian rewiree population.

How is the Aravalli range to be protected?

Source: The post “How is the Aravalli range to be protected?” has been created, based on ‘How is the Aravalli range to be protected?’ published in “The Hindu” on 18th December 2025.

UPSC Syllabus: GS Paper-3-Environment

Context: The Aravalli range is India’s oldest mountain system and plays a critical ecological role in preventing desertification and maintaining environmental stability. The Supreme Court has recently intervened to ensure uniform identification and sustainable protection of the Aravalli hills across multiple States.

Ecological Significance of the Aravalli Range

1. The Aravalli hills act as a natural barrier that prevents the eastward expansion of the Thar Desert into the Indo-Gangetic plains.
2. The range helps regulate local climate, supports rich biodiversity, and aids in groundwater recharge.

3. The Aravallis are the source of important rivers such as the Chambal, Sabarmati, and Luni.
4. The hills contain key aquifer recharge zones that sustain agriculture and drinking water needs in surrounding regions.
5. India is internationally obligated under the UN Convention to Combat Desertification to protect ecosystems such as the Aravalli range.

Threats to the Aravalli Range

1. Excessive and often illegal mining of stone and sand over the past four decades has severely degraded the hills.
2. Mining has contributed to declining groundwater levels, increased air pollution, and habitat fragmentation.
3. Weak enforcement of environmental regulations has allowed continued ecological damage.

Recommendations of the Central Empowered Committee

1. The CEC recommended comprehensive scientific mapping of the Aravalli range across all States.
2. It proposed a macro-level environmental impact assessment of cumulative mining activities.
3. The committee advised a strict ban on mining in ecologically sensitive zones such as protected forests, water bodies, tiger corridors, aquifer recharge areas, and the National Capital Region.
4. It recommended stringent regulation of stone-crushing units.
5. The committee advised that no new mining leases or renewals should be allowed until mapping and assessments were completed.

Need for a Uniform Definition of the Aravalli Hills

1. States were using inconsistent and selective criteria to define the Aravalli hills, enabling mining in ecologically fragile areas.
2. Expert bodies, including the Forest Survey of India, had differing definitions based on slope, buffers, and valley width.
3. To resolve this confusion, the Supreme Court constituted a multi-agency committee to arrive at a scientifically sound definition.
4. The committee concluded that hills above 100 metres should be classified as part of the Aravalli range.
5. While concerns were raised that this definition could allow mining in lower hills, the Court accepted it as more inclusive and administratively workable.

Other Directions Issued by the Supreme Court

1. The Court directed the preparation of a comprehensive Management Plan for Sustainable Mining (MPSM).
2. The plan must identify no-go zones where mining is permanently prohibited.
3. It must also identify areas where limited and strictly regulated mining may be allowed.
4. The plan must assess cumulative ecological impacts and define restoration and rehabilitation measures.

Conclusion: The protection of the Aravalli range requires a science-based, coordinated, and regulated approach rather than absolute prohibition. The Supreme Court's directions aim to balance ecological

conservation with controlled economic activity. Effective implementation of these measures is essential to prevent desertification and ensure long-term environmental sustainability.

Disability rights: Behind bars, but not barred

Source: The post ‘Disability rights: Behind bars, but not barred’ has been created, based on "Disability rights: Behind bars, but not barred" published in "New Indian Express" on 20th December 2025.

UPSC Syllabus: GS Paper-2-Governance

Context: Persons with disabilities constitute one of the most vulnerable groups within the criminal justice system, particularly in Indian prisons where pre-trial incarceration is widespread. In 2025, the Supreme Court delivered two landmark judgements such as **L. Muruganantham v. State of Tamil Nadu** and **Sathyan Naravoor v. Union of India** which significantly expanded the rights of disabled prisoners. These judgements reinforce constitutional morality and bridge the gap between disability law and prison administration.

Background and Context

1. The **Rights of Persons with Disabilities (RPwD) Act, 2016** was enacted to ensure dignity, equality, and accessibility for persons with disabilities, but its application within prisons remained largely neglected.
2. Disabled prisoners often face denial of basic necessities such as medical care, assistive devices, accessible infrastructure, and personal assistance.
3. The Supreme Court intervened through social action litigation to address this systemic exclusion.

Key Features of the Muruganantham Judgement (2025)

1. The Court directed the **identification of disabled prisoners** and assessment of their special needs.
2. It mandated provision of **medical care, physiotherapy, psychotherapy, and personal assistance**.
3. The judgement ordered **revision of Prison Manuals** in line with the RPwD Act.
4. It required **training of prison officials** on disability rights and sensitisation.
5. It provided for **periodic audits, monitoring committees, and inspections** to ensure compliance.
6. Initially, these directives were applicable only to Tamil Nadu.

Expansion through the Sathyan Naravoor Judgement (2025)

1. The Supreme Court **extended Muruganantham directives to all States and Union Territories**.
2. It directed the establishment of an **effective grievance redressal mechanism** for disabled prisoners.
3. The Court mandated **inclusive education and rehabilitation measures** within prisons.
4. It provided for **enhanced visitation rights** to enable families to assist disabled inmates.
5. Crucially, the Court held that **Section 89 of the RPwD Act applies to prison authorities**, making violations punishable and ensuring accountability.

Constitutional and Jurisprudential Significance

1. The judgements reaffirm that **fundamental rights do not end at prison gates**, as held in *Sunil Batra*.
2. They uphold **Articles 14, 19, and 21**, ensuring equality, dignity, and humane treatment.

3. The rulings demonstrate **constitutional morality**, judicial sensitivity, and correction of legislative silence.
4. They strengthen the tradition of **social action litigation** as an instrument of social justice.

Challenges

1. Poor implementation of prison reforms due to **administrative apathy and lack of accountability**.
2. **Inadequate infrastructure and financial constraints** in most prisons.
3. **Low awareness and sensitisation** of prison officials regarding disability rights.
4. Absence of **uniform standards** across States and Union Territories.

Way Forward

1. Ensure **time-bound implementation** of Supreme Court directives through clear SOPs.
2. Conduct **mandatory disability audits** in all prisons.
3. **Revise Prison Manuals** in line with the RPwD Act, 2016.
4. Provide **adequate budgetary allocations** for accessibility and healthcare.
5. Institutionalise **training and sensitisation** of prison staff.
6. Establish **independent monitoring and grievance redress mechanisms**.
7. Prefer **alternatives to incarceration** for severely disabled undertrials.

Conclusion: The Muruganantham and Sathyan Naravoor judgements mark a transformative step in recognising the rights of disabled prisoners. By aligning prison administration with disability law and constitutional values, the Supreme Court has advanced substantive justice. The real test now lies in faithful enforcement to ensure that incarceration does not result in double punishment for disability.

Question: Discuss the significance of recent Supreme Court judgements extending disability rights to prisoners in India. How do these judgements reflect constitutional morality and address systemic deficiencies in prison administration?

Lok Adalats emerge as key pillar of accessible justice

Source: The post ‘Lok Adalats emerge as key pillar of accessible justice’ has been created, based on “Lok Adalats emerge as key pillar of accessible justice, resolve millions of cases annually” published in “DD NEWS” on 20th December 2025.

UPSC Syllabus: GS Paper-2-Governance

Context: Lok Adalats are an important component of India’s alternative dispute resolution mechanism aimed at delivering accessible and people-centric justice. They function under the **Legal Services Authorities Act, 1987**, and promote amicable settlement of disputes through consensus. By reducing litigation costs and delays, Lok Adalats strengthen access to justice for marginalised and vulnerable sections.

Legal and Institutional Framework

1. Lok Adalats operate under a **four-tier structure** comprising the National Legal Services Authority (NALSA), State Legal Services Authorities, District Legal Services Authorities, and Taluk Legal Services Committees.

2. This decentralised structure ensures justice delivery from the national level to grassroots institutions.
3. Awards passed by Lok Adalats have the **status of civil court decrees** and are **final and binding**, with no provision for appeal.

Key Features of Lok Adalats

1. Lok Adalats follow an **informal, conciliatory, and non-adversarial procedure**.
2. They do not charge court fees, and any fee already paid is refunded upon settlement.
3. They deal with both **pre-litigation disputes** and **pending court cases**.
4. National Lok Adalats are organised on pre-notified dates across the country, enabling mass disposal of cases in a single day.
5. The introduction of **E-Lok Adalats during the COVID-19 pandemic** expanded access through virtual participation.

Role of Permanent Lok Adalats

1. Permanent Lok Adalats handle disputes related to **public utility services** such as transport, electricity, water, postal services, and telecommunications.
2. They have jurisdiction over cases involving claims up to **₹1 crore**.
3. If conciliation fails, Permanent Lok Adalats can **adjudicate disputes**, ensuring timely and enforceable outcomes.

Significance and Impact

1. Lok Adalats have significantly **reduced pendency** in regular courts.
2. They provide **swift relief** to accident victims, farmers, small traders, and consumers.
3. By combining speed, empathy, and legal certainty, Lok Adalats enhance **public trust in the justice system**.

Challenges

1. Many settlements in Lok Adalats are criticised for **mechanical disposal and forced compromises**, especially involving vulnerable parties.
2. Lok Adalats have **limited jurisdiction**, excluding serious criminal matters and complex disputes.
3. Lack of **legal awareness** among citizens reduces effective utilisation of Lok Adalats.
4. **Inconsistent quality of conciliation** due to varying expertise of conciliators.
5. Overemphasis on numerical disposal sometimes undermines **substantive justice**.

Way Forward

1. Ensure **voluntary and informed consent** of parties to prevent coerced settlements.
2. Improve **training and capacity-building** of conciliators and judicial officers.
3. Strengthen **legal awareness programmes** through NALSA and para-legal volunteers.
4. Expand the scope of **E-Lok Adalats** using secure and user-friendly digital platforms.
5. Introduce **monitoring and evaluation mechanisms** focusing on quality, not just quantity, of settlements.

Conclusion: Lok Adalats have emerged as a cornerstone of accessible justice in India. Their continued expansion reflects the State's commitment to an efficient, inclusive, and humane justice delivery system. Strengthening Lok Adalats will further advance the constitutional goal of justice for all.

Question: Lok Adalats have emerged as a key pillar of India's alternative dispute resolution framework. Discuss their role in ensuring accessible, speedy, and cost-effective justice in India.

The bulldozed demolition of MGNREGA

Source: The post **"The bulldozed demolition of MGNREGA"** has been created, based on **"The bulldozed demolition of MGNREGA"** published in **"The Hindu"** on **22nd December 2025**.

UPSC Syllabus: GS Paper-2-Governance

Context: The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), enacted in 2005, is a landmark rights-based legislation derived from Article 41 of the Constitution of India. It guarantees wage employment to rural households and has functioned as a critical pillar of social security, poverty alleviation, and decentralised governance in rural India.

Importance of MGNREGA

1. MGNREGA has played a transformative role in rural India. It has provided income security to crores of households, increased rural wage levels, reduced seasonal migration, and strengthened the bargaining power of landless labourers.
2. The scheme has empowered Gram Panchayats and institutionalised transparency through social audits. During the COVID-19 pandemic, MGNREGA acted as a lifeline for the rural poor.

Key Changes and Their Implications

1. **Dilution of the Right to Work:** The new law removes the legal guarantee of employment and converts MGNREGA into a discretionary scheme. Employment is no longer demand-driven, which undermines the very foundation of the right to work.
2. **Budgetary Capping of Employment:** The earlier uncapped funding system has been replaced with pre-determined budgetary allocations. This limits the number of workdays provided and makes employment dependent on Union government priorities rather than rural distress.
3. **Restriction on Year-Round Employment:** The imposition of mandatory non-working days during peak agricultural seasons reduces employment availability. This weakens the wage bargaining power of workers and may suppress rural wage growth.
4. **Increased Financial Burden on States:** The cost-sharing ratio has been altered from 90:10 to 60:40, with States bearing all additional expenditure beyond central allocations. This discourages States from generating employment and strains their finances.
5. **Centralisation and Weakening of Local Governance:** The replacement of Gram Sabha-led planning with centrally designed frameworks undermines the 73rd Constitutional Amendment. It erodes local self-governance and ignores region-specific needs.
6. **Misleading Claims of Increased Employment Days:** Although an increase from 100 to 125 days is claimed, structural constraints make this unachievable in practice. Past trends of delayed payments and stagnant budgets further weaken credibility.

7. **Constitutional and Democratic Concerns:** The weakening of MGNREGA reflects a broader erosion of rights-based legislation in India. Similar dilution has occurred in the Right to Information, Right to Education, Forest Rights Act, and land acquisition laws. This trend raises serious concerns about constitutional morality and the rights-based vision of governance.

Way Forward

1. The legal guarantee of employment must be restored to reaffirm the constitutional right to work.
2. Central funding should remain demand-driven and uncapped to ensure timely and adequate employment.
3. The cost-sharing ratio should be revised in favour of States to encourage active implementation.
4. Year-round employment should be ensured, especially during periods of agrarian distress.
5. Gram Sabhas must be reinstated as the primary planning and implementation authorities in line with the 73rd Constitutional Amendment.
6. Wage payments should be made timely, and technological systems should be simplified to prevent worker exclusion.
7. Regular social audits and parliamentary oversight must be strengthened to ensure transparency and accountability.

Conclusion: MGNREGA represents the constitutional commitment to social justice, dignity of labour, and inclusive growth. Its dilution threatens rural livelihoods and democratic decentralisation. Strengthening and protecting MGNREGA is essential for safeguarding India's constitutional values and ensuring equitable development.

Question: MGNREGA has been one of the most important rights-based social security legislations in India. Critically examine the recent changes to the scheme and suggest a way forward.

Aviation Sector Restructuring

Source: The post "Aviation Sector Restructuring" has been created, based on "We saw Indigo meltdown. Now lets see Aviation Sector Restructuring" published in "Indian Express" on 22nd December 2025.

UPSC Syllabus: GS Paper-3- Economy

Context: The recent operational meltdown of IndiGo Airlines highlights deep-rooted structural and regulatory weaknesses in India's rapidly expanding aviation sector, similar to earlier crises such as the 2022 Southwest Airlines disruption in the United States.

Background and Context

1. India is the third-largest domestic aviation market and is projected to become the largest by 2027.
2. IndiGo controls nearly 60% of the domestic market, indicating high market concentration.
3. On October 5, 2023, IndiGo cancelled over 1,000 flights due to crew shortages, exposing systemic failures.
4. The Directorate General of Civil Aviation (DGCA) was aware of pilot shortages but delayed intervention.

Key Issues Highlighted by the IndiGo Meltdown

1. **Operational and Corporate Governance Issues:** IndiGo pursued aggressive cost-cutting and scheduling efficiency at the cost of operational resilience. The airline lacked adequate buffer capacity in pilots and aircraft to manage disruptions. Internal warnings about system stress were reportedly ignored, similar to the Southwest Airlines case.
2. **Regulatory and Institutional Failures:** The DGCA relied on paperwork compliance rather than proactive safety oversight. Regulatory responses were reactive rather than preventive. Parliamentary oversight remained weak, with limited accountability mechanisms.
3. **Market Structure Concerns:** Excessive market dominance reduced competitive pressure on service quality. Passengers lacked effective alternatives due to limited competition.
4. **Passenger Welfare Issues:** Flight cancellations and delays caused financial and psychological distress to passengers. Compensation mechanisms remained weak and inconsistently enforced.

Lessons from the 2022 Southwest Airlines Crisis

1. The crisis demonstrated how fragile operational systems can amplify minor disruptions into nationwide breakdowns.
2. Strong post-crisis regulatory intervention in the US led to financial penalties and mandated system upgrades.
3. The US Department of Transportation enforced passenger compensation and accountability.

Suggested Reforms for India's Aviation Sector

1. **Regulatory Reforms:** The DGCA should conduct a formal inquiry into IndiGo's operational failure and publish findings. Financial penalties should be imposed proportional to airline turnover to ensure deterrence. Safety audits must focus on operational resilience, not just documentation.
2. **Competition and Market Reforms:** The Competition Commission of India should examine monopoly-like conditions in aviation. Policies should encourage sustainable competition rather than excessive consolidation.
3. **Consumer Protection Measures:** The Consumer Protection Act, 2019 should be effectively enforced for aviation services. Passenger compensation norms must be automatic and time-bound.
4. **Institutional Oversight:** A Joint Parliamentary Committee may be constituted to examine systemic aviation failures. Political funding links through electoral bonds should be reviewed to avoid regulatory capture.

Conclusion: The IndiGo meltdown serves as a warning that rapid aviation growth without strong regulation, competition, and passenger-centric governance can undermine safety and public trust. Comprehensive restructuring of regulatory oversight and market practices is essential to ensure a resilient and equitable aviation ecosystem in India.

Question: The IndiGo Airlines disruption has exposed structural and regulatory weaknesses in India's civil aviation sector. Discuss the causes of such aviation meltdowns and suggest reforms to improve safety, resilience, and competition.

For a choking capital, going electric is the way out

Source: The post "For a choking capital, going electric is the way out" has been created, based on "For a choking capital, going electric is the way out" published in "Indian Express" on 23rd December 2025.

UPSC Syllabus: GS Paper-3- Environment

Context: Delhi experiences a severe air pollution crisis every winter, turning the city into a public health emergency zone. The government response largely relies on short-term measures such as GRAP, traffic restrictions and school closures, which only manage symptoms. Transport has emerged as the single largest controllable source of air pollution in Delhi, making electrification of mobility a long-term structural necessity.

Challenges

1. Transport-related emissions contribute nearly 25–40 per cent of Delhi's PM_{2.5} due to tailpipe emissions, congestion, idling and ageing vehicles.
2. Policy uncertainty caused by delays in notifying a new EV policy has led to withdrawal of incentives and decline in consumer and investor confidence.
3. Delhi has witnessed a slowdown in EV adoption, including zero electric-auto registrations in 2025 and a decline in electric two-wheeler sales.
4. The Fleet Aggregator Scheme has not been effectively operationalised, limiting electrification of commercial and shared mobility fleets.
5. The city operates only 7,000–8,000 buses for nearly 30 million residents, which is far below global urban transport standards.
6. Reduction in bus routes and unreliable service frequency have resulted in falling public transport ridership.
7. Charging and swapping infrastructure remains inadequate, unreliable and poorly monitored, discouraging potential EV users.
8. Weak enforcement of scrappage policies allows old and highly polluting vehicles to continue operating on city roads.

Four Pillars of a Credible Clean Transport Strategy

1. Accelerated Electrification of Vehicles

- Delhi must promote EV adoption across all segments through stable incentives, clear policy signals and predictable funding.
- The city should phase out new sales of non-electric two- and three-wheelers from 2026 to provide certainty to manufacturers, financiers and consumers.

2. World-Class Electric Bus System

- A strong and reliable public transport system is essential, as no global city has cleaned its air without one.
- Delhi must commit to deploying at least 20,000 electric buses over the next five years to reduce emissions at scale.
- High-frequency services, route expansion and seamless last-mile connectivity are necessary to restore public confidence in buses.

3. Phasing Out Old and Polluting Vehicles

- Delhi must enforce year-round restrictions on non-BS IV and non-BS VI vehicles to reduce emissions from ageing fleets.

- An aggressive scrappage and replacement programme should be implemented with firm deadlines, incentives and strict enforcement.

4. Charging and Swapping Infrastructure as a Public Utility

- Electric mobility cannot scale without widespread and reliable charging and swapping infrastructure.
- Delhi must deploy thousands of charging points across residential areas, markets, office districts and transport corridors.
- Charging infrastructure should be treated as a public utility with transparent pricing, real-time uptime monitoring and operator accountability.

Way Forward

1. Delhi should establish a permanent clean-transport war room to ensure coordinated, data-driven and accountable decision-making.
2. A unified five-year clean transport mission should be launched with measurable targets and enforceable timelines.
3. Clean mobility should be recognised as essential public health infrastructure rather than a discretionary environmental initiative.
4. Financial support mechanisms such as concessional loans, leasing models and battery swapping should be promoted for small operators and low-income users.
5. Public-private partnerships should be leveraged to rapidly scale electric fleets and charging infrastructure.

Conclusion: Delhi's air pollution crisis cannot be resolved through episodic emergency responses and seasonal restrictions. Electrification of transport, supported by strong public transport systems and robust infrastructure, offers the most credible pathway to clean air. With sustained political will, policy certainty and mission-mode execution, Delhi can restore its leadership in electric mobility and ensure the fundamental right to clean air for its citizens.

Question: Delhi's air pollution crisis requires a shift from seasonal emergency measures to a structural clean transport strategy. Discuss

Aravalli Benchmark could have effects beyond mining

Source: The post "Aravalli Benchmark could have effects beyond mining" has been created, based on "Aravalli Benchmark could have effects beyond mining" published in "Indian Express" on 23rd December 2025.

UPSC Syllabus: GS Paper-3- Environment

Context: The Aravalli Hills are ecologically critical for biodiversity conservation, groundwater recharge and pollution control in north-west India. The newly approved 100-metre local relief benchmark for defining the Aravalli Hills has generated concern as it may substantially reduce the officially recognised extent of the range. Although the government has assured limited impact on mining, the new definition poses wider environmental and governance challenges.

Challenges

1. Large-scale exclusion of Aravalli landscapes

- The 100-metre local relief criterion excludes vast areas earlier identified as Aravalli under the Forest Survey of India's 3-degree slope methodology.
- In Rajasthan, which hosts nearly two-thirds of the Aravalli range, more than 99 per cent of previously mapped Aravalli hills could be excluded.
- Several ecologically and historically significant districts have been dropped from the official Aravalli list.

2. Risk of increased mining and construction

- Areas excluded from the Aravalli definition may legally become available for mining and quarrying in the future.
- Even if legal mining remains limited, the scope for illegal mining may increase due to weaker regulatory oversight.
- The new definition may also enable large-scale real estate and infrastructure development, particularly in Delhi-NCR.

3. Weakening of ecological safeguards beyond mining

- The Aravallis act as a natural barrier against desertification, dust storms and air pollution in the NCR region.
- Derecognition of low-height hill systems may expose fragile landscapes to land-use change, deforestation and groundwater depletion.
- Environmental damage from non-mining activities such as construction and road building may intensify.

4. Methodological and scientific concerns

- Measuring hill height from local relief rather than a standardised baseline can exclude genuine hills if surrounding terrain is elevated.
- The focus on avoiding "inclusion errors" overlooks the far more serious risk of "exclusion errors" in fragile ecosystems.
- Averaging slope data at the district level obscures the presence of hilly terrain within largely plain districts.

5. Uncertainty in long-term protection

- Although protected areas like tiger reserves and sanctuaries remain safeguarded under existing laws, past attempts to alter boundaries raise concerns.
- Protection dependent on administrative classifications rather than ecological continuity is vulnerable to policy changes.

Way Forward

1. Adopt a precautionary and ecosystem-based definition

- The Aravalli definition should integrate elevation, slope, geology and ecological functions rather than rely on a single height benchmark.

- Scientific mapping by independent institutions such as the Forest Survey of India should be given primacy.

2. Ensure protection beyond mining restrictions

- Regulatory safeguards must explicitly cover construction, real estate development and infrastructure projects in Aravalli landscapes.
- Environmental Impact Assessments should be made mandatory for all major activities in Aravalli-adjacent areas.

3. Strengthen monitoring and enforcement

- Illegal mining and encroachments should be addressed through satellite monitoring, real-time reporting and strict penalties.
- State governments must be held accountable for enforcement failures through judicial and institutional oversight.

4. Provide statutory and long-term protection

- The Aravallis should be protected through a comprehensive legal framework or a dedicated conservation notification.
- Eco-sensitive zoning should be expanded to include buffer areas beyond formally notified hills.

5. Balance development with ecological security

- Urban and infrastructure planning in NCR and western India must recognise the Aravallis as critical natural infrastructure.
- Sustainable development models, rather than deregulation, should guide land-use decisions in the region.

Conclusion

The new Aravalli benchmark presents serious environmental challenges that extend well beyond mining. Without corrective safeguards, it risks weakening protection for one of India's most fragile and valuable ecological systems. A science-based, precautionary and legally robust approach is essential to ensure that development does not come at the cost of irreversible ecological damage.

Question: The new 100-metre benchmark for defining the Aravalli Hills may harm the ecosystem. What are the challenges it creates, and how can the Aravallis be protected?

Right to Disconnect: Drawing the line after work

UPSC Syllabus Topic: GS Paper 3 -Indian Economy – Employment and labour productivity.

Introduction

The Right to Disconnect Bill responds to the growing problem of **constant work-related digital connectivity**. It is introduced as a **private member's Bill**, which is **rarely enacted**. The Bill comes at a time when India has consolidated labour law through **four labour codes**. These codes regulate **working hours, overtime, and**

employer control. However, **digital work now extends beyond offices and fixed hours**, raising serious questions about how labour law should respond.

What is Right to Disconnect bill

The Bill gives employees the right to **not respond** to work-related calls, emails, or messages **beyond prescribed working hours**. It seeks to protect **personal time** from constant digital intrusion. This recognises that work now extends beyond **physical workplaces**.

Significance of Right to Disconnect law

1. **Mental & Physical Health:** Prevents digital burnout, stress, and fatigue by ensuring proper rest, reducing risks of work-related health issues.
2. **Improved Work-Life Balance:** Gives employees control over their personal time, allowing more focus on family, hobbies, and personal development, as noted in studies showing long hours strain family life.
3. **Enhanced Productivity:** Refreshed and less stressed employees are more focused and efficient during working hours, as downtime leads to better performance.
4. **Clear Boundaries:** Establishes a legal line between professional and personal life, something older labor laws didn't address in a 24/7 digital world.
5. **Protection from Penalties:** Shields employees from disciplinary action or negative consequences for not responding to work communications outside of agreed hours.
6. **Adaptation to Modern Work:** Addresses the challenges of remote and constant digital work, recognizing the need for legal frameworks in the digital era.
7. **Economic & Societal Benefits:** Healthier, happier workers can reduce healthcare burdens, potentially leading to broader economic benefit

What are the concerns of Right to Disconnect bill?

1. **Undefined "Work":** Indian labour law does not clearly define what counts as work in a digital economy. The Bill limits after-hours communication but does not say whether such engagement is legally treated as **work**.
2. **Labour Code Gap:** The **Occupational Safety, Health and Working Conditions Code, 2020** governs working hours and overtime. The Bill does not clarify how **after-hours digital communication** fits within this framework.
3. **Weak Legal Status:** Because communication is regulated without linking it to working time, the right risks becoming a **behavioural expectation**. It may not function as a **binding labour standard** with enforceable consequences.
4. **Employer Control Issue:** The Bill does not address how **employer control** over an employee's time should be assessed. It leaves unanswered the question of **when an employee's time legally belongs to the employer**.
5. **Mandatory or Contractual:** Indian labour law combines **mandatory rules** with **contractual terms** shaped by employer policies. The Bill does not specify whether the right to disconnect is **mandatory** or can be modified through **contracts**.

6. **Article 21 Ambiguity:** The freedom to disengage is closely linked to **individual autonomy under Article 21**. However, the Bill does not explain whether this right has a **constitutional basis** or remains purely **statutory**.

7. **Enforcement Difficulty:** Workplace pressure to stay connected is often **informal and unwritten**. This makes violations hard to prove and weakens practical enforcement of the right.

8. **Coverage Limits:** Many sectors depend on **cross-time-zone work**, and large parts of India's workforce operate outside standard office hours. The Bill does not address how such realities will be handled.

Way forward

1. **Responsibilities on Employers:** Employers should frame policies that **respect boundaries between work and personal time**, clearly limiting after-hours communication expectations.

2. **Promotion of Vacation:** Encouraging **leave, breaks, and personal time** helps employees recharge, supporting **job satisfaction and productivity**.

3. **Flexible Schedules:** Flexible work hours can help employees manage work-life balance and build a **culture where disconnecting is accepted**.

4. **Supporting Mental Health:** Access to **counselling, wellness programmes, and mental health days** can reduce work-related stress and burnout.

5. **Integrating Digital Work into Labour Law:** The right will be effective only when **digital engagement is clearly recognised as work**, and included under **working time, overtime, and employer control**.

6. **Clarifying Legal and Constitutional Status:** The Bill must clarify whether the right is a **mandatory labour standard** and explain its **relationship with constitutional protections**.

7. Global Learning:

- The **EU** treats **employer control** as the key test for working time, including availability.
- **France** separates working time and rest time, treating availability under employer control as work.
- **Germany** enforces **strict working and rest period rules**.

These examples guide India in answering when an employee's time belongs to the employer.

Conclusion

The Bill accepts that digital work has blurred the line between work and personal life. However, it does not explain how digital labour fits within laws on working time and employer control. Comparative experience shows that protection works when time under employer control is treated as work. The Bill also leaves its constitutional character unclear. It should be seen as the start of a wider legal debate.

For detailed information on **Right to disconnect – Significance and Challenges** [read this article here](#)

Question for practice:

Evaluate the legal and practical challenges of implementing the Right to Disconnect in India in the context of digital work and existing labour laws.

Source: [The Hindu](#)

Death knell for the rural job guarantee

UPSC Syllabus Topic: GS Paper 3 -Indian economy.

Introduction

Death knell for the rural job guarantee captures the shift from a **rights-based rural employment system** to a **discretionary framework**. The replacement of **MGNREGA by the VB-G RAM G Act, 2025** changes rural employment from an **enforceable right linked to dignity and survival** into an **administratively sanctioned programme**. This transition **weakens constitutional values, decentralisation, and livelihood security** for the rural poor.

MGNREGA: A Rights-Based Employment Framework

- 1. Constitutional foundation:** The **right to livelihood** is an integral part of the **right to life** under **Article 21**, as affirmed by the Supreme Court in **Olga Tellis v. Bombay Municipal Corporation (1985)**. **MGNREGA translated this constitutional principle into practice** by recognising employment as a **necessary condition for a dignified life**.
- 2. Demand-driven guarantee:** **MGNREGA ensured work on demand**. If employment was not provided within **15 days**, workers had the **right to unemployment allowance**, making the **State legally accountable**.
- 3. Justiciable worker rights:** The law guaranteed **timely wage payments, delay compensation, minimum wages, and equal wages for men and women**. These rights were **legally enforceable and not dependent on administrative discretion**.
- 4. Ecological and institutional role:** **MGNREGA focused on creating durable assets to address ecological distress**. It also **strengthened panchayat raj institutions** by placing **planning and execution at the local level**.

Impact of MGNREGA

- 1. Universal and inclusive design:** **MGNREGA was universal rather than targeted**, avoiding **exclusion errors** and ensuring that **all rural households facing distress** could access employment without **complex eligibility conditions**.
- 2. Improvement in rural incomes:** Within a few years of implementation, studies showed a **rise in workers' incomes** and a **decline in overall poverty**. Increased income stability also led to **higher school enrolment** among rural households.
- 3. Reduced dependence on moneylenders:** According to the **India Human Development Survey**, reliance on moneylenders declined by **21%**, indicating **reduced vulnerability to debt traps and informal exploitation**.

4. Transformative impact on women: Before MGNREGA, about **45% of women workers** were either **not engaged in paid work** or worked only on **family farms**. Over the last five years, **women's participation averaged around 58%**, reflecting the impact of **equal wages, proximity of worksites, and predictable employment**.

5. Reduction in social inequalities: The programme helped **counter caste and gender inequalities** by reducing dependence on **dominant-caste employers**. **Gram Sabha oversight and social audits** enabled **community assertion**.

6. Global recognition and crisis role: International opinion shifted from criticism to praise, with the **World Bank calling MGNREGA a "stellar example" of rural development in 2014**. Its role during the **COVID-19 crisis** showed its value as a **shock absorber**.

New Employment Law: VB-G RAM G Act, 2025

What is VB-G RAM G Act:

The **VB-G RAM G Act, 2025** replaces **MGNREGA** by redefining rural employment as a **mission-based programme rather than a legal guarantee**. It shifts responsibility from **workers' demand to administrative planning and central approval**, turning employment from a **right enforceable against the State** into a **scheme dependent on discretion**.

Features

1. Shift in policy logic: The new law replaces **demand-driven employment** with **administratively planned works**. Employment now depends on **pre-approved missions**, not workers' applications.

2. Centralised control: **Section 5(1)** grants the **Union government wide discretion** over **where, what, and how** public works will be executed. **Local autonomy embedded in MGNREGA stands diluted**.

3. Normative allocations: **Section 4(5)** introduces **State-wise normative fund allocations** based on parameters decided by the **Centre**, converting a **legal guarantee into a centrally sponsored allocation model**.

4. Altered fiscal responsibility: The **Centre-State funding ratio shifts to 60:40** for most States. **Any expenditure beyond the allocated norm must be borne entirely by States**.

Major Concerns of the VB-G RAM G Act, 2025

1. Erosion of enforceable rights: The new law **removes the obligation of the Union government to compensate workers for wage delays**, despite **judicial directions fixing such liability on the Centre**.

2. Threat to federal balance: While **control is centralised**, **financial responsibility is shifted to States**, creating risks of **political favouritism and uneven access**.

3. Work rationing risk: **Fiscal pressure on States** may lead to **suppression of work demand**, increasing **unemployment and distress-driven migration**.

4. Seasonal employment restriction: The provision denying work for **60 days during the agricultural season** harms **landless workers and women**, reinforcing **land, caste, and gender hierarchies**.

5. Illusory employment promise: The claim of **125 days of employment per household** lacks credibility when **average employment remains around 50 days** due to **funding constraints**.

6. Exclusion through administration: **Technocratic controls**, including rigid norms and digital compliance, **widen the gap between workers and officials** and **create new spaces for corruption**.

7. Weak accountability mechanisms: The law introduces **no new safeguards to address corruption**. Existing mechanisms like **social audits remain underfunded and ineffective**.

For detailed information on **VB-G RAM G Bill – Provisions & Significance** [read this article here](#)

Conclusion

MGNREGA blended Gandhian local governance with Ambedkarite rights-based citizenship. The VB-G RAM G Act formalises a long erosion of this framework by replacing **enforceable rights with discretion and central control**. Rural employment policy needs reform, **not dismantling of rights**. Diluting accountability weakens dignity, justice, and the constitutional promise to rural India.

Question for practice:

Examine how the VB-G RAM G Act, 2025 replaces the rights-based employment guarantee under MGNREGA with a discretionary framework and its implications for rural livelihoods.

Source: [The Hindu](#)

The VB-G RAM G Act 2025 fixes structural gaps

UPSC Syllabus Topic: GS Paper 3 -Indian economy.

Introduction

The VB-G RAM G Act, 2025 reforms rural employment by expanding statutory guarantees while correcting long-standing planning and delivery gaps. It treats livelihood support and infrastructure-led rural productivity as linked goals. The focus is to make employment timely, accountable, and more reliable through stronger enforceability and better preparedness, instead of responding only after distress begins.

What is the VB-G RAM G Act, 2025?

The Viksit Bharat—Guarantee for Rozgar and Ajeevika Mission (Gramin) (VB-G RAM G) Act, 2025 repeals and replaces the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) of 2005. The Act continues a statutory and justiciable guarantee of wage employment for rural households, while redesigning how planning, funds, and implementation are organised to close the gap between legal promise and on-ground delivery.

Significance of the VB-G RAM G Act

1. **Stronger legal guarantee:** The Act keeps the statutory and justiciable right to employment, expands the entitlement from **100 to 125 days**. It removes procedural clauses that weakened unemployment allowance in practice, and strengthens **time-bound grievance redress**.
2. **Demand-based work with readiness:** Demand still comes from workers, but advance **participatory village-level planning** ensures work is ready when people ask, instead of being denied due to administrative unpreparedness.
3. **Decentralisation with coordination:** **Gram panchayats** remain primary planning and implementing authorities, and **gram sabhas** keep approval powers. Viksit Gram Panchayat Plans are aggregated at higher levels mainly to enable coordination, convergence, and visibility across sectors.
4. **Consultation-based reform:** The Bill is described as consultation-backed through State discussions, technical workshops, and multi-stakeholder engagement that shaped planning, convergence, and digital governance features.
5. **Fiscal design and cooperative federalism:** The Centre's share is said to rise to nearly **₹95,000 crore**, and funding ratios (**60:40**, and **90:10** for northeastern and Himalayan States and Jammu and Kashmir) are framed as shared responsibility. **Rule-based normative allocation** is balanced with flexibility for disasters and special relaxations.
6. **Aligning with agriculture cycles:** States can pre-notify up to **60 days** in a year during peak sowing/harvesting when works will not be undertaken. Notifications can vary by district, block, or gram panchayat based on agro-climatic conditions, so the employment guarantee complements agriculture cycles.

Major Concerns of the VB-G RAM G Act, 2025

1. **Erosion of enforceable rights:** The new law **removes the obligation of the Union government to compensate workers for wage delays**, despite judicial directions fixing such liability on the Centre.
2. **Threat to federal balance:** While **control is centralised**, **financial responsibility is shifted to States**, creating risks of **political favouritism and uneven access**.
3. **Work rationing risk:** **Fiscal pressure on States** may lead to **suppression of work demand**, increasing **unemployment and distress-driven migration**.
4. **Seasonal employment restriction:** The provision denying work for **60 days during the agricultural season** **harms landless workers and women**, reinforcing **land, caste, and gender hierarchies**.
5. **Illusory employment promise:** The claim of **125 days of employment per household** lacks credibility when **average employment remains around 50 days** due to **funding constraints**.
6. **Exclusion through administration:** **Technocratic controls**, including rigid norms and digital compliance, **widen the gap between workers and officials** and **create new spaces for corruption**.
7. **Weak accountability mechanisms:** The law introduces **no new safeguards to address corruption**. Existing mechanisms like **social audits remain underfunded and ineffective**.

Conclusion

The VB-G RAM G Act, 2025 reforms rural employment by **preserving the legal right to work** while correcting structural weaknesses seen over years of implementation. It expands entitlements, strengthens grievance redress, improves planning, and links welfare with development goals. Rather than dismantling the employment guarantee, it renews it through a more enforceable, coordinated, and productivity-linked framework. Its success will depend on how effectively expanded entitlements are translated into actual work without exclusion or rationing.

For detailed information on **VB-G RAM G Bill – Provisions & Significance** [read this article here](#)

Question for practice:

Discuss how the VB-G RAM G Act, 2025 seeks to reform the rural employment guarantee framework while addressing its structural weaknesses, and examine the key concerns associated with the new law.

Source: [The Hindu](#)

Lightning an understated disaster in India

Source: The post “**Lightning an understated disaster in India**” has been created, based on “**Lightning an understated disaster in India: Experts call for deeper understanding of atmospheric electricity**” published in “**Down to earth**” on 24th December 2025.

UPSC Syllabus: GS Paper-3- Disaster Management

Context: Lightning is the deadliest natural hazard in India, causing more fatalities than floods, cyclones, or earthquakes. Despite its high mortality, it remains an under-recognised and spatially dispersed disaster. Experts at the 9th National Lightning Conference held in December 2025 highlighted the growing threat posed by lightning in the context of climate change, along with persistent gaps in research, infrastructure, and local preparedness.

Key Trends and Findings

1. Rising Frequency and Changing Geography

- Lightning strikes in India increased by nearly 400 percent between 2019 and 2025, indicating a sharp escalation in risk.
- New lightning hotspots have emerged in Rajasthan, Gujarat, Haryana, Punjab, and Delhi, reflecting increasing vulnerability in semi-arid and desert regions.
- Additional hotspots have been identified along the Kaimur and Satpura ranges in Madhya Pradesh, Bihar, and Uttar Pradesh, suggesting a widening geographical spread.

2. Regional and Seasonal Patterns

- Eastern and central India experience the highest incidence of cloud-to-ground lightning strikes and associated casualties.
- Lightning activity spreads over a larger geographical area during the southwest monsoon season.
- North-west India records higher lightning activity during the monsoon months, while the western peninsular region witnesses peak lightning during the pre-monsoon period.

3. Human Impact

- Between 2014 and 2025, Madhya Pradesh recorded the highest number of lightning-related deaths at 3,496, followed by Bihar with 3,041 deaths and Himachal Pradesh with 2,923 deaths.
- District-level vulnerability analysis indicates that 207 districts fall under high lightning vulnerability, while 434 districts fall under moderate vulnerability categories.

Role of Climate Change and Geography

1. Global warming is intensifying thunderstorm activity by increasing atmospheric instability.
2. Rising atmospheric electricity enhances cloud moisture retention, thereby establishing a direct link between lightning, extreme rainfall events, and cloudbursts.
3. Certain geographical features, such as the rocky terrain of the Western Ghats and the limestone hills of Uttarakhand, tend to accumulate higher atmospheric electrical charges, which increases local lightning risk.

Existing Measures and Achievements

1. The India Meteorological Department and the National Disaster Management Authority have developed early warning systems through applications such as Sachet, Mausam, and Damini.
2. The Annual Lightning Report 2024–25 was released by the Centre for Research on the Epidemiology of Disasters, the IMD, and the Ministry of Earth Sciences.
3. Improved forecasting, warning dissemination, and public awareness have contributed to a decline in lightning-related deaths despite a rise in the number of strikes.
4. The adoption of multi-model ensemble forecasting has further improved the assessment of lightning intensity and probability.

Key Gaps and Challenges

1. Scientific and Technical Gaps

- India has a limited network of ground-based lightning detection systems, which affects accurate monitoring and forecasting.
- There is an absence of high-voltage testing laboratories for evaluating lightning protection equipment.
- Measurement of atmospheric electric fields remains inadequate, even though such measurements could enable earlier and more reliable warnings.

2. Institutional and Capacity Constraints

- Technical capacity at the state and district levels remains insufficient to manage lightning-related risks effectively.
- Detection and monitoring infrastructure is particularly weak in hilly and mountainous regions, where lightning vulnerability is often high.

3. Community-Level Limitations

- Early warning messages often fail to translate into timely protective action at the community level.
- Alerts are not consistently issued in local languages or framed in an action-oriented manner. Gram Panchayats and village institutions lack structured lightning mitigation and preparedness plans.

Way Forward

1. **Scientific infrastructure must be strengthened** by expanding ground-based lightning detection networks, establishing high-voltage lightning testing laboratories, and systematically measuring atmospheric electric fields for earlier warnings.
2. **Decentralised planning should be promoted** through the preparation of district-specific lightning mitigation plans and the deployment of low-cost detection devices at the village level.
3. A community-centric approach is essential, which includes enhancing grassroots awareness, issuing warnings in simple local languages with clear do's and don'ts, and integrating lightning mitigation into local disaster management plans.
4. **All mitigation and preparedness measures should follow NDMA guidelines** to ensure systematic and standardized disaster management at national, state, and district levels.

Conclusion: Lightning is a climate-amplified and spatially dispersed disaster that requires a shift from a purely technological response to a science-backed, decentralised, and community-driven strategy. Strengthening research capabilities, infrastructure, and local preparedness is critical to further reducing fatalities and building long-term lightning resilience across India.

Question: Lightning has emerged as the deadliest yet under-recognised natural disaster in India. Analyse the changing trends, regional patterns, and underlying causes of lightning incidents in India. Examine the gaps in existing mitigation measures and suggest a way forward.

How exports are concentrated in few States

Source: The post “How exports are concentrated in few States” has been created, based on “How exports are concentrated in few States” published in “The Hindu” on 24th December 2025.

UPSC Syllabus: GS Paper-3- Indian Economy

Context: India's aggregate export figures appear robust despite a weakening rupee and a challenging global environment. However, a disaggregated analysis reveals that exports are increasingly concentrated in a small number of States, exposing deep structural and regional imbalances. Export performance is no longer acting as a driver of convergence but as an outcome of prior industrial and institutional capacity.

Extent and Pattern of Export Concentration

1. Five States—Maharashtra, Gujarat, Tamil Nadu, Karnataka, and Uttar Pradesh—account for nearly 70 percent of India's total exports.
2. This share has risen from about 65 percent five years ago, indicating increasing spatial concentration.
3. The rising Herfindahl-Hirschman Index of export geography confirms a hardening core-periphery pattern.
4. Southern and western coastal States are integrating more deeply into global supply chains, while northern and eastern hinterland States are decoupling from the trade engine.

Structural Reasons for Export Concentration

1. Agglomeration and Spatial Clustering

- Export-oriented firms benefit from industrial clustering, which provides economies of scale, shared suppliers, skilled labour pools, and logistics efficiency.
- Established industrial belts attract new investment, while newer regions struggle to break into export networks.

2. Shift from Volume to Value in Global Trade

- Global merchandise trade volume growth has structurally slowed, reducing opportunities for late industrialisers.
- A small group of global exporters controls a majority of world trade, intensifying competition.
- Capital now flows towards regions with higher economic complexity rather than low-cost labour.

3. Economic Complexity and Product Space Constraints

- High-value exports such as machinery, automobiles, and electronics are located in dense product-space clusters.
- States with narrow and peripheral export baskets face steep barriers to upgrading into complex value chains.

4. Capital-Intensive Nature of Modern Exports

- India's export growth is characterised by capital deepening, with fixed capital investment growing faster than employment.
- Rising capital per worker has reduced the labour-absorbing capacity of manufacturing exports.
- Export growth now generates value rather than large-scale employment.

5. Weak Employment Linkages

- Manufacturing employment has stagnated at around 11.6–12 percent of total employment despite record exports.
- The elasticity of employment with respect to export growth has declined sharply.

6. Financial and Institutional Asymmetries

- Export-intensive States exhibit high credit–deposit ratios, indicating strong recycling of local savings into local industry.
- Hinterland States display low credit–deposit ratios, reflecting capital outflows and financial exclusion.
- Persistent human capital deficits in lagging States constrain their integration into high-complexity exports.

Implications of Export Concentration

1. Export-led growth has failed to deliver mass industrial employment or regional convergence.
2. Wage shares in net value added have declined as productivity gains accrue disproportionately to capital owners.
3. High GDP growth in exporting States has not translated into broad-based prosperity.
4. Regional inequality risks becoming entrenched, undermining inclusive and sustainable development.

Way Forward

1. Industrial policy must shift from output-based incentives to capability-building in lagging States through infrastructure, skills, and technology diffusion.
2. Employment-linked incentives should complement export promotion to restore labour absorption.
3. Financial deepening must be prioritised by improving credit flow and raising credit–deposit ratios in backward regions.
4. Decentralised industrial clusters should be developed beyond coastal belts to reduce spatial agglomeration.
5. New development metrics should supplement export growth with indicators of employment generation, wage growth, and regional convergence.

Conclusion: India's exports increasingly mirror accumulated industrial strength rather than enabling structural transformation. Treating export growth as a proxy for inclusive development risks confusing outcomes with instruments. A reoriented strategy that integrates trade, employment, financial inclusion, and state capacity is essential to ensure that exports contribute to equitable and sustainable growth.

Question: Despite strong aggregate export growth, why are India's exports concentrated in a few States? Discuss the causes, implications, and policy measures.

Regulating Academia - Viksit Bharat Shiksha Adhishthan Bill

Source: The post "**Regulating Academia - Viksit Bharat Shiksha Adhishthan Bill**" has been created, based on "**Regulating Academia - Viksit Bharat Shiksha Adhishthan Bill**" published in "**The Hindu BusinessLine**" on 26th December 2025.

UPSC Syllabus: GS Paper-2-Governance

Context: The Viksit Bharat Shiksha Adhishthan Bill was introduced in the recent session of Parliament to reform India's higher education regulatory system. The Bill seeks to replace the existing fragmented regulatory architecture with a single, unified framework.

Key Provisions of the Bill

1. The Bill proposes the establishment of a central authority named the *Viksit Bharat Shiksha Adhishtan*.
2. It subsumes existing regulators such as the University Grants Commission (UGC), the All India Council for Technical Education (AICTE), and other sector-specific bodies.
3. Separate verticals are proposed within the authority for standards-setting, accreditation, and funding.
4. Institutes of National Importance, including IITs, IIMs, and the Indian Institute of Science (IISc), are brought under the ambit of the new regulator.

Rationale and Potential Benefits

1. The Bill aims to simplify higher education regulation by reducing overlaps and regulatory duplication.
2. A unified regulator could improve coherence, consistency, and accountability across institutions.
3. It addresses long-standing concerns about the existing system being opaque and compliance-heavy.

Concerns Regarding Autonomy

1. Elite institutions such as IITs, IIMs, and IISc have historically enjoyed high academic and statutory autonomy.
2. This autonomy has been critical to their global reputation, research excellence, and ability to attract talent.
3. The broad scope of the new regulator raises fears of “regulatory creep,” even if oversight is initially light-touch.
4. Uniform standards may constrain institutions that are designed to set benchmarks rather than follow them.

Way Forward

1. The referral of the Bill to a Joint Parliamentary Committee provides an opportunity for detailed scrutiny.
2. Inputs from academic leaders, experts, and stakeholders should be incorporated.
3. Amendments should clearly safeguard the autonomy and decision-making powers of premier institutions.
4. A balanced approach is required to ensure accountability without undermining excellence.

Conclusion

While the objective of streamlining higher education regulation is laudable, preserving institutional autonomy is essential. The success of the Bill will depend on striking the right balance between regulatory oversight and academic freedom.

Question: The Viksit Bharat Shiksha Adhishthan Bill seeks to overhaul India’s higher education regulatory framework through a unified regulator. Discuss the rationale behind the Bill and critically examine the concerns related to the autonomy of premier institutions.

Rabies: the cruel and expensive disease of India’s most impoverished

Source: The post “Rabies: the cruel and expensive disease of India’s most impoverished” has been created, based on “Rabies: the cruel and expensive disease of India’s most impoverished” published in “The Hindu” on 26th December 2025.

UPSC Syllabus: GS Paper-2-Governance

Context: Rabies is a viral zoonotic disease that primarily affects the central nervous system and is almost invariably fatal once clinical symptoms appear. Despite being completely preventable, rabies continues to cause a large number of deaths in India, reflecting deep gaps in public health systems and social awareness.

Magnitude of Rabies in India

1. Rabies causes approximately 59,000 human deaths globally every year.
2. India accounts for nearly one-third of these deaths, with an estimated 20,000 fatalities annually, the highest in the world.
3. The disease remains endemic in India and disproportionately affects economically weaker and marginalized communities.

Reservoir of Infection and Transmission

1. Dogs are the primary reservoir of the rabies virus in India.
2. The majority of human rabies cases occur due to bites from free-roaming and unvaccinated street dogs.
3. Poor management of the stray dog population allows continuous circulation of the virus.

Dog Population and Bite Burden

1. India has an estimated 80 million free-roaming dogs.
2. Approximately 20 million dog bite incidents are reported every year.
3. These large numbers significantly increase the risk of rabies transmission and make control efforts more challenging.
4. The incubation period of rabies can range from a few days to several months depending on the bite location and severity.
5. Initial symptoms gradually progress to severe neurological manifestations such as hydrophobia, paralysis, fear of light and air, and aggressive behavior.
6. Once symptoms appear, rabies is almost always fatal, with death occurring due to cardio-respiratory failure.

Preventability of Rabies

1. Rabies is entirely preventable if appropriate medical care is provided in a timely manner.
2. Immediate washing of the bite wound with soap and running water for at least 15 minutes significantly reduces the risk of infection.
3. Early medical intervention plays a crucial role in preventing the virus from reaching the brain.
4. **Post-Exposure Prophylaxis (PEP):** Post-exposure prophylaxis includes the administration of anti-rabies vaccine to all bite victims.
 - Rabies immunoglobulin is essential for deep, bleeding, or severe wounds to neutralise the virus at the site of entry.
 - A vaccine alone is insufficient in severe cases without the use of immunoglobulin.

Challenges

1. **Shortage of Rabies Immunoglobulin:** India faces a severe shortage of rabies immunoglobulin across public health facilities.
 - Many government hospitals lack immunoglobulin supplies, forcing patients to travel long distances or seek private care.
 - The shortage leads to incomplete treatment and increases the risk of preventable deaths.
2. **Gaps in Healthcare Infrastructure:** Many public health facilities do not have trained doctors, adequate vaccine stocks, or immunoglobulin.
 - Rural and remote areas face severe accessibility challenges, delaying treatment. Inadequate referral systems further compromise patient outcomes.
3. **Lack of Awareness and Social Factors:** Public awareness regarding rabies prevention and treatment remains low, particularly among vulnerable populations.
 - Many people fail to wash wounds properly or delay seeking medical care after animal bites.
 - Some patients resort to unqualified practitioners and traditional remedies, which are ineffective and dangerous.

4. **Economic Burden on Households:** Rabies treatment imposes a heavy financial burden on poor families.
 - Costs related to vaccines, travel, and hospital visits often push households into debt.
 - Children and daily wage workers are particularly vulnerable to both health and economic consequences.
5. **Inequity in Disease Burden:** Rabies predominantly affects the poorest sections of society, including rural populations, children, and informal workers.
 - Limited healthcare access and affordability exacerbate inequalities in disease outcomes. The disease thus reflects broader social and health inequities in the country.
6. **Legal and Policy Challenges in Dog Control:** Policies and court directives exist for managing stray dog populations, but implementation remains weak.
 - Dog sterilisation and vaccination programs face administrative, legal, and logistical obstacles.
 - Lack of coordination between municipal bodies and health authorities hampers effective control.
7. **Vaccine Production and Supply Issues:** India's production of anti-rabies vaccines is insufficient to meet national demand.
 - Supply gaps affect the timely availability of vaccines in public health facilities. Dependence on limited suppliers increases vulnerability to shortages.

Way Forward

1. **New Medical Interventions:** New monoclonal antibody treatments have been developed as alternatives to rabies immunoglobulin. These newer treatments are cheaper and easier to administer. However, they are still under limited availability and are yet to be widely integrated into public healthcare.
2. **One Health Approach:** Rabies control requires a One Health approach integrating human health, animal health, and environmental management. Coordinated action among health departments, veterinary services, and local governments is essential. Addressing only human treatment without controlling the animal reservoir is insufficient.
3. **Strategies for Effective Rabies Control:** Mass dog vaccination and sterilization programs should be strengthened nationwide. Post-exposure prophylaxis, including vaccines and immunoglobulin, should be available at all primary healthcare centers.
4. **Public awareness:** Public awareness campaigns should emphasize wound washing, early treatment, and completion of vaccination schedules. Faster drug approvals and increased public investment in healthcare infrastructure are necessary.

Conclusion: Rabies in India represents a tragic failure to prevent a completely avoidable disease. Eliminating rabies requires sustained political will, strengthened healthcare systems, effective dog population management, and widespread public awareness. With coordinated action, India can significantly reduce rabies deaths and move towards eventual elimination.

Question: Rabies remains a major yet preventable public health challenge in India. Discuss the magnitude of the problem, key challenges in rabies control, and the measures required for its effective prevention and elimination.

The urban future with cities as dynamic ecosystems

UPSC Syllabus Topic: GS Paper 1- population and associated issues, poverty and developmental issues, urbanisation, their problems and their remedies.

Introduction

Cities are growing rapidly and pulling people from villages, small towns, and even across national borders. **Migration now shapes how cities function, who they serve, and who they exclude.** Yet, many cities are still planned as if populations are fixed and socially uniform. This mismatch between **lived urban realities and designed urban spaces** creates exclusion, stress, and inequality. Cities must be understood as **living systems**, shaped by movement, diversity, and everyday human needs, not just infrastructure and technology.

What is Migration?

- Migration refers to the movement of people away from their usual place of residence to another location, either within a country or across international borders. It includes both temporary and permanent movement and is driven by **employment, marriage, education, conflict, and climate stress.**
- In India, a person is counted as a migrant if their **place of birth or last residence differs from their current place of living.** While this method captures internal movement, it does not fully reflect migrants' **living conditions, access to services, or sense of belonging.**

Status of Migration in India

1. **Global scale of migration:** More than **280 million people globally** are migrants, accounting for **3.6% of the world's population.**

2. **National scale of migration:**

- Migrants constitute about **28.88% of India's population**, or nearly **40.2 crore people.**
- **Rural-to-rural migration dominates (55%),** while rural-to-urban and urban-to-urban migration together account for about 35%.

3. **Urban growth and future trends:** By 2030, over **40% of India's population** is expected to live in urban areas. This growth will be **driven largely by migration**, making cities central to India's economic and social future.

4. **Economic contribution of migrants:** Migrant workers contribute **0.5–2.5% of GSDP** in states such as **Delhi, Tamil Nadu, Gujarat, Karnataka, and Maharashtra.** Cities rely heavily on migrant labour, skills, and tax contributions for daily functioning.

5. **Rising climate-induced displacement:** India is the **fourth worst-hit country** globally for disaster-related displacement. Around **41 million people** were displaced due to weather events between **2020 and 2021**, increasing pressure on urban centres.

What are the major problems faced by migrants?

1. **Linguistic exclusion:** Language becomes a compulsory marker of belonging. Migrants who do not speak the dominant urban language face **daily exclusion and reduced acceptance** in public life.

2. **Invisible economic burden:** Limited language access makes **jobs, housing contracts, healthcare, and government services** difficult to navigate, creating hidden costs that reduce income and stability.

3. **Push into informal work:** Cultural and linguistic barriers force many migrants into **informal employment**, marked by low wages, weak protection, and high exploitation.

4. **Unequal access to urban services:** Despite cities depending on migrant labour and taxes, migrants face barriers in **welfare, healthcare, and public facilities**, creating structural inequality.

5. **Planning that ignores migrants:** Urban infrastructure is designed for settled residents, rendering migrants **invisible in city planning**, even as migration fuels urban growth.

6. **Weak representation in governance:** Planning bodies rarely reflect urban diversity, leading to **misaligned schools, transport systems, and public spaces**.

7. **Erosion of social belonging:** Exclusion undermines migrants' **dignity, safety, and trust**, deepening divisions between long-term residents and newcomers.

What are the government initiative taken to overcome the problem of migrant?

1. Digital & Social Security Integration

- **e-Shram Portal (One-Stop Solution):** This national database for unorganized workers now serves as a “**One-Stop Solution**”, integrating **14 central social security schemes**. Registered migrants can **access and track benefits** for schemes like **PM-SYM (pension)**, **Ayushman Bharat (healthcare)**, and **PMAY (housing)** through a **single Universal Account Number (UAN)**.

- **One Nation One Ration Card (ONORC):** Fully operational across **all 36 States and UTs (as of 2025)**. It strengthens **food security** by allowing migrants to access **subsidized food grains** from any **Fair Price Shop (FPS)** in India using their existing ration card and **Aadhaar authentication**.

- **Ayushman Bharat Portability:** Migrant workers covered under **PM-JAY** can receive up to **₹5 lakh free annual health coverage** at any **empanelled hospital nationwide**, regardless of their home state.

2. Legislative & Policy Reforms

- **New Labour Codes (2025):** The implementation of **four labour codes** (notably the **Social Security Code** and **OSH Code**) as of **November 21, 2025**, has introduced statutory rights such as **minimum wages**, **mandatory appointment letters**, and **portable social security** for **inter-state migrants**.

- **Shram Shakti Niti 2025:** A unified **digital labour-governance framework** designed to connect workers with **opportunities and welfare services** closer to their communities through **District Labour and Employment Resource Centres (DLERCs)**.

- **Overseas Mobility Bill 2025:** For international migrants, this proposed bill aims to establish an **Overseas Mobility and Welfare Council** to provide a **regulatory framework** for the **protection and welfare** of workers abroad.

- **All India Survey on Migrant Workers:** The **Labour Bureau** has conducted an **All India Survey on Migrant Workers** to capture their **socio-economic characteristics**.

3. Employment & Housing

- **Affordable Rental Housing Complexes (ARHC):** Under **PMAY-Urban**, this scheme provides **low-cost rental housing** for migrants in cities, improving living conditions **near work sites**.
- **PM Viksit Bharat Rozgar Yojana (2025):** Focused on jobs created between **August 2025 and July 2027**, this scheme provides financial incentives of up to **₹15,000** for newly employed youth and supports **formalization through EPFO registration**.
- **Garib Kalyan Rojgar Abhiyaan:** Launched on **20 June 2020**, it aimed to support **returning migrants** through **rural works** and **infrastructure saturation**.

4. State-Level Best Practices

- **West Bengal:** The **Shramashree Scheme (2025)** supports returning migrants with a **₹5,000 one-time grant**, **monthly financial aid**, and **immediate enrollment** in state health and education programs.
- **Jharkhand:** The **Safe and Responsible Migration Initiative (SRMI)** focuses on **systemic registration** and **helpdesks** to track and support migrants at both **source and destination districts**.

What should be done?

1. **Rethink cities as living systems:** Cities should be treated as **dynamic ecosystems**, not fixed structures. Urban planning must accept **constant movement and changing populations** as normal, not as an exception.
2. **Anticipate cultural and linguistic friction:** City systems should prepare for **diversity in everyday life** instead of responding only after problems arise. Measures like **multilingual communication** and simpler navigation of services can reduce daily barriers.
3. **Invest in cultural sensitisation:** Training **public-facing staff** to engage with diverse populations is not only about politeness; it improves **service delivery, operational efficiency, dignity, and democratic access**.
4. **Make governance more inclusive:** Planning bodies must reflect the **real diversity** of the city. When migrant perspectives are included, planning for **schools, transport, parks, and housing** becomes more realistic and effective.
5. **Accept short-term adjustment for long-term gain:** Inclusive reforms can create **temporary disruption or commotion**, but this is often necessary to reach a **fairer, stronger, and more adaptable** city outcome.
6. **Strengthen frontline and mobile service delivery:** **Frontline health and social workers** should actively reach migrants who are excluded from services and schemes. **Preventive health care** like vaccinations should be ensured, and **mobile facilities** should cover brick kilns, construction sites, and other hard-to-reach work locations.
7. **Include migrants in schemes and enable ID access:** Government departments, alone or with civil society, should involve migrants in the **design and implementation** of benefit schemes. At the same time, systems must ensure migrants can secure the **identification documents** needed to access those benefits in cities.

Conclusion

Cities succeed only when they serve **all who live in them**. Migration is not a problem but a **defining reality of urban life**. When migrants are excluded, cities weaken their own **economic strength, social trust, and resilience**. Urban planning must move beyond infrastructure and technology to focus on **people, belonging, and everyday lived experience**. **Empathy, inclusion, and recognition of diversity** are not optional ideals but the true measures of a successful and sustainable urban future.

Question for practice:

Examine how migration shapes urban life in India and discuss the challenges faced by migrants and the measures needed to make cities more inclusive.

Source: [The Hindu](#)

The Case of Political Funding in India

UPSC Syllabus Topic: GS Paper 2 - Salient features of the Representation of People's Act

Introduction

Political funding shapes how democracy works in practice. When access to money is unequal, political competition becomes unequal. In India, **private donations dominate political finance**, which has created **sharp funding asymmetries**, weakened electoral fairness, and strengthened the **nexus between money and power**. Despite repeated reform attempts, **weak enforcement, limited transparency, and lack of political will** have allowed distortions to persist.

Mechanisms of political funding in India

- 1. Individual contributions:** Political parties can receive voluntary donations from individuals under the Representation of the People Act, 1951. **Donations above ₹20,000 must be reported**, and **anonymous cash donations are capped at ₹2,000**. Despite these rules, **a large share of party income still comes from unknown or opaque sources**.
- 2. Corporate donations:** Corporate funding is permitted under the Companies Act, 2013. The **removal of the 7.5 per cent cap on corporate donations in 2017** expanded corporate influence. Companies disclose total political contributions, but **they no longer need to name beneficiary parties**, which weakens transparency.
- 3. Electoral trusts:** The Electoral Trust Scheme, 2013 allows companies and individuals to donate through registered trusts. Trusts must disclose donors and recipients to authorities and **donate at least 95 per cent of funds** to parties. However, the public **cannot see which company funded which party**, limiting scrutiny.
- 4. Electoral bonds (now scrapped):** Electoral bonds enabled **anonymous donations through banks**. The scheme was struck down by the Supreme Court in **February 2024** for violating transparency and the **voter's right to know**. Its removal has shifted corporate donations back to electoral trusts.
- 5. State or public funding:** India follows limited indirect public funding. This includes **tax exemptions, free media time, and subsidised facilities**. Direct public funding has been debated but not implemented due to concerns about **misuse and weak party regulation**.

What are the major concerns and distortions in political funding in India?

- 1. Extreme inequality in corporate donations:** Between FY 2013-14 and FY 2023-24, direct corporate donations declared by the BJP were **at least four times** more than all other national parties combined. Its share stood at **almost 84.648 per cent**, creating a clear imbalance in electoral competition.
- 2. High concentration through one dominant trust:** Among the top ten trusts, **Prudent Electoral Trust** received **86.38 per cent of the total contributions declared by all trusts** between FY 2013-14 and FY 2023-24. During the same period, **75 per cent of Prudent's disclosed donations went to the BJP**, showing strong concentration and skewed distribution.
- 3. Post-electoral bond shift and sharp surge in trust funding:** After the Supreme Court scrapped electoral bonds in **February 2024**, companies again turned to electoral trusts. Contributions rose from **₹1,218.36 crore in 2023-24 (five trusts)** to **₹3,811 crore in 2024-25 (nine trusts)**, increasing dependence on the trust route.
- 4. Lack of public visibility of donor-party links:** Trusts disclose donors and recipients to the authorities, but the public does not know **which company funded which party**, because the method of disbursement is not publicly available and is likely left to trust discretion without ample scrutiny. Only the **Election Commission and the income tax department** can see these links under the **2014 transparency guidelines**.
- 5. Quid pro quo risk and institutionalised corruption concern:** Political funding largely flows to parties ruling at the Centre or state level, suggesting a **quid pro quo** between corporates and ruling parties. The Supreme Court called quid pro quo an instance of **institutionalised corruption** and said corporate contributions are **business transactions** made with the intent of securing benefits in return.
- 6. Unlimited party expenditure and rising election costs:** There is **no legal ceiling on political party expenditure**. This has enabled unlimited spending on more ambitious and professional campaigns, making India's elections **one of the most expensive globally, surpassing even the US elections**, and raising entry barriers for less-funded parties and candidates.

What have the Supreme Court and various committees observed or recommended on political funding reforms?

- 1. Supreme Court on corporate intent:** In the electoral bonds judgment, the five-judge Bench stated that corporate political donations are **purely business transactions** made to secure benefits. It rejected anonymity as incompatible with democratic transparency and the voter's right to know.
- 2. Early constitutional concern (1948):** The Constituent Assembly discussed election costs in **1948** and argued that elections are a **state affair**, not a private concern. They warned that unfair advantage to richer candidates must be avoided, and public treasury should bear costs in a regulated and least expensive manner.
- 3. Indrajit Gupta Committee (1998):** The committee supported state funding in principle and recommended **limited in-kind public support** only for recognised parties, citing fiscal constraints.
- 4. Law Commission of India (1999):** The Commission backed total state funding but only if **private donations were banned**. It stressed internal party democracy and financial accountability as preconditions.
- 5. National Commission to Review the Working of the Constitution:** The Commission did not support state funding, but agreed that strong regulation of political parties must come first if state funding is ever considered.

6. Second Administrative Reforms Commission (2008): The ARC supported partial public funding to reduce illegal spending and emphasised ethical governance and stronger regulation of party finances.

Way forward

1. Public disclosure of donor-party links: Electoral trusts should publicly disclose which company donated to which party, not only to authorities, so citizens can see the full funding trail. Trust names should indicate the company or group that set them up to strengthen transparency.

2. Curb funding concentration and intermediaries: Reforms must address the dominance of a few donors and trusts, because such concentration of economic power distorts political competition and strengthens unequal access to funds.

3. Introduce party expenditure limits: Legal ceilings on political party spending are essential to control rising election costs and to prevent money from becoming the main determinant of electoral success.

4. Reduce corporate dependence and quid pro quo incentives: Political funding should not rely mainly on corporates donating to ruling parties, because this fuels quid pro quo arrangements and weakens policy neutrality.

5. Conditional approach to state funding: If state funding is introduced, it should be partial, mainly in-kind, and linked to strict compliance with transparency, internal democracy, and audited accounts, so that public funding does not become another route of misuse.

6. Strengthen regulation and accountability of parties: Political parties need stronger oversight on internal functioning, financial reporting, and accountability, so that transparency reforms are enforceable and meaningful.

7. Lower entry barriers and protect electoral competition: A political finance framework must reduce disparities in access to resources, diversify funding sources, and enable candidates without financial strength to contest meaningfully, or citizens will continue to bear the hidden costs of money-driven democracy.

Conclusion

Political funding in India shows deep distortions driven by **corporate dominance, high concentration through trusts, opaque donor-party links, quid pro quo risks, and unlimited party spending**. Past experience shows bans without alternatives can worsen corruption. A credible path needs **full transparency, expenditure control, stronger party regulation, diversified funding, and conditional public support** to protect democratic competition and integrity.

Question for practice

Discuss how corporate dominance and weak transparency mechanisms have created major concerns and distortions in political funding in India.

Source: [Indian Express](#)

Health care does not need the PPP route

UPSC Syllabus Topic: GS Paper 3 -Issues relating to development and management of Social Sector/Services relating to Health.

Introduction

India's healthcare system works through a mixed public-private model, where the public sector anchors universal access and the private sector dominates specialised services. Despite higher government spending and a fall in out-of-pocket expenditure, deep structural gaps remain in infrastructure, workforce distribution, and regional equity. In this context, healthcare PPPs—especially in medical education and district hospitals—are projected as solutions, even as they raise serious concerns about public control, affordability, and long-term health system strength.

Current status of Healthcare in India

- India's healthcare **runs as a mixed system**: a public network that anchors universal access, and a private network that delivers a large share of secondary-tertiary care.
- The **public system** is organised as a **three-tier structure**—**primary care** (PHCs/Health & Wellness-type services for first contact), **secondary care** (community/ district-level hospitals for referrals and basic specialties), and **tertiary care** (medical colleges and large government hospitals in major cities).
- The **private sector** is more concentrated in metros and Tier-I/II cities, and dominates many specialty services.
- Within this mix, **healthcare PPPs** are used to **fill capacity and service gaps**—for example, **outsourcing diagnostics/NCD services within district hospitals**, running specific units on concession/contract, and partnering for facility upgrading and management using model/guide documents.

Data and facts

- The **demand for Indian healthcare professionals** is expected to **double nationally and globally by 2030**.
- **By 2025, India will require three million additional hospital beds** to achieve the target of three beds per 1,000 people, along with 1.54 million doctors and 2.4 million nurses to address the growing healthcare demand.
- India's **public expenditure on healthcare is expected to be 1.9% of GDP in FY26**, compared to **2.5% in FY25**, as per the Economic Survey 2024-25.
- **Government share**: The **share of government spending in total health expenditure increased from 29% in FY15 to about 48% in FY22**.
- **Out-of-pocket expenditure**: **Out-of-pocket spending declined to about 39-40% of total health expenditure in FY22**.
- **Doctor-population ratio**: The **doctor-population ratio is estimated at roughly 1:800**, which meets WHO norms in aggregate but masks large rural-urban disparities.

- **PPP presence: Public-Private Partnerships have become integral to service delivery**, particularly in **dialysis, diagnostics, and insurance-based hospital care under PM-JAY**, where private hospitals deliver publicly financed services.

NITI Aayog Guidelines on Healthcare PPP Model in India

- The private establishment will construct the medical college on the site given by the government.
- The site will be given for lease to the private establishment for 99 years at payment of a subsidised lease of 8% of the circle rate (guidance value) of the land.
- The medical college will be owned by the private establishment.
- The government district hospital is handed over to the private establishment for 60 years (which may extend).
- The private establishment will have all the rights to operate and maintain the hospital.
- The private hospital is expected to develop the district hospital further, for which grant funds will be provided by the government.

Arguments in favour of the Healthcare PPP Model in India

1. **Capacity Expansion:** PPP enables **rapid creation of hospitals, medical colleges, and diagnostic centres** without overburdening public finances. *Example:* PPP medical colleges in **Andhra Pradesh** expanded seat capacity faster than purely public routes.
2. **Resource Mobilisation:** Private investment supplements limited public health budgets, especially for capital-intensive infrastructure. *Example:* Use of long-term institutional finance via NABARD for health infrastructure.
3. **Efficiency Gains:** Private partners bring **managerial efficiency, cost control, and timely project execution**, reducing delays common in public works. *Example:* PPP-mode diagnostic services in district hospitals.
4. **Technology Access:** PPP facilitates access to **advanced medical technology and digital systems** otherwise unaffordable for states. *Example:* PPP-run CT/MRI services in government hospitals.
5. **Human Resources:** Addresses shortage of doctors and specialists through **shared staffing and flexible recruitment**. *Example:* Private faculty support in government medical colleges.
6. **Quality Improvement:** Performance-linked contracts incentivise **service quality, uptime, and patient satisfaction**. *Example:* Contract-based quality benchmarks in PPP hospitals.
7. **Risk Sharing:** Construction, operational, and financial risks are **shared**, reducing fiscal stress on states.
8. **Regional Equity:** PPP helps establish facilities in **underserved districts** where private entry alone is unlikely.

Arguments Against the Healthcare PPP Model

1. **Risk to Public Assets:** The model often involves handing over public assets, such as district hospitals and land, to private entities for long lease periods (e.g., 33-66 years), effectively resulting in privatization.

2. Profit Motive vs. Welfare: Critics argue that the fundamental difference in motive—the state's goal of public welfare versus the private entity's need for profit—leads to a conflict of interest that ultimately harms public health goals.

3. Inaccessibility and Cost: There are concerns that PPP models lead to a two-tiered system of "paid" and "free" beds, potentially reducing the number of beds available to the public and increasing out-of-pocket costs for the majority of the population.

4. Lack of Enforcement Capacity: The argument posits that many states lack the institutional capacity for robust contract enforcement, which, as past examples in Karnataka and Andhra Pradesh show, can lead to failed agreements, poor management, and a lack of accountability.

5. Prioritizing Commercial Interests: Instead of addressing gaps in the public health system, such models may prioritize high-profit services, unnecessary diagnostics, and higher out-of-pocket expenditures for patients.

Way Forward

1. Strengthen primary care first: Invest in comprehensive primary healthcare, as evidence shows nearly **30% of hospitalisations can be avoided** through effective first-contact care.

2. Retain public control over district hospitals: District hospitals should remain public to ensure integrated referral pathways across all three tiers.

3. Reform medical education financing: Expand subsidised seats and invest in faculty to build a public-oriented health workforce, especially for rural areas.

4. Address human resource gaps: Target specialist shortages through direct public recruitment and incentives, rather than relying on commercial education models.

5. Limit PPPs to short-term, service-specific roles: Any private participation should be tightly regulated, time-bound, and focused on non-core services.

6. Improve state capacity and regulation: Strengthen contract enforcement, monitoring, and health regulation before considering asset-heavy PPP models.

Conclusion

India's healthcare challenge is not only about expanding infrastructure but about ensuring equity, quality, and system integration. While PPPs promise speed and capital, they risk weakening public control and fragmenting care delivery. A stronger, publicly funded, and well-regulated health system remains the most reliable path to affordable and inclusive healthcare.

Question for practice

Examine how the Public-Private Partnership (PPP) model in healthcare affects public control, equity, and long-term health system strengthening in India.

Source: [The Hindu](#)

RBI's new guidelines may slow expansion of urban cooperative banks

UPSC Syllabus Topic: GS Paper 3 -Economy

Introduction

RBI's new guidelines may slow expansion of urban cooperative banks by linking growth directly to deposit size, capital strength, governance quality, and compliance capacity. The revised framework introduces deposit-based regulatory tiers, higher capital needs, and stricter oversight. While the aim is to protect depositors after recent bank failures, the rules change how urban cooperative banks plan expansion, manage costs, and retain their cooperative character.

What are Urban Cooperative Banks?

Urban Cooperative Banks (**UCBs**) are financial institutions operating in urban and semi-urban areas that are owned by their members. They operate on cooperative principles of mutual help and democratic decision making.

Regulation: UCBs function under a dual regulatory framework: the **Reserve Bank of India (RBI)** regulates their **banking functions** (licensing, capital adequacy, etc.) under the **Banking Regulation Act, 1949**, while the **administrative aspects** (registration, management, etc.) are governed by the **Registrar of Cooperative Societies (RCS) of the state or central government**.

Umbrella Organisation: The **National Urban Co-operative Finance and Development Corporation (NUCFDC)** has been established as an umbrella organization to provide liquidity support and capacity building to member UCBs.

RBI's Revised Regulatory Framework for UCBs

1. Deposit-linked four-tier structure: The revised framework classifies UCBs into four tiers based on deposit size.

Tier-I includes unit banks and UCBs with deposits up to ₹100 crore.

Tier-II covers deposits between ₹100 crore and ₹1,000 crore.

Tier-III includes banks with deposits from ₹1,000 crore to ₹10,000 crore.

Tier-IV applies to banks above ₹10,000 crore.

2. Automatic movement to higher regulatory tiers: When a UCB crosses a deposit threshold, it is immediately placed in the next tier. This movement is not optional and brings tougher regulatory standards.

3. Tighter conditions for scheduled status: For inclusion in the Second Schedule of the RBI Act, it requires :

- Meeting the **Tier-III minimum deposit threshold for two consecutive years**
- Maintaining **CRAR at least 3 percentage points above** the minimum requirement
- Having **no major regulatory or supervisory concerns**

What are the major concerns related to this revision?

1. Deposit growth becoming a disincentive: As deposits rise, banks face stricter norms, higher capital needs, and stronger governance expectations. This creates a natural break on growth, as expansion increases regulatory pressure.

2. Capital as a major bottleneck: UCBs depend mainly on member contributions for capital. Unlike commercial banks, they cannot easily raise market capital, making higher CRAR norms difficult to meet.

3. Rising compliance costs: Officials estimate that compliance costs may rise by over 20 per cent. For many banks, this reduces funds available for lending and branch expansion.

4. Technology and risk management burden: Expansion now requires strong core banking systems, cybersecurity frameworks, and advanced reporting tools. The cost of upgrading technology and compliance systems puts pressure on balance sheets. Many small and mid-sized UCBs lack resources for such upgrades.

5. Limited relief from the glide path: The two-year transition period for moving into higher tiers offers little comfort. Aligning capital, systems, and processes within this period while running daily operations is difficult.

6. Governance expectations and legacy structures: Growing banks must show professional management and clean supervisory records. Traditional cooperative governance models may struggle to adjust quickly.

7. Loss of state-level control: The revised framework allows RBI to override state registrars. States such as Maharashtra, Gujarat, and Kerala see this as erosion of their constitutional role over cooperatives.

8. Weakening of member democracy: RBI can supersede elected boards and approve mergers without member consent. This reduces democratic participation and weakens trust among cooperative members.

9. One-size-fits-all regulation: Uniform rules apply to both large and small UCBs. Smaller banks struggle to survive norms designed for much larger institutions.

10. Slower innovation and local response: Branch expansion, new products, and operational changes require regulatory approval. This delays decisions and reduces responsiveness to local credit needs.

Way forward

1. Balance RBI control with state role (Hybrid model): A hybrid model can be used where the RBI ensures financial standards, while states keep a strong role in governance and day-to-day management. This helps protect financial stability without weakening the cooperative character.

2. Lighter rules for small community UCBs: Small, community-based UCBs can be given exemptions or lighter rules, especially when they do not deal with complex or risky products. This can reduce the burden of “one size fits all” compliance on weaker banks.

3. Consultative and data-driven reforms: Reforms should be based on data and should include voices from the grassroots level. They should also recognise the unique role of UCBs in financial inclusion and local development.

Conclusion

RBI's revised framework strengthens depositor safety but restricts expansion of urban cooperative banks. Deposit-linked tiers, higher capital needs, and rising compliance costs discourage growth and weaken cooperative autonomy. A calibrated approach is required that ensures financial stability while preserving state roles, member control, and the local development function of urban cooperative banks.

Question for practice

Examine how the Reserve Bank of India's revised regulatory framework may slow the expansion of urban cooperative banks while aiming to strengthen depositor protection.

Source: [Business Standard](#)

Decoding air pollution concerns in Delhi-NCR

Source: The post "Decoding air pollution concerns in Delhi-NCR" has been created, based on "Decoding air pollution concerns in Delhi-NCR" published in "The Hindu" on 27th December 2025.

UPSC Syllabus: GS Paper-3- Environment

Context: Delhi-NCR has been facing severe air pollution, particularly due to high concentrations of PM2.5 and toxic gases such as nitrogen oxides, benzene, and carbon monoxide. Although scientific evidence shows that vehicular emissions are the dominant source, the responsibility for deteriorating air quality is frequently placed on stubble-burning farmers in neighbouring States. This situation raises serious concerns regarding the correct application of the Polluter Pays Principle in India.

Polluter Pays Principle (PPP): Meaning and Legal Position

1. The Polluter Pays Principle states that any person or entity that causes environmental pollution must bear the cost of preventing, controlling, and remedying the damage caused.
2. The Supreme Court of India recognised the PPP as part of Indian environmental law in *Vellore Citizens Welfare Forum vs Union of India* (1996).
3. This judicial recognition later led to statutory incorporation of the principle under the National Green Tribunal Act, 2010.
4. The primary objective of PPP is to internalise environmental costs and ensure accountability of polluters.

Difficulty in Applying PPP to Delhi-NCR Air Pollution

1. Air pollution in Delhi-NCR arises from multiple sources such as vehicles, industries, construction activities, waste burning, and seasonal agricultural burning.
2. The presence of both point sources and non-point sources makes precise identification and quantification of individual liability extremely complex.
3. Seasonal stubble burning contributes only partially to pollution levels and cannot be treated as the sole or dominant cause.
4. Moreover, air pollution in the region has a transboundary character, extending beyond State boundaries, which limits the effectiveness of PPP in isolation.

Judicial and Comparative Perspectives on Proportionality

1. The Standley case decided by the European Court of Justice in 1999 introduced the principle of proportionality in the application of PPP.
2. The Court held that farmers could not be held liable for nitrate pollution when significant pollution originated from industrial sources.
3. This judgment implies that liability under PPP must correspond to the actual contribution of each polluter.
4. Applying this reasoning to India, stubble-burning farmers cannot be held responsible for pollutants predominantly generated by vehicles and industries.

Transboundary Nature of Air Pollution

1. The Trail Smelter case (1941) established that a State can be held responsible for pollution causing damage beyond its territorial boundaries.
2. Scientific studies, including research published by Q. Zhang et al. in *Nature* (2017), confirm that PM2.5 pollution has regional and global health impacts.
3. International agreements such as the Convention on Long-Range Transboundary Air Pollution (1979) and the Gothenburg Protocol (2012) recognise PM2.5 as a long-distance pollutant.
4. These developments clearly show that air pollution is not merely a local issue but a regional and global challenge.

Shift from Polluter Pays to Government-Pays Principle in India

1. Indian courts have faced difficulties in determining the precise valuation and quantification of environmental damage caused by pollution.
2. In cases such as *Indian Council for Enviro-Legal Action* and *S. Jagannath vs Union of India*, the Supreme Court focused more on compensating victims and restoring the environment.
3. This approach aligns more closely with corrective justice rather than strict application of the Polluter Pays Principle.
4. As a result, the financial burden of pollution control and remediation increasingly falls on the government.

Role of the State and Administrative Limitations

1. India has enacted comprehensive environmental legislation such as the Water Act, 1974, the Air Act, 1981, and the Environment Protection Act, 1986.
2. Constitutional provisions under Articles 48A and 51A(g) impose duties on the State and citizens to protect the environment.
3. However, environmental authorities suffer from weak enforcement, administrative inefficiencies, and limited capacity.
4. These failures further justify judicial intervention and increased government responsibility.

Activist Judiciary and Welfarist Approach

1. The Indian judiciary has adopted an increasingly activist role in environmental protection.
2. Courts often impose the primary responsibility for monitoring and controlling air pollution on governments.
3. This approach is based on welfarist considerations, as most victims of air pollution lack the resources to sue polluters individually.
4. However, this model weakens deterrence and fails to fully internalise the costs of pollution prevention.

Way Forward

1. A scientific source-apportionment mechanism should be institutionalised to ensure proportionate application of the Polluter Pays Principle.
2. Inter-State and regional cooperation must be strengthened to address the transboundary nature of air pollution.
3. Regulatory bodies should be empowered with better capacity, autonomy, and enforcement powers.
4. The approach should shift from a government-pays model to a shared-responsibility framework involving polluters, the State, and citizens.
5. Market-based instruments and stricter compliance mechanisms should be used to internalise pollution costs.
6. Farmers should be supported through incentives and technology rather than punitive measures.
7. Long-term solutions such as clean mobility, public transport expansion, and citizen environmental responsibility must be prioritised.

Conclusion: In India, the Polluter Pays Principle has effectively transformed into a government-pays principle. While this ensures immediate relief to citizens, it dilutes accountability and places a disproportionate burden on public resources. Sustainable air pollution control in Delhi–NCR requires proportional liability, regional cooperation, effective enforcement, and greater emphasis on individual environmental duties.

Question: Examine the challenges in applying the Polluter Pays Principle to air pollution in Delhi–NCR and suggest measures to make it more effective

India may soon get 4 new regional airlines, but their success isn't guaranteed

Source: The post “India may soon get 4 new regional airlines, but their success isn't guaranteed” has been created, based on “India may soon get 4 new regional airlines, but their success isn't guaranteed” published in “Indian Express” on 27th December 2025.

UPSC Syllabus: GS Paper-3- Economy

Context: The Ministry of Civil Aviation (MoCA) has recently issued No Objection Certificates (NOCs) to **Al Hind Air** and **FlyExpress**, allowing them to enter the Indian aviation market. **Air Kerala** and **Shankh Air** already have NOCs but are yet to receive **Air Operator Certificates (AOCs)**, which are required to commence operations. The government aims to increase domestic connectivity, particularly in regional routes, as India is among the fastest-growing aviation markets in the world.

Current Market Scenario

1. The Indian aviation sector is dominated by **IndiGo** and the **Air India group**, which together control over **90% of the domestic market share**.
2. The regional airline segment has historically witnessed a **high failure rate**, with several airlines such as Paramount Airways, Air Pegasus, TruJet, Zoom Air, Air Carnival, Air Costa, Air Mantra, Air Odisha, and Fly Big failing to sustain operations.
3. Only a few regional airlines, including **Star Air**, **Fly91**, and the government-owned **Alliance Air**, have managed to maintain stable and viable operations.

Challenges for Regional Airlines

1. Financial Constraints

- a. Regional airlines face **high operational costs**, most of which are dollar-denominated, making profitability difficult.
- b. The segment has **low profit margins** and limited access to finance, increasing the risk of operational instability.
- c. Smaller carriers often lack the **financial strength** to absorb external shocks, unlike larger airlines with deep pockets.

2. Market Limitations:

- a. Smaller airports often witness **inconsistent passenger demand** due to high seasonality and limited business or leisure travel.
- b. The majority of passenger traffic is concentrated at **major airports**, leaving smaller airlines with a relatively smaller market share.

3. Competition and Alternative Transport

- a. Distances typically served by regional airlines have **viable alternative transport options** such as trains and roadways, which reduces the potential passenger base.
- b. Regional airlines often struggle to generate **ancillary revenue** from sources like cargo, which larger airlines use to improve profitability.

4. Operational Challenges

- a. Regional airlines commonly operate smaller aircraft, such as **turboprops**, which may limit operational scalability.
- b. Compliance with regulatory requirements, including **AOCs and aircraft induction**, can delay the commencement of operations.
- c. Maintaining operational efficiency and stability in a price-sensitive market remains a significant challenge for new entrants.

Opportunities for Regional Airlines

1. Regional airlines can focus on **underserved areas and tier-2/tier-3 cities** where travel demand exists but is neglected by major carriers.
2. Adopting **lean and cost-efficient operations** can help mitigate financial pressures and improve sustainability.
3. Securing **strong financial backing** is critical to absorb market volatility and ensure long-term viability.
4. Creating a **regional niche presence** rather than directly competing with dominant carriers can enhance chances of success.

Way Forward

1. The government can provide **financial incentives and subsidies** for regional airlines to improve viability.
2. Encouraging **public-private partnerships** can help strengthen regional connectivity and operational efficiency.
3. Development of **regional airport infrastructure** is necessary to ensure smoother operations and higher passenger throughput.
4. Airlines should leverage **digital technologies** for ticketing, marketing, and operational efficiency to reduce costs.
5. Strategic **alliances with major carriers** can provide feeder traffic and improve financial sustainability for regional airlines.

Conclusion: The entry of **AI Hind Air, FlyExpress, Air Kerala, and Shankh Air** may improve regional connectivity and provide more options for passengers. However, due to financial, operational, and market challenges, the **success of these airlines is not guaranteed**. Only airlines that combine **strategic planning, financial resilience, operational efficiency, and government support** are likely to survive and thrive in India's competitive aviation market.

Question: Examine the reasons behind the high failure rate of regional airlines in India and suggest measures for their success

A grand vision and the great Indian research deficit

Source: The post "**A grand vision and the great Indian research deficit**" has been created, based on "**A grand vision and the great Indian research deficit**" published in "**The Hindu**" on **29th December 2025**.

UPSC Syllabus: GS Paper-3- Science and technology

Context: India aspires to emerge as a global economic and technological power, but this ambition is constrained by a persistent and systemic deficit in research and development (R&D). Despite possessing vast human capital, India has not been able to translate this advantage into innovation leadership due to chronic underinvestment and structural weaknesses.

Magnitude of the R&D Deficit

1. India accounts for nearly 17.5% of the world's population, yet it contributes only about 3% of global research output, highlighting inefficient utilisation of its demographic dividend.
2. India ranked sixth globally in patent filings in 2023, but its share constituted only 1.8% of total global patent applications, indicating limited innovation depth.
3. India ranks 47th in resident patent applications per million people, which reflects low domestic innovation intensity.
4. India's gross expenditure on R&D has stagnated at 0.6–0.7% of GDP, which is significantly lower than that of major innovation-driven economies such as China, the United States, and Israel.
5. The fact that a single multinational corporation like Huawei spends more on R&D than India's total national outlay underscores India's strategic underinvestment in frontier technologies.

Structural Weaknesses in India's R&D Ecosystem

1. Dominance of Government Funding: Government institutions contribute nearly two-thirds of India's total R&D expenditure, whereas globally, the private sector is the primary driver of innovation. This overdependence on public funding limits efficiency, scalability, and market-oriented research outcomes.

2. Weak Private Sector Participation: Indian industry has largely focused on incremental innovation and technology imports rather than disruptive and indigenous research. Risk aversion, short-term profit orientation, and limited deep-tech venture funding discourage long-term R&D investments.

3. Academia-Industry Disconnect: Indian universities primarily function as teaching institutions with limited engagement in applied and commercial research. Weak technology transfer mechanisms and minimal industry-funded research prevent laboratory innovations from reaching the marketplace.

4. Brain Drain and Talent Retention Issues: India produces a large number of engineers and doctoral graduates, but many of the most talented researchers migrate abroad in search of better funding, infrastructure, and career opportunities. The domestic research environment struggles to attract and retain world-class researchers due to inadequate facilities and lower compensation levels.

5. Bureaucratic and Institutional Constraints: Lengthy approval processes and fragmented funding mechanisms delay the implementation of long-term research projects. Unpredictable fund disbursement and excessive compliance requirements further reduce research efficiency.

Implications of the R&D Deficit

1. India remains technologically dependent in critical sectors such as semiconductors, defence, pharmaceuticals, and clean energy.
2. Limited innovation capacity constrains India's ability to move up global value chains and achieve sustained economic competitiveness.
3. Weak indigenous R&D undermines strategic autonomy and national security in an era of technology-driven geopolitics.

Way Forward

1. India must increase its R&D expenditure to at least 2% of GDP within the next five to seven years to build a sustainable innovation ecosystem.
2. The private sector's share in R&D funding must be raised to at least 50% through tax incentives, grants, and risk-sharing mechanisms.
3. India should adopt a mission-mode approach by focusing on strategic sectors such as semiconductors, artificial intelligence, quantum computing, biotechnology, and green energy.
4. The ₹1 lakh crore Research, Development and Innovation Fund must be efficiently deployed with transparent governance and outcome-based financing.
5. Universities must be transformed into research-intensive institutions through enhanced PhD funding, global faculty recruitment, and world-class research infrastructure.
6. Structured mechanisms such as industry-sponsored research chairs, joint incubation centres, and collaborative doctoral programmes should be institutionalised.
7. India must simplify patent procedures, strengthen enforcement, and create financial incentives for the commercialisation of intellectual property.
8. Talent retention should be improved through globally competitive fellowships, returnee scientist programmes, and flexible hiring policies.

Conclusion: India possesses the intellectual resources and ambition required to become a global innovation leader. However, without decisive financial commitment, institutional reform, and a cultural shift towards risk-taking and long-term research, the R&D deficit will continue to undermine national goals. Sustained political will and mission-driven investment are essential for realising the vision of *Viksit Bharat* by 2047.

Question: India's ambition to become a global power is constrained by a weak research and development (R&D) ecosystem. Discuss the key reasons for India's R&D deficit and suggest measures to strengthen innovation and research capacity in the country.

Gaps in regulating digital campaigns

Source: The post “Gaps in regulating digital campaigns” has been created, based on “Gaps in regulating digital campaigns” published in “The Hindu” on 29th December 2025.

UPSC Syllabus: GS Paper-2- Governance

Context: The nature of election campaigning in India has undergone a significant transformation with the growing dominance of digital platforms. While political persuasion is increasingly mediated by third-party actors such as influencers and campaign agencies, election regulations continue to focus narrowly on political parties and candidates, creating serious gaps in accountability.

Key Concerns with Existing Election Rules

1. **Limited Regulatory Scope:** Current Election Commission (EC) guidelines primarily regulate the expenditure and advertisements of political parties and candidates, even though a large share of digital campaigning is carried out by third-party actors operating outside formal oversight.
2. **Rise of Shadow Campaigns:** Evidence from the Bihar Assembly election shows that third-party campaigners not only outspent official parties but also achieved greater reach and efficiency in influencing voters through digital advertisements.
3. **Opaque Campaign Financing:** Third-party entities have been found to sponsor advertisements on official party pages, yet such expenditures are often not reflected in party accounts, leading to under-reporting of actual campaign spending.
4. **Accountability and Legal Gaps:** This practice weakens the enforcement of the Representation of the People Act, 1951, and contradicts Supreme Court rulings that prohibit indirect political advertising by unauthorised entities.
5. **Inadequate Timing of Regulation:** Election regulations are largely activated only during the immediate pre-poll period, whereas digital campaigns influence voters continuously over long durations before polling day.

Implications of Shadow Campaigns in Elections

1. **Erosion of Electoral Transparency:** When third-party actors finance and run political advertisements without mandatory disclosure, the true scale and source of campaign funding remain hidden, weakening transparency in the electoral process.
2. **Uneven Electoral Playing Field:** Third-party campaigners, operating outside expenditure limits applicable to parties and candidates, can disproportionately amplify certain political narratives, thereby distorting electoral competition.
3. **Weakening of Regulatory Authority:** The inability of the Election Commission to effectively monitor and regulate indirect digital campaigning reduces the credibility and enforceability of election laws.
4. **Risk to Democratic Accountability:** Opaque funding and influence mechanisms allow private interests to shape voter behaviour without being answerable to voters or regulatory institutions, undermining democratic accountability.
5. **Decline in Public Trust:** Persistent gaps between electoral rules and campaign practices can lead to voter cynicism and declining faith in the fairness of elections.

Way Forward

1. **Expanding the Definition of Campaign Stakeholders:** Election laws must formally recognise third-party digital campaigners, influencers, and political consultancies as electoral actors subject to regulation.
2. **Comprehensive Disclosure Norms:** Political parties should be legally mandated to disclose not only their direct campaign expenditure but also all spending incurred by third parties on their behalf, ensuring full financial transparency.
3. **Platform-Level Accountability:** Social media platforms should be required to share real-time advertising data with the Election Commission to enable effective monitoring and enforcement.
4. **Strengthening Expenditure Oversight:** Clear expenditure ceilings and audit mechanisms should be introduced for third-party political advertising to prevent circumvention of existing limits.
5. **Reforming the Temporal Framework:** Election regulations should apply throughout the campaign period, rather than being confined to the immediate pre-poll window, to address long-term digital influence.

Conclusion: The rise of digital and third-party campaigning has outpaced India's party-centric election regulations, creating gaps in transparency and accountability. If these shadow campaigns remain unregulated, they risk undermining electoral fairness and public trust. Updating electoral laws to reflect the realities of digital influence is essential to protect the integrity of India's democratic process.

Question: Discuss the key challenges posed by shadow digital campaigns to electoral transparency and fairness in India. Suggest measures needed to strengthen election regulation in the digital age.

Celebrating 25th Anniversary: Pradhan Mantri Gram Sadak Yojana (PMGSY)

Source: The post "Celebrating 25th Anniversary: Pradhan Mantri Gram Sadak Yojana (PMGSY)" has been created, based on "Celebrating 25th Anniversary: Pradhan Mantri Gram Sadak Yojana (PMGSY)" published in "PIB" on 30th December 2025.

UPSC Syllabus: GS Paper-3- Indian Economy

Context: The **Pradhan Mantri Gram Sadak Yojana (PMGSY)** was launched on **25 December 2000** with the objective of providing all-weather road connectivity to rural habitations that were previously unconnected. This initiative aimed to integrate villages with markets, schools, and healthcare facilities. The programme plays a pivotal role in promoting **inclusive rural development** by improving access to social services, employment opportunities, and agricultural markets.

Progress and Achievements

1. Since inception, PMGSY has sanctioned **8,25,114 km** of rural roads and completed **7,87,520 km**, achieving nearly **95% physical progress**, demonstrating the programme's extensive reach.
2. In **FY 2025-26**, the programme received an allocation of **Rs 19,000 crore**, reflecting continued government emphasis on strengthening rural infrastructure.
3. The programme has significantly improved **rural mobility**, facilitated access to **markets and healthcare**, and enabled socio-economic growth.

Phased Implementation

1. **Phase I (2000):** Focused on connecting **1,63,339 unconnected habitations** to all-weather roads, linking villages with economic, educational, and health centres.
2. **Phase II (2013):** Strengthened and upgraded the existing road network, prioritising economically important routes to **improve transportation efficiency** and boost rural economic activity.
3. **RCPLWEA (2016):** Targeted 44 Left Wing Extremism-affected districts to improve security mobility for forces while enhancing access to education, markets, and health facilities for rural populations.
4. **Phase III (2019):** Focused on upgrading **through routes and major rural links** to improve connectivity with Gramin Agricultural Markets, higher secondary schools, and healthcare institutions.
5. **Phase IV (2024-29):** Plans to construct **62,500 km of roads** to connect **25,000 unconnected habitations** in special category, tribal, and Himalayan regions, with an outlay of **Rs 70,125 crore**, ensuring last-mile connectivity.

Technology and Quality Monitoring

1. The **Online Management, Monitoring, and Accounting System (OMMAS)** enables real-time monitoring of physical and financial progress, ensuring accountability.
2. The **e-MARG platform** ensures systematic maintenance of roads during the Defect Liability Period (DLP) and links contractor payments to road performance.
3. **GPS-enabled vehicle tracking systems** monitor machinery and construction activities, improving adherence to quality standards.
4. A **three-tier quality monitoring system** involving executing agencies, State Quality Monitors, and National Quality Monitors ensures long-term durability of rural roads.

Innovation and Environmental Sustainability

1. PMGSY promotes the use of **eco-friendly materials** like waste plastic, fly ash, slag, geosynthetics, and bio-bitumen to reduce environmental impact.
2. Construction techniques such as **cold mix technology** and **Full Depth Reclamation** enhance road durability and climate resilience.
3. As of 2025, **over 1.24 lakh km of roads** have been constructed using sustainable and innovative methods.

Socio-Economic Impact

1. PMGSY has improved **market access** for farmers, reduced travel time, and strengthened agricultural price realisation.
2. The programme has expanded **non-farm employment opportunities**, improved access to **education and healthcare**, and promoted overall rural economic growth.
3. It has significantly contributed to **poverty reduction**, inclusive development, and socio-economic transformation in rural areas.

Challenges

1. **Delays in land acquisition and forest clearances** continue to affect project implementation.
2. Maintaining **road quality in hilly terrains and high rainfall areas** remains a challenge.
3. Local capacity constraints hinder **timely execution and maintenance** of projects.
4. **Climate change and extreme weather events** threaten the durability of rural roads.

Way Forward

1. Institutional capacity at **state and local levels** should be strengthened to ensure efficient project execution and maintenance.
2. Roads should be built using **climate-resilient designs** and region-specific construction technologies.
3. **Community participation** in road maintenance should be encouraged to improve sustainability.
4. PMGSY should be integrated with **rural livelihood, agriculture, and logistics programmes** to maximize socio-economic benefits.
5. Continuous **innovation, monitoring, and financial support** will ensure universal, durable, and sustainable rural connectivity.

Conclusion: PMGSY has transformed rural connectivity over 25 years and played a central role in improving **market access, education, healthcare, and livelihoods**. Addressing implementation challenges and adopting **sustainable, technology-driven approaches** will ensure that PMGSY continues to promote **inclusive and climate-resilient rural development**.

Question: Evaluate the impact of the Pradhan Mantri Gram Sadak Yojana (PMGSY) on rural development. Discuss its key features, use of technology, and challenges in implementation.

Source - [PIB](#)

India-New Zealand Free Trade Agreement (FTA) 2025

Source: The post “India-New Zealand Free Trade Agreement’ has been created, based on “What is the India-New Zealand Free Trade Agreement? | Explained” published in “The Hindu” on 30th December 2025.

UPSC Syllabus: GS Paper-2- International Relations- Bilateral and Multilateral Agreements

Context: The India-New Zealand Free Trade Agreement was concluded in **December 2025**, after being announced in March 2025. The FTA was completed in a record **nine months**, making it one of India’s fastest negotiated trade deals. Currently, bilateral trade between India and New Zealand stands at **\$1.3 billion**, and the agreement aims to **double this figure in five years**.

Key Provisions:

1. **Market Access for India:** India will receive **zero-duty access for all exports** to New Zealand.
2. **Sectoral Benefits:** Labour-intensive sectors such as **textiles, leather and footwear, gems and jewellery, engineering goods, and processed foods** will gain from enhanced market access.
3. **MSME and Employment Support:** The agreement will promote **MSME growth and create employment opportunities** in India.
4. **Services and Skill Mobility:** New Zealand will allow trade in **Ayurveda, yoga, and traditional medicine services** and facilitate **skilled Indian workers, students, and professionals** to live and work there, including extended post-study work visas and work permits of up to 20 hours per week while studying.
5. **FDI Commitment:** New Zealand has committed to **investing \$20 billion in India by 2030**, targeting 118 sectors, with **clawback mechanisms** if the investment targets are not met.

Tariff Concessions:

1. India will relax tariffs on **95% of imports from New Zealand**, with **57% of these products becoming duty-free from day one**.
2. India has kept **sensitive sectors outside the agreement**, including **dairy, milk, cheese, butter, yogurt, onions, sugar, edible oils, spices, and rubber**, to protect domestic farmers and industries.
3. New Zealand will assist in improving the **productivity and quality of Indian fruit growers**, especially for exotic fruits like **kiwifruit and apples**, through **technical support, capacity building, and supply chain improvements**.

Strategic Importance:

1. The FTA enhances India's **global economic footprint** and provides integration into **global value chains**.
2. It serves as a **gateway to high-income markets in Oceania and the Pacific Islands**, with New Zealand's per capita income at **\$49,380**.
3. The agreement strengthens **soft power diplomacy**, with the Indian diaspora constituting **5% of New Zealand's population**.
4. India's FTAs aim to **diversify trade partners** beyond traditional markets like the U.S., EU, and China and align with **Make in India, services, digital trade, and investment policies**.

Criticisms and Challenges:

1. In New Zealand, the FTA has faced criticism for **excluding dairy and agriculture**, which are the country's largest industries. The Foreign Minister has stated that the deal is **"neither free nor fair"**, and opposition is expected in Parliament in 2026.
2. In India, FTAs are sometimes criticized for **widening trade deficits and creating asymmetric gains**, as imports often grow faster than exports. The success of this agreement will depend on the effective **implementation of safeguards and promotion of sensitive sectors**.

Way Forward:

1. India needs to invest in **domestic competitiveness, quality standards, research and development, rules of origin, and anti-dumping measures**.
2. Strengthening MSMEs and sensitive sectors is essential to **benefit fully from the FTA**.
3. The agreement sets a framework for **long-term economic cooperation, investment, and strategic partnership** beyond mere tariff reductions.

Conclusion: The India-New Zealand FTA represents a **historic milestone** in India's trade diplomacy, balancing **market access, investment, and skill mobility** while protecting sensitive sectors. Its successful implementation will enhance India's **global economic presence, support labour-intensive sectors, and strengthen strategic partnerships**, providing a **blueprint for future trade agreements**.

Question: Examine the key features, benefits, and challenges of the India-New Zealand Free Trade Agreement (2025).

Source - [The Hindu](#)

Invalidate all forms of unilateral talaq

UPSC Syllabus Topic: GS Paper 2- Issues related to Constitution, GS 1- Issues Related to Women.

Introduction

Invalidating all forms of unilateral talaq raises a core question about **fairness, equality, and consent** in Muslim marriage and divorce. **Recent judicial concern** shows that practices allowing a husband to end marriage alone, even through agents, break the idea of marriage as an **equal bond**. The issue is not faith versus law. It is about restoring the **Koranic process**, protecting **women's dignity**, and aligning personal law with **constitutional equality and natural justice**.

Nature of Marriage in Islam

- 1. Marriage as a contract between equals:** Islam treats marriage as a **firm but dissoluble contract between two equal adults**. It is not a sacrament that places the husband above the wife. This equality rules out any right of one spouse to end the marriage alone.
- 2. Meaning of the Koranic terms:** The Koran uses **uqdatan-nikah** as the bond of marriage and **meesaaqan ghaleean** as a solemn covenant. These terms show **consent, knowledge, and free will of both spouses**, similar to a modern prenuptial contract.
- 3. Rejection of unilateral authority:** Because marriage is based on equality, the husband cannot act as **judge in his own dispute**. Unilateral divorce violates the principle of **natural justice**, where no one decides a matter that affects only their own interest.

Koranic Framework for Divorce

- 1. Emphasis on reconciliation:** The Koran allows divorce only after **sincere efforts to save the marriage**. It treats divorce as a **last step**, not a quick personal choice of one spouse.
- 2. Four mandatory steps before talaq:** First comes **private advice and dialogue** to resolve the issue. Second is **temporary separation** to cool tensions. Third is **clear communication** about the seriousness of the dispute and the harm of continued conflict.
- 3. Role of family arbitration:** If problems continue, the matter must go before **two arbiters from both families**. This step brings **community oversight** and balances power between spouses.
- 4. Limited and phased talaq:** Only after all four steps fail can the **first talaq** be given. During **iddah**, which usually lasts **three menstrual cycles**, no more than **two talaqs** are allowed.
- 5. Final talaq with safeguards:** If reconciliation fails after iddah, a **final talaq** may end the marriage completely. Even then, the Koran allows **reunion** if the final talaq is not pronounced, and any final separation must be **open, witnessed, and fair**.

Extra-Koranic Talaq Practices

- 1. Absence of Koranic support:** Practices like **talaq-e-bid'a, talaq-e-hasan, talaq-e-ahsan, and talaq-e-tafweed** have **no basis in the Koran or the Prophet's example**. They grew from later juristic opinions.
- 2. Patriarchal interpretation:** These practices reflect a mindset that **denied women legal personhood and autonomy**. They allowed men to dominate marriage decisions without equal responsibility.
- 3. Talaq-e-hasan and agency:** Talaq-e-hasan permits divorce through **repeated pronouncements** and even through an agent under **tawkeel**. This idea of agency in divorce has **no Koranic backing** and reduces women to **passive recipients**.
- 4. Social harm of unilateral divorce:** Such practices allow marriage to end **without reconciliation, notice, or fairness**. They create **fear, insecurity, and sudden loss of status** for women.

Constitutional and Gender Justice Implications

- 1. Judicial concern over arbitrariness:** The Supreme Court questioned talaq-e-hasan after seeing **divorce notices sent by advocates** without the husband's own act. The Court asked whether a **civilized society** can allow such casual dissolution of marriage.
- 2. Violation of equality and dignity:** Unilateral talaq breaks **Article 14** by allowing **arbitrary action by one spouse**. It also harms **women's dignity** and denies them **equal voice** in marital decisions.
- 3. Triple talaq judgment of 2017:** In **August 2017**, the Supreme Court set aside **instant triple talaq** as unconstitutional. The Court held that it was **manifestly arbitrary** and allowed marriage to end without reconciliation.
- 4. Legislative action to give effect:** The **Muslim Women (Protection of Rights on Marriage) Ordinance, 2018** started on **19 September 2018**, followed by further ordinances, and then the **Act of 2019** with **retrospective effect from 19 September 2018**.
- 5. Core protections and reported impact:** The **2019 Act** makes instant triple talaq **void and illegal**, provides **punishment up to three years with fine**, and gives the woman **custody and subsistence allowance**.
- 6. Harmony between Islam and the Constitution:** Striking down unilateral talaq supports both **constitutional morality** and **Islamic principles**. The Koranic process itself rejects **gender discrimination** and demands fairness.

Conclusion

The Koran treats marriage as an **equal contract** and divorce as a **staged process** that prioritises repair, arbitration, iddah, and witnesses. **Talaq-e-hasan and other male-only methods** allow arbitrary endings, even through agents. Striking down all unilateral talaq and keeping only the **Koranic, gender-neutral procedure** would protect **dignity, equality, and fair process** for spouses in a fair society.

Question for practice:

Examine how unilateral talaq practices conflict with the Koranic framework of marriage and divorce, and how constitutional and institutional responses in India have addressed these conflicts.

Source: [The Hindu](#)

Quick delivery apps are taking a toll on gig workers

UPSC Syllabus : GS Paper 3 – Indian Economy – Issues related to growth and employment

Introduction

Quick delivery apps are taking a toll on gig workers because the **10-minute promise** turns time into the main product and pushes risk onto workers. In India's megacities, this model scales fast due to **low labour costs, high unemployment, and an abundant supply of young workers**. The outcome is instant convenience for consumers, but rising safety, wage, and dignity costs for riders and dark-store pickers.

How the 10-Minute Delivery Model Works

- 1. Speed-first promise:** Platforms sell groceries, meals, and daily essentials through a strict ten-minute delivery commitment, so speed becomes the core competition.
- 2. Dark stores and last-mile sprint:** Orders are picked quickly in dark stores and then handed to riders, so the final stretch becomes a race against the timer.
- 3. Risk shifts to workers:** Unlike planned logistics where risk is spread across inventory planning and scheduling, this model concentrates pressure on the rider and the picker.
- 4. Algorithm decides work:** Opaque ratings, automated penalties, and unpredictable task allocation control the workday, so workers have less control over pace and income.
- 5. Targets enforce discipline:** Missing performance targets can lead to workers being sent home **without pay**, often with no explanation or grievance option.
- 6. Long hours to survive:** To chase bonuses and maintain ratings, riders can face extreme shifts, with reported workdays stretching up to **16 hours**.

Major Concerns Related to the 10-Minute Delivery Model

- 1. Unsafe delivery conditions:** Short delivery timelines force riders to rush. This increases accidents, injuries, and unsafe driving practices.
- 2. Excessive working hours:** To earn enough, riders often work very long days. Some shifts extend up to sixteen hours.
- 3. Low and unstable earnings:** Workers earn per order with small bonuses linked to ratings. These earnings are often insufficient in large cities.
- 4. Wage penalties without explanation:** There are reports of workers being sent home without pay for missing targets. Clear reasons are rarely provided.
- 5. Absence of grievance mechanisms:** Workers lack proper systems to challenge penalties or decisions. Most actions are final and automated.
- 6. Arbitrary account deactivations:** Apps can block worker IDs without notice. This instantly cuts income and creates fear among workers.

7. Poor conditions at dark stores: Basic facilities like drinking water, rest areas, and toilets are often missing. Workers spend long hours without support.

Gaps in Legal and Institutional Protection

- **Partial recognition under labour codes:** New labour codes recognise gig and platform workers. However, they do not address speed-based delivery pressure.
- **Lack of social security coverage:** Many workers lack health insurance, accident coverage, and pension benefits. Support remains voluntary, not guaranteed.
- **Weak bargaining power:** Independent contractor status limits collective bargaining. Workers negotiate individually against large platforms.

Workers' Protests and Collective Response

1. **Nationwide offline call:** Gig delivery workers plan to go offline on **New Year's Eve (31 December)** to protest working conditions across major platforms.
2. **Earlier walkout impact:** A similar Christmas Day strike caused delivery delays of **50%–60%** in several locations, showing how dependent cities are on gig labour.
3. **Scale and organisers:** Around **40,000** delivery workers are estimated to have joined the Christmas Day strike, organised by **Telangana Gig and Platform Workers' Union (TGPWU)** and the **Indian Federation of App-Based Transport Workers (IFAT)**.

What Should Be Done?

1. **Drop ultra-short timelines:** Remove the 10-minute promise so that delivery is planned around safety rather than fear of penalties.
2. **Set minimum guaranteed pay:** Ensure a basic wage floor so workers are not forced into risky speed just to earn enough orders.
3. **Provide insurance and medical cover:** Make accident insurance and medical coverage standard, because the model creates higher physical risk.
4. **Stop arbitrary deactivations:** Require clear rules and due process before ID blocking, since access to the app is the worker's livelihood.
5. **Build real grievance redressal:** Put transparent, responsive grievance systems in place so workers can challenge penalties and unfair treatment.
6. **Regulate hours and breaks:** Enforce regulated work hours and mandatory breaks so the system does not normalise exhaustion.
7. **Match recognition with protection:** Labour code recognition should translate into protections that directly address speed-driven risk and harsh app control.

Conclusion

The 10-minute delivery model turns urgency into a business plan and shifts danger onto riders and pickers. It also weakens planning and promotes instant buying habits. Home delivery is useful, but extreme speed is not necessary. Without accountability, the cost spreads to society. Safer timelines, minimum wages, insurance, regulated hours, and transparent grievance systems must come first.

Question for practice:

Discuss how the 10-minute delivery model shifts risk onto gig workers and why workers are demanding changes in pay, safety, and grievance systems.

Source: [Businessline](#)

A multipolar world with bipolar characteristics

Source: The post “A multipolar world with bipolar characteristics” has been created, based on “A multipolar world with bipolar characteristics” published in “The Hindu” on 31st December 2025.

UPSC Syllabus: GS Paper-3- International Relations

Context: The post-Cold War unipolar world, dominated by the United States, is transitioning to a **multipolar system**. China and Russia have emerged as major powers, reducing U.S. exclusivity in shaping global geopolitics. The emerging world order is **fluid and competitive**, displaying multipolar characteristics with distinct **bipolar features** due to U.S.-China rivalry.

U.S. Strategic Reorientation:

1. The United States has increased military presence in the **Caribbean**, deploying aircraft carriers, submarines, and tens of thousands of troops to pressure Venezuela.
2. The 2025 **National Security Strategy (NSS)** identifies Latin America and the Caribbean as a strategic priority, reviving the **Monroe Doctrine** to limit Chinese influence.
3. Simultaneously, the U.S. is **reducing its security commitments in Europe**, asking allies to take greater responsibility for regional defence.
4. These actions indicate the U.S. is **consolidating influence in its immediate neighbourhood** while preparing for **long-term competition with China**.

The Three Great Powers:

1. **United States:** It continues to be the **pre-eminent military and economic power** globally but faces challenges from the rise of China and assertive actions by Russia. It prioritises **regional primacy** in the Western Hemisphere while engaging in strategic competition with China.
2. **China:** The world's **second-largest economy**, growing faster than the U.S. and converting economic power into **military capability**, including the largest navy by number of ships. It seeks **regional dominance in East and Southeast Asia** and aims to establish a **China-centric global order**.
3. **Russia:** It is economically weaker than the U.S. and China but retains **nuclear weapons, vast territory, and abundant energy resources**. It seeks to **reassert influence in its traditional sphere**, and its partnership with China balances global power dynamics. Also, it functions as a **swing power**, mediating between U.S. and China while pursuing its own strategic goals.

Global Power Dynamics:

1. The world is **multipolar**, with no single authority controlling international affairs.
2. Unlike previous eras, this multipolarity is **fluid**, as China lacks satellite states, the U.S. re-evaluates alliances, and Russia navigates its strategic independence.

3. Divergent objectives of the three great powers create **uncertainty and competitive tensions** in global politics.
4. **Bipolar Characteristics within Multipolarity:**
 - a. The **U.S.-China rivalry** introduces bipolar features reminiscent of historical contests such as Britain versus Germany in 19th-century Europe.
 - b. Russia's role as a **swing power** further accentuates the bipolar tendencies within the multipolar system.

Challenges in the Emerging Order:

1. **Risk of great power conflicts** due to overlapping spheres of influence and strategic competition.
2. **Instability in alliances**, as middle powers like India, Japan, Brazil, and Germany must hedge their positions.
3. **Erosion of global governance structures**, as consensus on international rules is difficult with competing interests.
4. **Regional conflicts and proxy wars** may intensify as great powers exert influence in different regions.
5. **Economic vulnerabilities**, as trade and investment flows are affected by geopolitical competition.

Way Forward:

1. Middle powers must adopt **strategic autonomy** to safeguard national interests and avoid overdependence on any single power.
2. Strengthening **multilateral institutions** like the UN, G20, and regional forums can help manage conflicts and promote cooperation.
3. Diplomacy should focus on **balancing great powers**, encouraging dialogue between the U.S., China, and Russia to reduce tensions.
4. Regional security frameworks should be **modernised and inclusive**, incorporating emerging powers to ensure stability.
5. Promoting **economic interdependence and trade cooperation** can help mitigate the risks of confrontation.

Conclusion: The unipolar world has ended, but U.S. dominance persists alongside **rising Chinese power and assertive Russia**. The emerging order is **multipolar but exhibits bipolar features**, primarily due to U.S.-China competition and Russia's swing role. The new global environment requires **strategic autonomy, multilateralism, and balanced diplomacy** to navigate challenges and maintain stability.

Question: Examine the transition from a unipolar to a multipolar world with bipolar features. Discuss the roles of the U.S., China, and Russia, and the challenges and way forward for middle powers like India.

How India's oil basket has changed over the years

Source: The post "**How India's oil basket has changed over the years**" has been created, based on "**How India's oil basket has changed over the years**" published in "**The Hindu**" on 31st December 2025.

UPSC Syllabus: GS Paper-3- International Relations

Context: India, the **third-largest oil consumer globally**, has historically relied on **geopolitical navigation and economics** to secure its energy needs. Over the decades, India's crude oil imports have **shifted from**

heavy dependence on West Asia to a **diversified global basket**, with **Russia emerging as a major supplier** in recent years. The changes reflect India's efforts to balance **energy security, economic viability, and geopolitical considerations**.

Early Dependence on West Asia:

1. Before 2005, **over 70% of India's crude oil** came from West Asian countries, primarily **Saudi Arabia, Iraq, Iran, Kuwait, and UAE**.
2. Even in 2011-12, more than **60% of crude oil imports** came from seven West Asian nations, while **African countries** like Nigeria and Angola contributed around 20%.
3. This heavy reliance made India **vulnerable to regional geopolitical tensions**, sanctions, and supply disruptions.

Impact of Iran Sanctions:

1. In 2010-11, **UN and U.S. sanctions on Iran** restricted its oil exports, reducing India's imports from Iran from **11.3% to under 6%** by 2013-14.
2. Sanctions were lifted in 2016, temporarily increasing India's imports from Iran to **12.7%**.
3. Renewed U.S. sanctions in 2017 forced India to **diversify further**, boosting imports from the **UAE and the U.S.** and sharply reducing Iranian purchases by **91.8% in 2019-20**.

Gradual Diversification (2005–2015):

1. India began sourcing oil from **Africa (Nigeria, Angola) and Venezuela** to reduce dependence on West Asia.
2. By 2025, India's imports were **40–45% from the Middle East, 8–10% from Africa, and 10–12% from the Americas**, showing **increased diversification**.
3. Diversification helped India **mitigate geopolitical risks**, maintain economic efficiency, and ensure stable refinery operations.

Emergence of Russia as a Major Supplier:

1. Following **Russia's sanctions from the EU and U.S. after the Ukraine crisis in 2022**, India continued to purchase Russian oil due to **discounted prices and compatibility with refineries**.
2. Russia's share in India's crude oil basket rose from **less than 2% in 2021-22** to **21.6% in 2022-23**, further increasing to **35.9% in 2023-24** and **35.8% in 2024-25**.
3. Russian crude, especially Urals, declined in price from **\$79.41 per barrel in April 2022** to **\$66.49 per barrel in March 2025**, enhancing its economic attractiveness.
4. Currently, Russia accounts for **about one-third of India's total crude imports**, while Iraq, Saudi Arabia, and UAE maintain marginal declines in their share.

Challenges in India's Oil Basket:

1. Reducing dependence on Russia is **difficult, costly, and risky** due to:
 - a. Need to **rapidly scale imports from multiple suppliers** at higher costs.
 - b. Potential **compression of refinery margins** and **increase in retail fuel prices**, causing inflation and political backlash.
 - c. Pressure on **domestic operating budgets and credit lines of refiners**.

2. Heavy reliance on a single supplier or region **exposes India to geopolitical and market vulnerabilities.**

Way Forward:

1. India should **continue diversifying its crude oil sources**, including Africa, the Americas, and emerging suppliers, to reduce over-dependence on any single country.
2. **Strategic petroleum reserves** should be strengthened to buffer against global supply shocks.
3. Investments in **refinery upgrades** can enhance the ability to process a **wider variety of crude types**, ensuring flexibility in sourcing.
4. India should expand **long-term supply contracts** to ensure price stability and predictability.
5. Accelerating the transition to **renewable energy and alternative fuels** can gradually reduce import dependence and enhance energy security.
6. Strengthening **geopolitical and diplomatic engagement** with oil-exporting countries can secure stable, diversified supplies without compromising economic viability.

Conclusion: India's crude oil basket has evolved from **over-reliance on West Asia** to a **more balanced, diversified portfolio** including Russia, Africa, and the Americas. While Russia currently plays a **strategic role**, diversification remains key to **ensuring energy security, economic efficiency, and geopolitical stability**. Combining **supplier diversification, strategic reserves, refinery adaptability, and renewable energy transition** will help India navigate future energy challenges effectively.

Question: Examine the changes in India's crude oil import basket over the years. Discuss the challenges and suggest the way forward to ensure energy security.