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INDEX

India's new CAFE-III fuel-efficiency norms - Impact on carmakers, small cars and EVs 4
India can no longer overlook its pasture lands 5
Household Debt, Financing Today Against Tomorrow 7
The India–EFTA Partnership: One Plus One Equals Three 9
For constituting poll body, a lesson from the UN 12
Organ donation in India: How the system works and what law says 15
India's Model BIT — A Decade Later, Amid Changes 17
CAFE Smokescreen 20
The tussle for top posts in India's CAPFs: IPS officers or force veterans? 24
Rethinking rural cooperatives 26
Outbound force: On the U.S. leaving Iraq 28
How Regulation Stifles HEIs 31
Disabled citizens and the future of AI 34
Why is Buxa bringing tigers back? 35
The Looming Crisis of World Unemployment 38
Legislative Privileges Vs Free Speech 40
Rewilding the Great Indian Bustard: Key Challenges 43
Break the chain: On leprosy in India 45
The China-U.S. Rapprochement 47
Indian Research Can Shape the World 51
AI companions and child safety 54
How does detention differ from arrest? 55
India's Stakes in the Global Pandemic Agreement 57
Property Taxation Needs Structural Reform 60
US green card suspension: What it means for Indian IT workers on H-1B visas 62
Adequate response: on the RBI and inflation 65
Calibrating India's Inbound Investment Framework 67
Account aggregator 'interoperability':What RBI's move means for asset statement 71
National SC-ST Hub: Powering Inclusive Entrepreneurship 74
WHO's obesity prescription goes beyond the clinic 76
India's 'WorldSkills' Medals Reflect Patient Investment 78
What Laws Protect Indian Seafarers Working in Conflict Zones? 80
Can rate hikes control cost-push inflation? 84
The next farm revolution must aim at significantly raising farmers' incomes 85

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The AI Challenge How to Maximise Economic Impact, Spread Gains Evenly 87
India Will Not Succumb to Musk's Pressure Tactics 90
A digital India needs Wi-fi for everyone 93
Unregulated use of GM: A cautionary tale 94
Warming Himalayas Demand a Rethink on Development 96
A Common Language for Justice 99
India's problem of overtreatment and overmedication 102
India-U.S. ties and the hurdle of American unilateralism 104
Margin caps on cancer drugs, could there be more on the anvil? 105
Electric mobility – the way ahead 107
A contested UNSC seat poses a test for India 110
A reality check on AI boom: Eight risks to look out for 111
'Innovate Today, Nourish Tomorrow' for Food Security 113
Kigali Amendment: India's Cooling Transition and Climate Commitments 117
Balancing foreign investment with tax sovereignty 121
Metrics to Minds — Restoring Purpose to Universities 123
Why Bond Yields Are Rising in All Major Countries — Except China 126
A case for joining the global carbon coalition 129
Developing Minds in a Digital World, a Changing India 131
Rupee and the price of dodging a century 135
The sunset test: Why India needs more coal-based power 136
Moves by the North of England to Unlock India Trade 138
How Conversion Affects Reservation 141
The struggle to preserve a fair international law 145
Six steps to strengthen the India-US relationship 146
Unlocking Agri-Potential of FRA Lands 147
How to Break the Ration-Shop Monopoly in PDS 150
How exposed is India to foreign tech? 153
For migrant children, access to school is not enough 155
Indian Agriculture's Polycrisis Moment 157
Tied by Geography, Divided by Politics 159
What the eMudhra fiasco means to users, investors 162
This isn't the UN we need 164
Limits of satellite internet plan 165
Rethinking the defence PSU model 168

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Cost of Fertiliser Imbalance in India 170
Old values, new avenues: On India-Poland ties 172
Questions Arising Out of PHP Breach 173
Soil Health in India Challenges and the Way Forward 176
India's power dilemma: Surplus during the day, deficits at night 179
What are the powers and functions of a Special Executive? 180
Beyond Kudankulam's fence, a cybersecurity challenge 183
A Ready Solution to Tackle Anaemia 186
Clean air needs targets, timelines and accountability 190
China's Grey-Zone Warfare along the LAC: Challenges for India and the Way Forward 191
Is India to Be World's Oil Refiner? 193
India's Next Investment Cycle Will Shape Its Carbon Future 196
India Must Build a Holistic Care System 198
How Neoliberalism Turned the World Against Its Young 201
Operationalise life cover for delivery workers 204
For federalism to be truly cooperative, revive the Inter-State Council 205
Greenland Deal but Not the End of the Arctic Contest 207
CONCERNS OVER THE COLLEGIUM SYSTEM 210
Operationalise life cover for delivery workers 213
For federalism to be truly cooperative, revive the Inter-State Council 214
Greenland Deal but Not the End of the Arctic Contest 216
CONCERNS OVER THE COLLEGIUM SYSTEM 219
Why the WHO must declare climate change a public health emergency 222
Beyond gullibility: On digital arrest scams 224
Suboptimal Outcomes Social Security Boards for Unorganised, Gig and Platform Workers 227
Can India and China Coexist Peacefully? 229

India's new CAFE-III fuel-efficiency norms - Impact on carmakers, small cars and EVs

Source: The post **"India's new CAFE-III fuel-efficiency norms - Impact on carmakers, small cars and EVs"** has been created based on **"India's new CAFE-III fuel-efficiency norms - Impact on carmakers, small cars and EVs"** published in "**Indian Express**" on 1st October 2026.

UPSC Syllabus: GS-2-Governance

News: India's CAFE-III norms, effective from April 2027, will assess carmakers on the efficiency of their overall vehicle fleet rather than individual models, with the biggest compliance benefit going to EVs.

About Corporate Average Fuel Economy (CAFE)-III framework

1. **CAFE stands for Corporate Average Fuel Economy**, and CAFE-III refers to India's third set of fuel-efficiency standards for passenger vehicles.
2. It **requires automobile manufacturers** to maintain the average fuel efficiency of their eligible passenger vehicles within a prescribed limit.
3. It **assesses the overall fleet of a manufacturer rather than applying the same fuel-efficiency target** to every individual car model.
4. **The norms will apply from 1 April 2027 to 31 March 2032** and will cover M1-category passenger vehicles manufactured or imported for sale in India.

Key features

1. **Fleet-level compliance:** Carmakers will be assessed on the **average efficiency of their entire eligible passenger-vehicle fleet**, rather than requiring every individual model to meet the same standard.
2. **Weight-based formula:** The permitted fuel consumption will depend on the **weighted average unladen weight** of a manufacturer's fleet. The reference weight has been fixed at **1,229 kg**.
3. **Progressively stricter norms:** The standards will become more stringent during the five-year period, encouraging continuous improvement in fuel efficiency and CO_2 reduction.
4. **No separate small-car concession:** The final rules have removed the proposed additional **3 g/km benefit for petrol cars weighing up to 909 kg**. However, vehicle weight continues to influence the overall fleet target.
5. **Strong incentive for EVs:** Battery-electric vehicles and range-extended electric vehicles receive a **volume derogation factor of 3**, meaning one such vehicle effectively counts as three vehicles for fleet-level compliance calculations.
6. **Support for multiple powertrains:** Different technologies receive different benefits, including **2.5 for certain plug-in/strong hybrids, 1.6 for strong hybrids and 1.1 for flex-fuel vehicles**.
7. **Alternative-fuel pathway:** The framework recognises renewable and low-carbon fuels such as **ethanol-blended petrol, biofuels and CBG** through a **Carbon Neutrality Factor (CNF)**.
8. **Credit-based compliance:** Manufacturers performing better than their target can earn **credits**, while those performing below the target accumulate debits. Credits can be carried forward within a compliance block and traded between manufacturers.
9. **Technology incentives:** Efficiency-enhancing technologies such as **start-stop systems, tyre-pressure monitoring, regenerative braking, efficient transmissions, LED lighting and improved air-conditioning systems** can qualify for efficiency benefits, subject to an overall cap.

10. **Greater scope for innovation:** The framework provides manufacturers with multiple routes—**vehicle efficiency, electrification, hybrids and cleaner fuels**—to improve fleet-level CAFE performance.

Implications

1. **For carmakers:** The norms will require greater investment in **R&D, efficient technologies and cleaner powertrains**, while providing a clearer long-term compliance framework.
2. **For small cars:** Although the separate proposed concession has been removed, their lighter weight continues to affect the fleet-level calculation.
3. **For EVs:** EVs receive the **largest powertrain-specific compliance benefit**, creating a strong incentive for electrification.
4. **For consumers and the environment:** Greater fuel efficiency and cleaner technologies can contribute to **lower fuel consumption and CO_2 emissions**, while encouraging technological innovation.

Conclusion: CAFE-III marks an important step towards making India's automobile sector more fuel-efficient and environmentally sustainable. By combining stricter fleet-level standards with incentives for EVs, hybrids, cleaner fuels and technological innovation, the framework seeks to balance India's energy-security and climate objectives with the evolving needs of the automobile industry.

Question: What are the key features of India's new CAFE-III fuel-efficiency norms? Examine their implications for carmakers, small cars and electric vehicles.

Source: The Hindu

India can no longer overlook its pasture lands

Source: The post **"India can no longer overlook its pasture lands"** has been created based on **"India can no longer overlook its pasture lands"** published in **"Business Line"** on 1st October 2026.

UPSC Syllabus: GS-3-Environment

Context: Rangelands and permanent pastures are important common resources that support livestock production, rural livelihoods, biodiversity and ecological resilience. Despite their importance, **India does not yet have a dedicated national framework for rangelands and grasslands**, and their management remains fragmented.

About Rangelands

1. Rangelands are **areas where natural or semi-natural vegetation** provides forage for grazing and browsing animals.
2. They **extend beyond open grasslands** and include grasslands, shrublands, savannahs, steppes, deserts, mountain pastures, open woodlands and certain wetlands.
3. Rangelands are **primarily dominated by grasses and other herbaceous vegetation.**
4. It **supports both livestock and wild herbivores and performs important ecological functions** such as protecting soil, regulating water cycles, storing carbon and providing habitats for diverse species.

5. They also **convert natural vegetation from areas unsuitable for intensive cultivation into valuable products and livelihoods**, including milk, meat, wool, fibre, manure and income.

Significance of Rangelands

1. In India, rangelands are **spread across diverse geographical regions,** including the alpine pastures of the Himalayas, the cold-arid grazing grounds of Ladakh, and the grasslands and common lands of western India.
    a. They also **include desert vegetation, forest grazing landscapes and open grazing areas of the Deccan Plateau,** reflecting the wide ecological diversity of India's rangelands.
2. **Significance of Rangelands:** In India, the importance of rangelands and grasslands is clearly visible in the seasonal movement of pastoral communities.
    a. **Every spring, as the winter snow melts in the Himalayas,** pastoral families move with their livestock towards higher-altitude pastures.
    b. They **return to lower areas** before winter makes the mountain routes inaccessible.
    c. Similar **seasonal movements of pastoral communities and livestock** occur across India's deserts, forests, plateaus and semi-arid regions.

Importance of Rangelands

1. **Rangelands support livestock production:** According to ICAR's *Comprehensive Assessment of Feed and Fodder Resources*, India has about **11.5 million hectares of rangelands and permanent pastures**, producing around **28 million tonnes of forage annually**.
2. **They support rural livelihoods:** For millions of **livestock-owning households, common grazing lands** provide fodder, reduce feed costs and support livestock-based livelihoods.
3. **They provide economic benefits: Grazing commons provide an important form of in-kind income,** even though their economic value is often not reflected in conventional accounting.
4. **They support biodiversity:** Healthy **rangelands provide habitats for biodiversity** and contribute to the maintenance of ecological systems.
5. **They improve drought resilience:** Well-managed rangelands **strengthen the ability of communities and livestock systems** to withstand drought and environmental stress.
6. **They protect soil and water resources:** Healthy rangelands help protect soil, support water regulation and contribute to **groundwater recharge**.
7. **They contribute to carbon storage:** Rangelands also provide ecosystem services through **carbon storage and reduced land degradation**.

Major Challenges

1. **Rangelands are undervalued:** Their benefits are often invisible because grazing on common lands does not usually involve direct monetary transactions.
2. **The 'wasteland' perception is a major problem:** Rangelands are often viewed as marginal or unproductive lands, encouraging their conversion for agriculture, infrastructure and other uses.
3. **Degradation increases household costs:** When rangelands deteriorate, livestock owners face higher feed expenses, lower livestock productivity, smaller herds and greater dependence on purchased fodder.
4. **Policy management is fragmented:** Rangeland management is spread across different sectors, programmes and jurisdictions, making it difficult to assign responsibility and resolve competing claims.

5. **India lacks a dedicated national framework:** The absence of a specific national policy for rangelands and grasslands has contributed to their continued marginalisation.

Way Forward

1. **India should develop a National Rangeland/Grassland Policy** with clearly defined institutional responsibilities at different levels of government.
2. **A National Rangeland Atlas should be developed** to systematically map the extent, condition and productivity of rangelands and grazing commons.
3. **Degraded rangelands should be restored** through scientifically sound and locally adapted management practices.
4. **Existing government schemes should be utilised and strengthened** rather than creating an entirely new delivery architecture.
5. **Local communities should be given a greater role in management**, and the principle of **"one Gram Panchayat, one grazing land"** can provide an institutional anchor for protecting common grazing resources.
6. **Pastoralists and livestock keepers should be treated as stakeholders and potential stewards**, rather than merely as users of rangelands.
7. **Traditional pastoral knowledge should be combined with scientific management** to promote sustainable grazing and restoration.
8. **Payments for ecosystem services and suitable carbon-credit mechanisms should be explored** so that local communities can receive a share of the wider ecological benefits generated by healthy rangelands.

Conclusion: **India's rangelands should not be viewed as empty or "wastelands" awaiting more productive use.** They already provide **fodder, livelihoods, biodiversity, soil protection, carbon storage and drought resilience**. The need of the hour is to **recognise their economic and ecological value, strengthen institutional management and involve local communities in their sustainable stewardship**.

Question: Rangelands and grazing commons play an important role in India's rural economy and ecological resilience. Discuss their significance and suggest measures for their sustainable management.

Source: Business Line

Household Debt, Financing Today Against Tomorrow

UPSC Syllabus: Gs Paper 3- Indian Economy

Introduction

Household borrowing is becoming an important part of consumption through personal loans, cards, digital lending, gold loans and consumer finance. India's household debt has risen, with borrowing shifting towards non-housing loans. The central issue is whether borrowing creates assets or finances present consumption against uncertain future income.

Current Status of Household Debt in India

1. **Rising household leverage:** Household debt rose from **39.2% of GDP in March 2021** to **42% in June 2023** and **45.5% in September 2025**.

2. **Non-housing loans gaining share:** Non-housing retail loans reached **58.4% of household debt in March 2026**, up from around 50% during 2019-20, growing faster than housing loans.
3. **Bank personal lending expansion:** Bank personal loans increased from **₹5.53 lakh crore in March 2019** to **₹17.32 lakh crore in March 2026**, while NBFC retail lending also expanded rapidly.
4. **Small-ticket digital borrowing:** Fintechs gave **13.2 crore loans worth ₹2.15 lakh crore** between April 2022 and March 2026, with an average size of **₹16,238**.
5. **Gold loans surging:** Bank gold loans rose from **₹24,671 crore in March 2019** to **₹4.61 lakh crore in March 2026**, while NBFC gold lending expanded strongly.
6. **Household savings recovering partly:** Net financial savings improved from **5.2% of GDP in 2023-24 to around 6% in 2024-25**, but remained below pre-pandemic levels.
7. **Global position:** India's household debt remains below China, Malaysia and Thailand, but exceeds Chile, Brazil and South Africa, remaining high relative to per-capita income.

Causes of Rising Household Borrowing

1. **Easy digital credit:** Digital lending, instant personal loans and online financing have made borrowing quicker during everyday purchases.
2. **Fintech expansion:** Fintech firms held **56.8% of small-ticket personal loans below ₹50,000 in March 2026**, with their loan book growing **41.6%**.
3. **Better borrower assessment:** UPI transactions give lenders information about informal workers' income and repayment capacity, enabling access that was previously difficult.
4. **Changing borrowing attitudes:** Younger Indians are increasingly comfortable using loans for consumption, as social taboos around routine borrowing have weakened.
5. **Rising consumption aspirations:** Household aspirations are increasing faster than incomes, so borrowing bridges desired purchases and current affordability.
6. **Digital spending behaviour:** Greater use of digital payments can reduce restraint associated with cash spending and may encourage higher consumption.
7. **Point-of-purchase financing:** Credit is increasingly offered during smartphone, airline-ticket and online purchases, making borrowing only a click away.
8. **Gold price increase:** Rising gold prices have increased borrowing capacity against existing jewellery, encouraging greater use of gold as collateral.

Implications and Emerging Concerns

1. **Higher repayment burden:** Rising debt-servicing obligations can reduce households' disposable income and limit discretionary spending.
2. **Greater borrower vulnerability:** Informal, casual and self-employed workers face greater repayment risks because their incomes are less predictable.
3. **Rising loan delinquencies:** Fintech personal-loan delinquencies increased from around **4.5% in March 2024 to 6.4% in March 2026**, with smaller loans showing higher delinquency rates.
4. **Multiple-loan stress:** Borrowers using **five or more unsecured lenders** show higher impairment, indicating greater repayment stress among highly leveraged borrowers.
5. **Debt rollover risk:** Some borrowers may be using new loans to repay older loans, especially when small-ticket borrowing is used for regular expenses.
6. **Gold collateral risk:** Rapid growth in gold loans increases vulnerability if gold prices fall, as weaker collateral can increase borrower stress and defaults.
7. **Consumption versus asset creation:** Borrowing for houses, education and productive assets can create long-term value, while borrowing for routine consumption mainly commits future income.
8. **Distress borrowing and income constraints:** When households borrow for food, healthcare, rent or other essential needs because current income is inadequate, debt postpones rather than resolves the underlying income constraint.

Way Forward

1. **Promote sustainable incomes:** Stronger and more stable income growth can reduce the need to use borrowing as a substitute for inadequate earnings.
2. **Protect essential household needs:** Better social protection can reduce dependence on loans for healthcare, education, housing and old-age needs.
3. **Encourage productive credit:** Lending should support productive activity, education, housing and asset creation rather than mainly financing routine consumption.
4. **Strengthen responsible lending:** Policy should distinguish productive credit from distress credit rather than restricting household lending indiscriminately.
5. **Improve borrower awareness:** Households need greater awareness of borrowing costs, repayment obligations and risks from multiple unsecured loans.
6. **Monitor vulnerable borrowers:** Monitor borrowers using several lenders or spending a large share of monthly income on repayments.
7. **Maintain formal credit access:** Formal credit remains important for household welfare and development, so regulation does not unnecessarily restrict useful borrowing.
8. **Watch collateral risks:** Rapid gold-loan growth requires attention because falling gold prices could weaken collateral and increase stress.

Conclusion

India's rising household debt is not automatically harmful because credit can support investment and household welfare. The key concern is borrowing for routine consumption and repeated repayment. Sustainable income growth, productive credit, responsible lending and stronger social protection can help households use credit to build long-term financial security rather than depend on future income over time.

Question for practice:

Examine the rising household debt in India, its causes, implications, and the way forward.
Source: The Hindu

The India–EFTA Partnership: One Plus One Equals Three

UPSC Syllabus: Gs Paper 2- International Relations

Introduction

One year after the Trade and Economic Partnership Agreement (TEPA) between India and the European Free Trade Association (EFTA) entered into force, its importance goes beyond tariff reduction. The agreement combines market access with investment, employment, services, technology and sustainable development. Its wider potential is visible through Iceland's experience in geothermal energy, carbon management and fisheries, while Arctic cooperation adds another dimension. Thus, TEPA can develop from a trade agreement into a broader economic and knowledge partnership.

Understanding EFTA and TEPA

1. **EFTA as a European economic bloc: European Free Trade Association (EFTA)** is an intergovernmental organisation of **Iceland, Liechtenstein, Norway and Switzerland**, established in **1960 by seven Member States** to promote free trade and economic integration.

2. **EFTA's position in Europe:** EFTA is one of the **three important economic blocs in Europe**, alongside the **European Union (EU) and the United Kingdom (UK)**, giving its members a separate platform for economic cooperation.

3. **TEPA's origin and status:** India and EFTA signed **Trade and Economic Partnership Agreement (TEPA)** in **March 2024 in New Delhi**, and the agreement entered into force in **October 2025**.

    - **India's first FTA with these countries:** TEPA is India's **first Free Trade Agreement with four developed European nations**, namely Switzerland, Norway, Iceland and Liechtenstein.
    - **Comprehensive framework:** TEPA contains **14 chapters** covering goods, rules of origin, trade facilitation, trade remedies, sanitary and phytosanitary measures, technical barriers, services, investment, Intellectual Property Rights and sustainable development.

Key Features of TEPA

1. **Extensive market access:** EFTA offered concessions on **92.2% of tariff lines**, covering **99.6% of the value of India's exports**, while India offered concessions on 82.7% covering 95.3% of EFTA exports.

2. **Investment commitment:** EFTA states have committed to increase FDI in India by **$50 billion in the first 10 years** and another **$50 billion in the next five years**.

3. **Employment commitment:** The investment framework aims to facilitate **one million direct jobs in India** and create stronger links between Indian skills and European technology ecosystems.

4. **Investment facilitation:** The **India–EFTA Desk**, operational since February 2025, acts as a single-window platform and promotes investment, joint ventures and SME cooperation.

5. **Protection of sensitive sectors:** India excluded dairy, soya, coal, pharmaceuticals, medical devices and selected food products, while some Make in India and Production Linked Incentive (PLI) products receive phased tariff reductions over **5–10 years**.

6. **Services and professional mobility:** India has made commitments in **105 services sub-sectors**, while EFTA offers cover 128 from Switzerland, 114 from Norway, 110 from Iceland and 107 from Liechtenstein.

7. **Mutual recognition and IPR:** TEPA includes **Mutual Recognition Agreement (MRAs)** for professions such as nursing, chartered accountancy and architecture, while its IPR provisions retain India's flexibility on public health and generics.

Sectoral Impact and Opportunities for India

1. **Agriculture and allied products:** India's exports to EFTA were valued at **$72.37 million in FY2024–25**, with guar gum, processed vegetables, basmati rice, pulses, fruits and grapes among the major products.

2. **Coffee and tea:** EFTA countries import around **$175 million of coffee**, while zero duty on coffee lines improves access; India's average tea export realisation increased from **$5.93/kg to $6.77/kg** in 2024–25.

3. **Marine products:** Norway provides duty exemption of up to **13.16%** on fish and shrimp feed, while Iceland eliminates tariffs up to 10% on several seafood products and reduces fish-feed tariffs by up to 55%.

4. **Engineering and manufacturing:** Engineering exports reached **$315 million in FY2024–25**, up 18% year-on-year, with opportunities in electric machinery, copper products, energy-efficient systems and precision engineering.

5. **Textiles and consumer goods:** Textiles, apparel, leather, footwear, sports goods and toys gain from duty stability, zero-duty access or simpler standards and conformity arrangements.

6. **Chemicals and allied products:** EFTA has provided zero or reduced tariffs on **95% of India's chemical exports**, while selected exports are projected to increase from **$49 million to $65–70 million**.

7. **Electronics and software:** The investment commitment and access to high-income European markets can support Indian electronics firms, MSMEs and Original Equipment Manufacturer (OEMs) seeking to expand internationally.

Iceland and India: Geothermal Energy and Energy Security

1. **Geothermal expertise:** Iceland has nearly a century of experience in the direct use of low- and medium-temperature geothermal heat, beyond electricity generation.

2. **Indian agricultural applications:** Geothermal drying and cooling can help Indian farmers process produce and avoid being forced to sell immediately during harvest.

3. **Himalayan applications:** India's Himalayan geothermal belt can draw on Icelandic experience for direct-use applications.

4. **High-altitude energy security:** Direct geothermal heat can provide energy to northern high-altitude communities and installations without depending on fuel supply lines that may close for months.

Iceland and India: CCUS and the Blue Economy

1. **India's CCUS potential:** NITI Aayog estimated that India could capture around **750 million tonnes of CO_2 annually by 2050**, while national **Carbon Capture, Utilisation and Storage (CCUS)** research is moving towards commercial applications.

2. **Carbon storage:** CarbFix has demonstrated that more than **95% of injected CO_2 can turn into stone within two years**, with India's Deccan Trap basalts offering similar geological characteristics.

3. **Carbon utilisation:** Iceland's experience in converting captured CO_2 into methanol can support Indian e-methanol projects, including the proposed **3,00,000-tonne-a-year project in Raigad**.

    - **Technology partnership:** The opportunity is not limited to equipment exports but includes **technology licensing, storage assessment, monitoring, verification and co-development**.
    - **Fisheries and processing:** Iceland offers expertise in seafood quality, cold-chain logistics and value-added processing, including the use of around **90% of each cod landed**.
    - **Value from existing resources:** India can create additional value, jobs and exports by better using existing fish catches rather than increasing the volume of fishing.

Wider Partnership: Arctic Cooperation and Europe–India Linkages

1. **Arctic cooperation:** Iceland, a founding member of the Arctic Council, can provide India with a direct bilateral channel for Arctic governance and research.
2. **India's Arctic engagement:** India has been an **Observer in the Arctic Council since 2013**, published its **Arctic Policy in 2022**, and operates the **Himadri research station in Svalbard**.
3. **Complementary engagement:** Bilateral cooperation with Iceland can complement India's existing multilateral engagement in the Arctic and strengthen cooperation in research and governance.
4. **Energy and Arctic stewardship:** India and Iceland can connect cooperation in **energy, trade and Arctic stewardship**, linking economic interests with the sustainable management of a changing Arctic.
5. **Complement to EU–India FTA:** TEPA is **not a rival to the EU–India Free Trade Agreement (FTA)** but can complement it by providing an existing model for wider Europe–India economic cooperation.
6. **Broader European partnership:** TEPA can demonstrate how trade agreements can create wider cooperation in **investment, technology, jobs, energy, fisheries and sustainable development**.

Way Forward

1. **Translate investment commitments into projects:** The $100 billion commitment should support actual manufacturing, research, innovation and technology partnerships in India.

2. **Scale clean-technology cooperation:** Geothermal energy and CCUS cooperation can move from pilot projects towards wider applications through technology licensing, joint development and knowledge sharing.

3. **Increase value addition:** India can use Icelandic expertise to improve processing and value creation in agriculture, fisheries and industrial sectors without increasing resource extraction.

4. **Strengthen Arctic cooperation:** Iceland can provide India with a direct bilateral channel for Arctic governance and research, complementing India's Observer role in the Arctic Council and its Himadri station in Svalbard.

5. **Build wider European cooperation:** TEPA can complement the **EU–India FTA** and serve as a working model for wider Europe–India cooperation in trade, investment and technology.

Conclusion

TEPA can take India–EFTA relations beyond tariff reduction towards investment, jobs, technology and sustainability. Its wider value lies in combining India's market, workforce and industrial base with EFTA's capital and specialised expertise. Iceland shows how such cooperation can support energy security, carbon management, fisheries and Arctic engagement, giving practical meaning to **"one plus one equals three"** in practice.

Question for practice:

Examine how the India–EFTA Trade and Economic Partnership Agreement (TEPA) can strengthen India's trade, investment, technology and strategic partnerships.
Source: The Hindu

For constituting poll body, a lesson from the UN

Source: The post **"For constituting poll body, a lesson from the UN"** has been created based on **"For constituting poll body, a lesson from the UN"** published in "**Indian Express**" on 3rd October 2026.

UPSC Syllabus: GS-2-Governance

Context: Two recent developments highlight the need to protect public trust in India's electoral system. Concerns were raised over the functioning of the CEC and senior EC officials, while a Supreme Court split verdict stressed that the executive should not have exclusive control over appointing the CEC and ECs. These developments underline the need for an independent and impartial Election Commission.

About Article 324 of the Indian Constitution

1. Article 324 in the Indian Constitution **gives power to the Election Commission to direct, control, and conduct elections to all Parliament, to the Legislature of every state and of elections to the offices of the President and Vice President** held under the Constitution.
2. Article 324(1) of the Indian Constitution vests **the superintendence, direction, and control of the preparation of electoral rolls and the conduct of all elections to Parliament, State Legislatures, and the offices of the President** and **Vice-President** in the **Election Commission of India.**

3. **Article 324(2) provides that the Election Commission comprises the Chief Election Commissioner and such number of other Election Commissioners as the President may determine from time to time.**
4. **Article 324(3)** further stipulates that, **when other Election Commissioners are appointed, the Chief Election Commissioner shall serve as the Commission's Chairman.**

Present Appointment Framework

1. For nearly **75 years**, Parliament did not enact a law governing the appointment of the CEC and ECs, and the executive made these appointments.
2. In **March 2023**, the Supreme Court ruled against exclusive executive control and provided for a selection committee comprising the **Prime Minister, Leader of Opposition in the Lok Sabha and Chief Justice of India**, until Parliament enacted a law.
3. Parliament subsequently enacted a law in **2023** that **excluded the Chief Justice of India** and included a **Union Cabinet Minister** in the three-member selection committee.
4. The **Cabinet Secretary prepares the shortlist**, while decisions of the committee are taken by **majority vote**.
5. The concern raised is that the presence of the Prime Minister and a Cabinet Minister may give the government a dominant position in the selection process.

Why a Consensus-Based Mechanism is Important

1. The Election Commission exercises significant administrative powers and its decisions directly affect the **electoral process and public confidence**.
    a. The CEC and ECs must therefore be perceived as **fair and independent**, not merely formally independent.
2. A selection process involving both the **government and Opposition** can help create broader institutional trust.
3. Consensus can ensure that the selected candidate is **not distrusted by either side**, even if complete agreement on the most technically qualified candidate is difficult.

Lesson from the UN

1. The procedure for selecting the **UN Secretary-General** provides a relevant institutional lesson.
2. The process requires that none of the **five permanent members of the UN Security Council** exercise their veto against the candidate.
3. Consequently, the candidate who eventually emerges may not necessarily be the person considered the most technically qualified by every member, but should be someone who is **acceptable and not distrusted by the major stakeholders**.
4. A similar principle could be considered for appointments to the ECI, where **consensus and removal of distrust** can strengthen institutional legitimacy.

Possible Institutional Arrangement

1. The selection committee could include: **Chief Justice of India** as Chairperson; **Union Cabinet Minister**; and **Leader of Opposition in the Lok Sabha**.
2. The role of the **Cabinet Secretary** could be important in preparing a credible shortlist.

3. The shortlist should include persons with **senior administrative experience**, while also ensuring that candidates are not perceived as having political leanings or being particularly close to political leadership.
4. Seniority and experience are relevant because the ECI requires considerable **administrative acumen and institutional experience**.

Challenges

1. Achieving consensus among the government and Opposition may require **multiple rounds of discussion**.
2. **Complete consensus may not always be possible**, as also illustrated by the ongoing process for selecting the next UN Secretary-General.
3. However, the objective should be to **minimise distrust and ensure broad acceptance** of the eventual choice.

Way Forward

1. **Build bipartisan consensus:** The government and Opposition should work towards a selection process based on broad agreement rather than simple numerical majority.
2. **Strengthen the role of the CJI:** The Chief Justice of India can provide an independent institutional voice in the selection process and help reduce perceptions of executive dominance.
3. **Ensure a credible shortlist:** The Cabinet Secretary should recommend candidates based on **administrative experience, integrity, seniority and demonstrated political neutrality**.
4. **Maintain transparency:** Clear and publicly known **eligibility criteria and selection procedures** should be established to enhance public confidence.
5. **Avoid political proximity:** Candidates who are perceived to be particularly close to the political leadership should be avoided so that the ECI's independence is protected both **in substance and in perception**.
6. **Adopt the principle of consensus:** The UN Security Council's approach provides a useful lesson — where complete agreement is difficult, the focus can be on finding a candidate who is **acceptable to all major stakeholders and not distrusted by any**.
7. **Protect institutional independence:** The appointment mechanism should ultimately ensure that the CEC and ECs can discharge their constitutional responsibility of ensuring **free and fair elections without fear or favour**.

Conclusion: The credibility of India's electoral democracy depends not only on conducting elections but also on ensuring **public trust in the institution conducting them**. A selection mechanism that encourages **government-Opposition agreement, institutional independence and transparency** can strengthen the ECI. Thus, the emphasis should be on selecting persons whose **experience, impartiality and independence are widely trusted**, while using consensus as an important safeguard against perceptions of political bias.

Question: Why is a consensus-based mechanism for appointing the CEC and ECs important for electoral democracy? Discuss.

Source: Indian Express

Organ donation in India: How the system works and what law says

Source: The post **"Organ donation in India: How the system works and what law says"** has been created based on **"Organ donation in India: How the system works and what law says"** published in "**Business Standard**" on 3rd October 2026.

UPSC Syllabus: GS-2-Governance

Context: The Karnataka High Court recently allowed a 52-year-old unmarried man to altruistically donate one of his kidneys to an unrelated recipient. The state government informed the court that it is in the process of formulating guidelines to establish a mechanism for regulating cases of altruistic organ donation. This case raises questions about India's regulation of organ donation, the legality of altruistic donation to unrelated recipients, and safeguards against organ trading.

About Organ donation in India and Legal framework

1. Organ donation in India is primarily regulated by the **Transplantation of Human Organs and Tissues Act (THOTA), 1994**, along with its **2011 amendments and 2014 Rules**.
2. The framework aims to facilitate organ transplantation while ensuring **voluntary donation, informed consent and prevention of commercial organ trade**.
3. **THOTA, 1994** regulates the **removal, storage and transplantation of human organs and tissues** for therapeutic purposes.
4. It provides rules for both **living and deceased donors**.
5. It also aims to prevent **commercial dealings in human organs and tissues**.

Institutional Framework

1. **NOTTO (National Organ and Tissue Transplant Organisation)** functions at the national level.
    a. It maintains the **national registry of donors and recipients**.
    b. It establishes protocols and oversees **fair organ distribution**.
    c. It implements the **National Organ Transplant Programme**.
2. **ROTTOs (Regional Organ and Tissue Transplant Organisations)** and **SOTTOs (State Organ and Tissue Transplant Organisations)** operate at regional and state levels.
3. Together, this **three-tier system** coordinates organ procurement, waiting lists and awareness.

Who Can Donate?

1. THOTA permits donation by **living donors** as well as **deceased donors after cardiac or brain death**.
2. Living donors are broadly classified as:
    a. **Near relatives**, including spouses, children, grandchildren, siblings, parents and grandparents.
    b. **Non-related donors**, who require approval from an **Authorisation Committee**.
3. A near-relative donation requires permission from the **doctor in charge of the transplant centre**, while non-related donation requires clearance from the appropriate **State Authorisation Committee**.

About Altruistic Organ Donation

- **Altruistic donation** means donating an organ without expecting monetary payment or any prohibited benefit.
- It is legally permitted under **Section 9(3) of THOTA** for non-relatives when motivated by **"affection or attachment" or other special reasons**, provided there is no commercial transaction.
- Non-related donations are subject to strict scrutiny by the **Authorisation Committee**.
- The Committee examines whether the donation is **Voluntary**, **Free from financial motives** and **Free from pressure, inducement, influence or allurement**.
- The **2014 Rules** prescribe forms requiring donors and recipients to disclose the reasons for donation and affirm that the decision is voluntary.
- Courts, including the **Kerala and Karnataka High Courts**, have recognised genuine altruistic and anonymous donations to strangers, while stressing that authorities should not reject them merely on vague suspicion.
    - **Kerala** has established formal guidelines for altruistic donations, while **Karnataka** is developing structured protocols.

Prevention of Illegal Organ Trade

- THOTA **prohibits commercial dealings in human organs**.
- **Section 19** penalises:
    - Paying or receiving money for supplying an organ.
    - Offering or seeking an organ for payment.
    - Negotiating arrangements involving payment.
    - Managing organisations involved in commercial organ transactions.
    - Advertising paid organ supply.
    - Creating or submitting false documents to disguise a commercial donation as a legitimate donation.
- Unauthorised removal of an organ can attract **up to 10 years' imprisonment and a fine up to ₹20 lakh**.
- Commercial dealings can attract **5–10 years' imprisonment and a fine of ₹20 lakh to ₹1 crore**.

International Framework

1. The **WHO Guiding Principles on Human Cell, Tissue and Organ Transplantation**, endorsed by the World Health Assembly, provide the **main international framework** for organ donation and transplantation.
2. These principles apply to organs obtained from **both living and deceased donors** and emphasise **voluntary and non-remunerated donation, informed consent, donor protection and equitable allocation** of organs.
3. **Altruistic donation** is recognised as an important principle under the WHO framework.
4. The WHO encourages countries to establish systems for the **voluntary and non-remunerated donation** of organs from both living and deceased donors.
5. However, the **specific rules governing altruistic donation** are determined by individual countries through their **national laws**.

Challenges

1. A major challenge is distinguishing **genuine altruistic donation from disguised commercial transactions**.

2. Excessive suspicion may discourage legitimate donations, while inadequate scrutiny may facilitate **organ trafficking**.
3. Differences in implementation and guidelines across states can also create uncertainty.

Way Forward

1. States should develop **clear and uniform protocols** for altruistic and unrelated donations.
2. Authorisation Committees should ensure **transparent, timely and evidence-based scrutiny**.
3. Strong coordination among **NOTTO, ROTTOs and SOTTOs** should be maintained.
4. Public awareness should be strengthened to promote **voluntary and non-commercial organ donation**.
5. Strict verification of documents and financial relationships should continue to prevent **commercial exploitation**.
6. The system should balance **individual autonomy and altruism** with safeguards against coercion, fraud and organ trafficking.

Conclusion: India's organ donation framework seeks to create a balance between **facilitating life-saving transplantation and preventing exploitation**. A transparent, voluntary and non-commercial system, supported by effective institutional coordination and safeguards, can strengthen **public trust and ethical organ transplantation**

Question: Discuss the legal and institutional framework governing organ donation in India. How does it balance altruistic donation with the need to prevent commercial organ trading?

Source: Business Standard

India's Model BIT — A Decade Later, Amid Changes

UPSC Syllabus: Gs Paper 2- Indian economy

Introduction

India is revising its **Model Bilateral Investment Treaty (BIT)** nearly a decade after adopting the 2015 framework. The review comes as India's treaty practice and the global investment regime have changed. The key issue is not simply whether investors should receive more or less protection, but how India's experience since 2015 should shape the new framework. The revised model must balance **investor protection, State regulatory space, treaty flexibility and changing international investment rules** while guiding future negotiations.

For detailed information on Model Bilateral Investment Treaty (BIT) **read this article**

Why India Adopted a Cautious Framework

1. **Post-White Industries Context: Post-White Industries Context:** The White Industries v. India award (2011) and wider concerns over investor-State arbitration encouraged India to adopt a cautious treaty framework.

2. **Narrow Investment Definition:** The 2015 Model BIT adopted a narrower definition of investment to limit the scope of treaty-based investor claims.

3. **Carefully Framed Protections:** The model contained specific substantive protections and regulatory exceptions, giving the State greater space to pursue public-interest policies.

4. **Five-Year Local Remedies:** Investors were required to exhaust judicial and administrative remedies for at least five years before starting treaty arbitration.

5. **State Regulatory Space:** The 2015 framework sought to preserve the State's ability to regulate in the public interest through carefully framed protections and regulatory exceptions.

Evolution in India's Treaty Practice

1. **New-Generation Investment Agreements:** India has concluded **new-generation investment agreements with the UAE, Uzbekistan and Israel**, showing greater flexibility in its treaty practice since 2015.

2. **Shorter Local-Remedy Period:** The India-UAE BIT reduced the local-remedies period to three years, compared with five years under the 2015 Model BIT.

3. **India-Israel Agreement:** The India-Israel BIA, which entered into force in July 2026, also provides a three-year period for pursuing local remedies.

4. **Greater Treaty Flexibility:** These agreements show that India's treaty practice has become more flexible since 2015, especially on dispute-related provisions.

5. **Model BIT as a Starting Point:** A Model BIT should provide a negotiating framework while allowing individual treaties to reflect the specific circumstances and priorities of partner countries.

India as a Rule-Shaper in the Global Investment Regime

1. **Changing Global Priorities:** The international investment regime is moving towards investment facilitation, cooperation, sustainable development and more clearly defined investor protections.

2. **Reduced Reliance on Traditional ISDS:** The international investment regime is moving towards less reliance on traditional Investor-State Dispute Settlement (ISDS) and greater emphasis on investment facilitation, cooperation and sustainable development.

3. **UNCITRAL Reform Process: United Nations Commission on International Trade Law (**UNCITRAL) is examining reforms involving a permanent tribunal, appellate mechanism, damages and compensation, and dispute prevention.

4. **Opportunity for India:** India can use its treaty practice to act as a rule-shaper in international investment law rather than remaining only a rule-taker.

5. **Need for a Future-Oriented Model:** India's revised model must respond to these changes in international investment rules, rather than simply revisit the 2015 framework.

Key Issues for the Revised Model BIT

Need for Reassessment: India's changing treaty practice and the evolving international investment regime require a fresh assessment of **key provisions in the Model BIT**, particularly MFN, investor obligations and dispute settlement.

A. Most-Favoured Nation (MFN) Provision

- **MFN Status in India's Treaties:** The MFN provision is absent from most Indian investment treaties, limiting investors' ability to claim better protection available under other treaties.
- **MFN and Dispute Settlement:** In **Maffezini v. Spain**, an MFN clause was used to bypass an 18-month local-court requirement by relying on more favourable dispute-settlement provisions.
- **Contrasting Judicial Approach: Plama v. Bulgaria** rejected importing dispute-settlement provisions through an MFN clause when the treaty did not clearly permit it.
- **Need for Defined Scope:** The central issue is the **scope of MFN protection**, particularly its application to dispute-settlement provisions.

B. Investor Obligations and Counterclaims

- **Emerging Indian Practice:** The India-Uzbekistan BIT allows a State to make a **counterclaim against an investor or investment**, reflecting a broader approach to investor responsibilities.
- **Investor Obligations:** The revised framework must consider whether and how **legal obligations should be placed on investors**, alongside protections granted to them.
- **Counterclaim Framework:** The issue also involves identifying the **circumstances in which a State can raise counterclaims** against an investor.

C. Dispute Settlement and Local Remedies

- **Five-Year Requirement:** The 2015 Model BIT requires investors to exhaust **judicial and administrative remedies for five years** before initiating treaty arbitration.
- **Changed Treaty Practice:** India's newer agreements with the **UAE and Israel** use a three-year period, showing a shift from the earlier approach.
- **Dispute Prevention:** The evolving international discussion also raises the issue of **consultation and dispute-prevention mechanisms before arbitration**, including under UNCITRAL Working Group III.

Way Forward

1. **Balance Investor Protection with Regulatory Space:** The revised framework should protect legitimate investor interests while preserving India's ability to regulate in the public interest.

2. **Clarify Expropriation and FET:** Precise provisions on expropriation and Fair and Equitable Treatment (FET) can reduce interpretational uncertainty while safeguarding the State's regulatory powers.

3. **Define Investor Responsibilities:** Where India wants investors to follow particular responsibilities, these should be expressed through clear legal obligations rather than broad policy statements.

4. **Ensure Greater Clarity:** The model should clearly define the rights and obligations of investors and States, reducing uncertainty in treaty interpretation.

5. **Improve Workability:** The framework should provide a practical basis for future negotiations while allowing individual treaties to address specific circumstances.

6. **Retain Treaty Flexibility:** The Model BIT should establish common principles while allowing necessary adjustments based on the priorities of individual treaty partners.

7. **Reflect India's Current Position:** The revised framework should incorporate lessons from the past decade and respond to changes in the international investment regime.

Conclusion

India's revised Model BIT should reflect **the lessons of a decade of treaty practice and changes in the international investment regime**. It should provide clear and workable rules, balance investor protection with India's regulatory space, and retain flexibility for individual treaties. The aim should be neither stronger investor rights nor greater State control alone, but a **balanced framework suited to India's present needs**.

Question for practice:

Discuss the need to revise India's Model Bilateral Investment Treaty (BIT) and the key issues that should shape the new framework.

Source: The Hindu

CAFE Smokescreen

UPSC Syllabus: Gs Paper 3- Infrastructure

Introduction

India's **CAFE-III norms** will govern passenger vehicles from **1 April 2027 to 31 March 2032**. They aim to improve **fuel efficiency and reduce CO_2 emissions** through tighter targets, EV super-credits, technology credits and benefits for alternative fuels. However, the **weight-sensitive design** raises concerns because heavier vehicles can still receive higher permissible fuel consumption. Generous credits may also weaken

actual emission reductions and allow greater **internal combustion engine (ICE) vehicle output** within manufacturer fleets.

What is CAFE and CAFE Norms?

1. **Full Form: CAFE stands for Corporate Average Fuel Economy**, which refers to the average fuel efficiency of vehicles sold by an automobile manufacturer.
2. **Meaning of CAFE:** It measures **how much fuel a manufacturer's overall fleet consumes on average**, rather than judging each vehicle separately.
3. **CAFE Norms:** These are **mandatory fuel-efficiency standards** that require automobile manufacturers to keep their fleet's average fuel consumption within prescribed limits.
4. **Emission Link:** Since lower fuel consumption generally means lower CO_2 emissions, **CAFE norms also serve as a tool for reducing carbon emissions** from passenger vehicles.
5. **Fleet-Based Approach:** Compliance is determined through the **weighted average of the manufacturer's fleet**, so the composition and efficiency of its vehicles affect the final target.
6. **CAFE vs Bharat Stage: CAFE focuses mainly on fleet-level fuel efficiency and CO_2 emissions**, whereas Bharat Stage norms regulate harmful vehicle pollutants such as **NOx, particulate matter, CO and hydrocarbons**.
7. **Legal Basis:** India introduced CAFE norms in **2017 under the Energy Conservation Act, 2001**, making manufacturers responsible for improving the average efficiency of their passenger-vehicle fleets.

Status of CAFE Norms in India

1. **Three CAFE phases:** India has had **CAFE-I and CAFE-II**, while **CAFE-III has now been notified** for the next five-year period. It will replace the existing norms from **1 April 2027** and remain applicable until **31 March 2032**.
2. **CAFE-I (2017–22):** The first phase introduced **fleet-level fuel-efficiency standards** for passenger vehicles, making manufacturers responsible for the average efficiency of their vehicle fleet.
3. **CAFE-II (2022–27):** The second phase **tightened the fuel-efficiency requirements** and continued the fleet-average approach, forming the regulatory base that CAFE-III will replace from April 2027.
4. **CAFE-III (2027–32):** The new phase will apply from **1 April 2027 to 31 March 2032** and progressively tighten fuel-consumption targets over five years.
5. **Coverage:** CAFE-III covers **M1 passenger vehicles manufactured or imported for Indian sale**, including petrol, diesel, CNG, LPG, hybrid and electric vehicles.
6. **Testing transition:** From April 2027, manufacturers will report vehicle performance under both **Modified Indian Driving Cycle (MIDC)**and **Worldwide Harmonized Light Vehicles Test Procedure (WLTP)**, supporting a gradual shift towards globally harmonised vehicle testing.

Key Features of CAFE III

1. **Progressively tighter targets:** The fuel-consumption benchmark tightens from **3.996 litres/100 km in 2027-28 to 3.3273 litres/100 km in 2031-32**, exceeding 16% improvement.

2. **Weight-sensitive targets:** The revised target curve gives **relatively softer targets to lighter vehicles and requires greater fuel-efficiency improvement from heavier vehicles**, with the reference weight rising from **1,082 kg to 1,229 kg**.

3. **Small-car treatment:** The final norms **remove the specific carve-out for small cars** proposed in the draft, but modify the formula to provide some benefit to this category. This recognises that **small cars are generally more fuel-efficient than larger vehicles**.
4. **Reduced hybrid and flex-fuel incentives:** The final framework **reduces the rewards for hybrid and flex-fuel vehicles compared with earlier drafts**, while retaining incentives for cleaner technologies.
5. **EV super-credits: EV super-credit concern:** A **3× super-credit means one Battery Electric Vehicle (BEV) is counted as three vehicles while** calculating an **Original Equipment Manufacturer's (OEM) fleet-average performance**. This can make the fleet appear cleaner in compliance calculations and potentially allow greater **internal combustion engine (ICE) vehicle output**.

6. **Technology credits:** Manufacturers can get compliance benefits for adopting **12 recognised fuel-saving technologies**, compared with four earlier. Each eligible technology can reduce the **calculated fleet CO_2 emissions by 1 g/km**, with the total benefit capped at **9 g/km**.
7. **Credit-debit mechanism:** Manufacturers exceeding targets generate **credits**, while those missing targets accumulate debits under a market-based compliance system.

8. **Credit trading and buyout:** Credits can be **carried forward, traded or exchanged**, while manufacturers can purchase eligible credits through the **Bureau of Energy Efficiency**.

9. **Cleaner-fuel recognition:** The **Carbon Neutrality Factor** provides compliance benefits for E20-plus petrol, flex-fuel ethanol and CNG vehicles.

10. **Small manufacturers:** Manufacturers with **fewer than 1,000 eligible vehicles** are exempt from specific fleet-average obligations but must continue reporting fuel-consumption data.

Significance

1. **Lower fossil-fuel use:** Stricter fleet-average targets can reduce fuel consumption across new passenger vehicles.

2. **Decarbonisation support:** Linking fuel efficiency with CO_2 performance can contribute to **reducing carbon emissions from road transport**.

3. **Technology innovation:** Recognition of EVs, hybrids, alternative fuels and fuel-saving technologies gives manufacturers **multiple technological pathways for compliance**.

4. Energy security: Lower fuel consumption can support India's energy security by reducing dependence on fossil fuels.

5. **Regulatory certainty:** The **five-year roadmap and flexible compliance mechanisms** provide manufacturers greater predictability for investment and technology planning.

6. **Consumer choices:** Multiple recognised technologies allow manufacturers to develop **different vehicle pathways**, potentially giving consumers wider technology choices.

Key Concerns with CAFE III

1. **Weight-based formula:** The weight-linked formula can allow **higher permissible fuel consumption as fleet weight rises**, even though the revised curve also requires greater efficiency improvements from heavier vehicles.
2. **Large-vehicle costs:** Large vehicles **consume more fuel and occupy more road and parking space**, creating wider costs for society. These vehicles should therefore **bear higher taxes** to reflect their greater resource and infrastructure burden.
3. EV super-credit concern: The 3× multiplier can make an OEM's fleet appear cleaner in compliance calculations than its actual vehicle mix, potentially allowing greater internal combustion engine (ICE) vehicle output
4. **Coal-based electricity:** EVs have no tailpipe emissions, but **electricity generated largely from coal means their overall emissions are not necessarily zero**.
5. **Ethanol concession:** Giving petrol vehicles a standards concession for ethanol blending is questionable because **ethanol also has significant life-cycle emissions**.
6. **Gentle tightening:** Although targets become stricter over five years, the **gradual transition may not substantially change the existing vehicle mix**.

Way Forward

1. **Weight-neutral efficiency standard:** Set a **strict industry-wide fuel-efficiency standard without linking compliance primarily to vehicle weight**.
2. **Technology flexibility:** Allow **Original Equipment Manufacturers (OEMs)** to decide their **vehicle and technology mix**, provided they meet the common efficiency benchmark.
3. **Real emission reduction:** Design super-credits so that they encourage **actual additional emission reductions**, rather than mainly improving calculated compliance.
4. **Life-cycle assessment:** Assess EVs and alternative fuels through their **overall life-cycle emissions**, rather than relying only on tailpipe performance.
5. **Broader vehicle costs:** Consider the **fuel, road-space and parking costs of large vehicles** when framing the wider regulatory approach.

Conclusion

CAFE-III strengthens India's framework for improving fuel efficiency, reducing fossil-fuel use and supporting cleaner vehicle technologies. However, weight-sensitive targets and generous credits can weaken the link between regulatory compliance and actual emission reduction. A stronger approach should set strict industry-wide efficiency standards, preserve technology flexibility and assess vehicles and fuels through their life-cycle emissions, while addressing the wider costs of larger vehicles.

Question for practice:

Examine the key features and concerns of India's CAFE-III norms in promoting fuel efficiency and reducing vehicle emissions.

Source: Businessline; The Print

The tussle for top posts in India's CAPFs: IPS officers or force veterans?

Source: The post **"The tussle for top posts in India's CAPFs: IPS officers or force veterans?"** has been created based on **"The tussle for top posts in India's CAPFs: IPS officers or force veterans?"** published in "**Indian Express**" on 5th October 2026.

UPSC Syllabus: GS-2-Governance

Context: The Central Armed Police Forces (CAPFs), Central Reserve Police Force (CRPF), Border Security Force (BSF), Central Industrial Security Force (CISF), Indo-Tibetan Border Police (ITBP) and Sashastra Seema Bal (SSB) have their own Group A executive cadres, whose officers generally enter as Assistant Commandants and rise to senior command positions. However, senior posts have traditionally also been occupied by IPS officers on deputation, leading to a long-standing dispute over career progression and cadre rights.

Background of the Dispute

1. **CAPF cadre vs IPS deputation:** CAPF officers argue that officers who have spent their entire careers in the forces should have greater opportunities to occupy senior command positions.
2. **Deputation provisions:** Before the 2026 Act, recruitment rules provided for **20% of DIG posts and 50% of IG posts** to be filled through deputation.
3. **Promotion bottleneck:** As senior posts are limited and a proportion is reserved for deputation, CAPF cadre officers face stagnation and reduced promotional opportunities.

NFFU and Organised Group A Service Status

1. CAPF officers had long demanded **Non-Functional Financial Upgradation (NFFU)** to address stagnation when promotion was not possible due to lack of vacancies.
2. The **Delhi High Court ruled in their favour in 2015**, and the **Supreme Court upheld the decision in 2019**.
3. Subsequently, the Union Cabinet granted **Organised Group A Service (OGAS) status and NFFU benefits** to Group A executive cadre officers of CAPFs.
4. However, CAPF officers argue that NFFU has not completely solved the problem because it operates through existing Recruitment Rules.
5. Under these rules, **an officer must complete the prescribed period in a particular rank** before becoming eligible for the next grade. Therefore, **receiving higher pay through NFFU without actual promotion may not start the service period** required for the next financial upgrade.
6. CAPF officers therefore seek **service rules based on overall qualifying service rather than vacancy-based promotions**.

About Supreme Court Judgment, 2025

1. On **May 23, 2025**, the Supreme Court held that CAPFs should be treated as **OGAS not merely for NFFU but also for other cadre-related purposes**.
2. The Court directed a **cadre review and review of existing service and recruitment rules** after consultation with CAPF cadre representatives.
3. Most importantly, it directed that posts earmarked for deputation **up to the Senior Administrative Grade (DIG and IG)** should be **progressively reduced within two years**.
4. The Centre's review petition against the judgment was **dismissed in October 2025**.

Reasons behind Government Supporting IPS Deputation

1. The Ministry of Home Affairs argued that CAPFs perform an important **operational role** and cannot simply be treated like ordinary civilian Group A services.
2. According to the government, IPS officers provide an **institutional link between the Centre and State police establishments**, particularly when CAPFs are deployed in States.
3. The Supreme Court therefore **did not completely abolish IPS deputation**. Instead, it sought to balance operational requirements with the career interests of CAPF cadre officers.
4. CAPF officers, however, argue that personnel with decades of experience in **unit command and conflict areas** should not find senior positions in their own organisations substantially closed to them.
5. There is also a paradox: the Centre itself has faced difficulty in filling IPS-deputation posts because **States are sometimes reluctant to release IPS officers for central deputation**.

About Central Armed Police Forces (General Administration) Act, 2026

1. **The Central Armed Police Forces (General Administration) Bill** was introduced on **March 25, 2026**, passed by **both Houses in April, and became law.**
2. The Act creates an **umbrella framework for Group A officers of the five CAPFs**.
3. It empowers the Central Government to frame rules relating to **recruitment, promotion, deputation and service conditions**.
4. Significantly, the rule-making power operates **notwithstanding an inconsistent judgment, decree or court order**, and rules framed under the Act prevail over inconsistent rules or government orders.
5. **Features of the act:**
    a. The Act **retains a significant role for deputation at senior levels**:
        i. **50% of IG posts** are to be filled through deputation.
        ii. **At least 67% of Additional DG posts** are to be filled through deputation.
        iii. **All Special DG and DG posts** are to be filled through deputation.
    b. The government argues that this framework is necessary for **uniform administration of the five forces, operational requirements and Centre-State coordination**.
    c. Opposition MPs, however, argued that the legislation effectively seeks to **overcome the Supreme Court's 2025 judgment** and perpetuate the disadvantage faced by CAPF cadre officers.
    d. They demanded reference of the Bill to a **Select Committee** and walked out during its passage in Parliament.

Present Legal Position

1. CAPF officers have separately **challenged the 2026 Act in the Supreme Court**.
2. There are consequently **two overlapping proceedings**:
    a. Contempt petitions concerning alleged non-compliance with the **2025 Supreme Court judgment**.
    b. A challenge to the **2026 CAPF Act**, which subsequently changed the statutory framework.
3. The controversy also came into focus when contempt petitions listed before the Supreme Court were struck off and later placed before a specially constituted bench.
4. The **Registry stated that the Centre had requested that the contempt cases be heard along with the challenge to the new CAPF law** because the government's defence in both matters overlapped.

Conclusion: The CAPF–IPS dispute is fundamentally a question of **balancing institutional experience, fair career progression and operational requirements**. While IPS deputation may serve the objective of Centre-State coordination and operational flexibility, excessive deputation can create stagnation within the permanent CAPF cadres. A sustainable solution should therefore ensure **fair promotional opportunities for CAPF officers, effective cadre management and recruitment rules, while retaining only such deputation as is genuinely required for operational and administrative purposes**.

Question: Discuss the issue of senior leadership in CAPFs in light of the Supreme Court's 2025 judgment and the CAPF (General Administration) Act, 2026.

Source: Indian Express

Rethinking rural cooperatives

Source: The post **"Rethinking rural cooperatives"** has been created based on **"Rethinking rural cooperatives"** published in "**Indian Express**" on 5th October 2026.

UPSC Syllabus: GS-3- Indian Economy

Context: The cooperative sector has received renewed policy attention through initiatives such as **Bharat Taxi**, new Primary Agricultural Credit Societies (PACS) and primary milk cooperatives. However, changing rural financial needs and the consolidation of Regional Rural Banks (RRBs) make it necessary to **rethink the structure of grassroots rural cooperatives**.

Evolution of Rural Credit

1. The **All-India Rural Credit Survey Committee (1956)** advocated decentralised, village-level financial institutions to provide rural credit.
2. **Primary cooperatives** constituted the first major phase of formalisation of rural credit.
3. Subsequently, **nationalised banks**, supported by branch-licensing requirements and priority-sector lending, expanded into rural areas.
4. This was followed by **Regional Rural Banks (RRBs)**, which were intended to combine professional banking with a local focus.

Present status of the cooperatives in India

1. At their peak, India had **more than 1 lakh primary credit cooperatives**, although only around 60% were estimated to be active.
2. Today, approximately **40,000–50,000 primary cooperatives** may be active, although there is no clear current estimate after NABARD stopped regularly publishing comprehensive statistics on rural credit and non-credit cooperatives.
3. RRBs have undergone **consolidation**, while amendments to the RRB Act have enabled **private-sector shareholding**.
4. Increasing commercial imperatives of RRBs may gradually move them away from their original focused rural-development agenda.
5. Therefore, **hyper-local primary cooperatives remain important** for reaching people, particularly the last woman in the remotest village.

Major Problems with Rural Cooperatives

1. Rural cooperatives are **vulnerable and can fail easily** because they have traditionally been structured mainly as credit institutions.
2. They are highly **leveraged**, while their members can simultaneously be borrowers, creating governance and financial risks.
3. Their loan portfolios are often excessively concentrated in **agriculture**, creating portfolio concentration risk.
4. Their geographical concentration exposes them to **covariance risk**, where events such as natural disasters can simultaneously affect many borrowers.
5. Primary cooperatives depend heavily on **refinancing from District Central Cooperative Banks (DCCBs)**.
6. Many DCCBs themselves depend on **State Cooperative Banks**, which ultimately rely on **NABARD refinancing**.
7. Thus, weaknesses at one level can transmit throughout the entire cooperative credit structure.

Lessons from Successful Models

1. Successful models in **Maharashtra, Kerala, Coastal Karnataka, parts of West Bengal and Telangana** show that rural cooperatives can become more resilient by **diversifying their balance sheets**.
2. Many successful primary cooperatives accept **local deposits**, thereby creating local financial participation and a stronger stake in the institution.
3. They also undertake **non-credit trading activities**, which diversify their income and provide a buffer during years of financial stress.

Proposed Reforms

1. **Integrating the middle tier:** District-level cooperative banks should be integrated with State Cooperative Banks because, in an interconnected financial system, the middle tier may add significant overhead without providing equivalent value.
2. **Specialised Regional Banks (SRBs):** The integrated institution should function as a professionally managed **Specialised Regional Bank**, rather than being managed purely according to traditional cooperative principles.
    a. SRBs should focus their asset book on **cooperatives** and provide financing to the entire cooperative structure, covering both credit and non-credit activities.
3. **Ownership of SRBs:** Shares should be held only by cooperatives and cooperative-like institutions, including **Farmer Producer Organisations (FPOs)** and other local institutions.
4. **Professional governance:** Governance should not strictly follow the cooperative principle of **"one person/institution, one vote"**. Instead, RBI norms, including **independence and fit-and-proper requirements**, should guide management.
5. **Reduce excessive leverage:** Refinancing provided by SRBs to primary cooperatives should gradually be reduced to around **six times their member share capital and eligible non-withdrawable deposits**, subject to appropriate tenor conditions.
6. **Encourage local deposits:** Primary cooperatives should increase their reliance on **local deposits** rather than excessive external refinancing.
7. **Diversify activities:** Primary cooperatives should undertake **non-credit activities** to diversify income and strengthen their balance sheets.

8. **Modern banking facilities:** Strong primary cooperatives meeting financial conditions could access services such as **remittances, interoperability, UPI, debit cards and credit cards** for their members under a common brand.
    a. Such modern banking facilities could be **mapped to the balance sheet of the SRB**, providing technological and financial support to grassroots institutions.
9. **Government support:** Union or State Governments may provide a **one-time grant to viable active cooperatives** for revival.
    a. Cooperatives that are **beyond revival** could instead be replaced or restructured through new grassroots cooperatives involving local communities and linking them with activities such as **milk production and local payment systems**.

Way Forward

1. India needs to move beyond excessive concentration on **apex and elite financial institutions** and strengthen grassroots institutions.
2. The consolidation and commercialisation of RRBs make it even more important to preserve **hyper-local financial institutions**.
3. Modern financial technology and infrastructure now provide the capacity to improve the **housekeeping, payments and banking operations** of grassroots cooperatives.

Conclusion: India needs **vibrant, self-governed and financially responsible grassroots cooperatives** that combine local participation with professional governance. Strengthening primary cooperatives through **diversification, local deposits, reduced leverage, integrated banking support and modern digital services** can ensure that rural finance continues to reach the most remote sections of society.

Question: Rural cooperatives can play a crucial role in ensuring inclusive and decentralised financial development in India. Discuss.

Source: Business Standard

Outbound force: On the U.S. leaving Iraq

UPSC Syllabus: Gs Paper 2- International Relations

Introduction

The United States invaded Iraq in 2003 to remove Saddam Hussein and eliminate alleged weapons of mass destruction (WMDs), but the intervention produced prolonged conflict, sectarian violence and stronger Iranian influence. After withdrawing in 2011, U.S. forces returned in 2014 against Islamic State. Their final departure on September 30, 2026 ends a 23-year military involvement, while leaving Iraq responsible for managing serious security challenges. The final exit raises a central question: whether Iraqi institutions can preserve security while limiting outside influence.

From Regime Change to Prolonged Military Engagement

1. **2003 invasion and regime change:** U.S. forces invaded Iraq to topple Saddam Hussein and remove alleged weapons of mass destruction, which later proved nonexistent.

2. **Collapse of the Ba'athist state:** The destruction of Saddam's political order weakened existing state structures and helped deepen social and sectarian divisions across Iraq.

3. **Sectarian conflict and human cost:** The rise of Shia political forces and insurgency triggered a deadly civil war that killed hundreds of thousands of Iraqis.

4. **Growth of jihadist groups:** Al-Qaeda developed a violent branch in post-war Iraq, which later transformed into Islamic State and expanded across the region.

5. **Islamic State's territorial rise:** At its height, Islamic State controlled about one-third of Iraq and killed thousands, making its defeat a major security priority.

6. **Heavy American losses:** Operation Iraqi Freedom caused nearly 4,500 American military deaths, around twice the number recorded in the parallel Afghanistan war.

7. **2011 withdrawal and 2014 return:** U.S. forces completed their withdrawal from Iraq in **2011.** The rise of **Islamic State and its capture of large parts of Iraq in 2014** led the U.S. to return and support Iraqi forces against the group.

The Transformation of Iraq's Strategic Landscape

1. **Rise of Iranian influence:** Saddam's removal ended Iraq's role as a buffer between Iran and Arab Gulf states, allowing Tehran to expand influence through Shia parties and militias.

2. **Popular Mobilisation Forces:** Iran-backed Shia militias formed the Popular Mobilisation Forces, which developed major political and security influence inside Iraq.

3. **Iraq as a U.S.-Iran arena:** Iraq maintained close political and military relations with both powers, while its territory increasingly became a setting for their confrontation.

4. **Soleimani's killing and retaliation:** The U.S. killing of Qasem Soleimani in Baghdad in 2020 intensified tensions, followed by repeated attacks on American bases by Iran's allies.

5. **Weak state and powerful militias:** Iraq is now left with a weak government facing powerful armed groups backed by a resurgent Iran, limiting the state's control over security.

Why the United States Is Leaving Iraq

1. **Defeat of Islamic State's territorial control:** Iraqi forces and the international coalition defeated Islamic State's territorial control by **2017**, reducing the need for a large foreign military presence.

2. **Transfer of security responsibility:** Years of coalition training and operations strengthened the Iraqi Security Forces and Kurdish Peshmerga, allowing them to take greater responsibility for national security.

3. **2024 withdrawal agreement:** The United States and Iraq agreed in **2024** to end the coalition's military mission and withdraw foreign forces by the end of September 2026.

4. **Unsustainable military presence:** Iran and its allies carried out at least **600 attacks** on U.S. military and diplomatic facilities in Iraq during the current regional war, increasing the risks of maintaining American forces.

5. **End of Operation Inherent Resolve:** The departure of U.S. and British forces ends the coalition's military mission against Islamic State in Iraq and shifts the security role to Iraqi institutions.

Iraq's Security Challenges After the Withdrawal

1. **Risk of greater Iranian influence:** The withdrawal removes a U.S. military presence that had acted as a counterweight to Tehran, potentially increasing Iran-backed groups' political and security influence.

2. **Militia challenge to state authority:** Prime Minister Ali al-Zaidi has vowed to disarm Iranian-backed militias and bring weapons under state control, but powerful factions resist this effort.

3. **Threat of Islamic State resurgence:** Islamic State has lost its territorial caliphate but retains sleeper cells, creating a continuing threat during the security transition.

4. **Security gaps after U.S. exit:** Reduced access to American intelligence, logistics and drones could provide Islamic State with opportunities to regroup and exploit weaknesses.

5. **Drone attacks on Irbil:** Iranian-backed militias targeted the coalition base with up to **28 drones and missiles a day** during the regional war.

6. **Evidence of continuing militant capability:** Iraqi forces detected a suspected Islamic State suicide-attack plot around the withdrawal, showing that the group can still exploit security gaps.

A New Phase of Iraqi Sovereignty

1. **Iraqi-led security responsibility:** The withdrawal shifts primary responsibility for Iraq's security and stability to Iraqi institutions after more than a decade of coalition operations.

2. **Broad domestic support for sovereignty:** The departure is broadly popular among Iraqis because full national sovereignty remains a widely shared objective.

3. **Fear of a security vacuum:** Some Iraqi security figures believe the country is not fully ready to manage the security file alone and fear a vacuum after withdrawal.

4. **Continued U.S. support:** Following its military withdrawal from Iraq, the United States will continue providing targeted training and intelligence support to Iraqi forces.

Broader Strategic Implications for West Asia

1. **Iraqi responsibility for security:** The withdrawal places primary responsibility for Iraq's security and stability on its own institutions after years of coalition operations.

2. **Sovereignty versus security:** Although the departure is broadly popular among Iraqis, some security figures fear that the exit could create a security vacuum.

3. **Continued U.S. support:** Following its military withdrawal, the United States will continue providing targeted training and intelligence support to Iraqi partners.

4. **Iran's strategic gain:** Iran and its allied groups see the U.S. departure as a victory because it removes an important military counterweight to Tehran's influence.

5. **Limits of U.S. intervention:** Iraq shows how regime change and prolonged military intervention can produce instability, strengthen militias and expose the limits of American power.

6. **Iraq's balancing role:** Iraq's ability to maintain relations with both the United States and Iran will remain important amid continuing regional rivalry.

Conclusion

The U.S. withdrawal ends a military engagement that began with the 2003 invasion, but it does not end Iraq's security challenges. Iraq must strengthen state control over armed groups, prevent Islamic State's return, balance relations with Iran and the U.S., and protect its sovereignty. The success of withdrawal will depend on Iraq's ability to manage these pressures.

Question for practice:

Discuss the reasons for the U.S. withdrawal from Iraq and its implications for Iraq's security and regional stability.
Source: The Hindu; BBC

How Regulation Stifles HEIs

UPSC Syllabus: Gs Paper 2- Issues relating to development and management of Social Sector/Services relating to Education

Introduction

Higher Educational Institutions (HEIs) need regulation to ensure quality, accountability and minimum standards. However, excessive supervision can shift focus from teaching and research to compliance, documentation and accreditation. This can weaken internal integrity, discourage academic innovation and create risk-averse behaviour. The **Viksit Bharat Shiksha Adhishthan (VBSA) Bill**, 2025 seeks to restructure higher education regulation across India, making it important to balance regulatory oversight with institutional autonomy and academic freedom.

Current Status of Higher Educational Institutions in India

1. **Existing Regulatory Architecture:** The University Grants Commission (UGC), All India Council for Technical Education (AICTE), National Council for Teacher Education (NCTE) and NAAC form important parts of the existing regulatory and accreditation system.

2. **Compliance-Driven Culture:** Institutions may focus on prescribed norms, annual self-assessment reports and inspection evidence instead of improving classroom engagement, teaching and scholarship.

3. **Paper and Evidence Burden:** Digital documentation has created an **"evidence blizzard"**, where institutions collect proof for regulatory requirements rather than demonstrate actual learning.

4. **Regulatory Inconsistencies:** Different regulations, circulars and guidelines can contain inconsistencies, leading to repeated clarifications and additional administrative requirements.

5. **Academic Work as Arithmetic:** The **UGC's 2018 regulation** combines a 40-hour working week with five hours of daily campus presence, risking mechanical measurement of academic work.

6. **Surveillance and Risk Aversion:** Regulatory surveillance can create a trust deficit, making teachers and institutions avoid experimentation because conventional practices appear safer.

7. **Autonomy and Quality: Indian Institute of Science (IISc), Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs), National Institutes of Technology (NITs) and Indian Institutes of Science Education and Research (IISERs)** enjoy greater freedom in curriculum, recruitment and resource allocation.

Proposed Regulatory Reform

1. **Unified Regulatory Body:** The **Viksit Bharat Shiksha Adhishthan (VBSA) Bill, 2025** proposes replacing UGC, AICTE and NCTE with one apex body, while medicine, law and architecture remain separately regulated.

2. **Legislative Status:** The Bill was introduced in the Lok Sabha on **15 December 2025** and referred to a **31-member Joint Parliamentary Committee (JPC)** for review.

3. **NEP 2020 Alignment:** The Bill seeks to operationalise the **National Education Policy (NEP) 2020** vision of a unified higher education regulator.

4. **Three-Council Structure:** The Regulatory Council will oversee institutional entry, the Accreditation Council will independently assess quality, and the Standards Council will set minimum academic standards.

5. **Digital Approvals:** Institutions can seek online, paperless approvals based on land, funding, faculty and infrastructure conditions, reducing delays and discretionary decision-making.

6. **Graded Autonomy:** Better-performing institutions will receive greater freedom over curriculum, fees and international collaborations, although the Bill does not clearly define performance measurement.

7. **Flexible Academic Pathways:** The **National Academic Credit Bank (NACB)** will store credits for seven years, allowing certificates after one year, diplomas after two years, and degrees after three or four years.

8. **Employability and Internationalisation:** Six-month internships, industry professionals as faculty, top-500 foreign university campuses and IIT-IIM centres abroad aim to strengthen practical and global exposure.

Major Concerns

1. **Centralisation of Power:** A single apex regulator may concentrate significant authority and raise concerns about political interference without strong independence safeguards.

2. **Federalism and State Autonomy:** Education is on the **Concurrent List**, yet states may have limited influence over decisions affecting their publicly funded universities.

3. **Scale and Diversity:** One regulator would oversee about **1,100 universities and over 43,000 colleges** with different languages, funding models and regional conditions.

4. **Regulatory Overload:** Replacing several regulators with one overarching body may preserve the compliance-driven approach if inspection remains the main measure of quality.

5. **Unclear Performance Criteria:** Graded autonomy and funding depend on performance, but the Bill does not clearly establish how institutional performance will be measured.

6. **Performance-Linked Funding:** Linking **30% of government funding** to employment and research outcomes may disadvantage universities serving poorer or remote regions.

7. **Commercialisation Risk:** Foreign university profit repatriation and relaxed faculty qualification rules may encourage revenue-driven education, especially where public universities remain underfunded.

8. **Digital Inequality:** Digital-only regulation may exclude institutions and students in rural and tribal areas where reliable internet access remains limited.

Way Forward

1. **Meaningful State Participation:** The JPC should create a formal consultative mechanism that gives states real input into decisions affecting their universities.

2. **Protect Academic Freedom:** The framework should safeguard research, curriculum and faculty appointments from regulatory interference for non-academic reasons.

3. **Independent Accreditation:** Accreditation should remain separate from licensing so that quality assessment remains independent from institutional approval.

4. **Clarify Funding Arrangements:** The Bill should clearly specify how state universities will be funded during and after the regulatory transition.

5. **Build Internship Capacity:** Quality internship and apprenticeship opportunities should be developed before making the six-month requirement compulsory for all undergraduates.

6. **Strengthen Digital Infrastructure:** Digital regulation should expand alongside reliable internet access, especially in rural and tribal areas.

7. **Contextualise Performance Funding:** Funding indicators should consider socioeconomic and regional conditions so institutions serving disadvantaged students are not unfairly penalised.

8. **Increase Public Investment:** Regulatory reform should be matched with adequate public funding because regulation alone cannot revive chronically underfunded public universities.

Conclusion

Regulation should ensure quality and accountability without turning higher education into a compliance exercise. The VBSA framework must balance institutional autonomy, academic freedom, equity and cooperative federalism. Its success will depend on independent regulation, adequate public funding, State participation and context-sensitive implementation. The ultimate goal should be HEIs that promote teaching, research, innovation and knowledge creation for society.

Question for practice:

Evaluate whether the VBSA Bill, 2025 can improve the quality of higher education without undermining institutional autonomy and academic freedom.
Source: The Hindu

Disabled citizens and the future of AI

Source: The post **"Disabled citizens and the future of AI"** has been created based on **"Disabled citizens and the future of AI"** published in "**The Hindu**" on 6th October 2026.

UPSC Syllabus: GS-2-Governance

Context: Artificial Intelligence (AI) is increasingly being used in government services, recruitment and healthcare. For persons with disabilities, it can provide greater independence, but its benefits will not automatically reach them unless accessibility and disability inclusion are made integral to AI development.

Opportunities of AI for Persons with Disabilities

1. **Greater independence:** AI can help persons with disabilities perform everyday tasks without depending entirely on others. For example, AI can help a visually impaired person read documents, understand photographs and access government forms.
2. **Improved assistive technologies:** AI can improve mobility by identifying accessible routes and can support communication through **eye-tracking and voice-recognition technologies**.
3. **Better access to information and education:** Speech-to-text software, automatically generated captions, image descriptions and digital assistants can make information more accessible.
4. **Support in communication:** AI can enable communication through technologies such as sign-language avatars and other assistive tools.
5. **Support for independent living:** AI-enabled systems can address individual needs and expand the possibilities for persons with disabilities to live independently.

Major concerns

1. **Late inclusion:** Persons with disabilities are being brought into the AI conversation only after AI systems are already being developed.

2. **Poor accessibility:** Many government websites and apps remain inaccessible to disabled citizens. Although the **Rights of Persons with Disabilities Act, 2016** required accessible digital services from 2019, compliance remains an exception.
3. **Weak implementation of accessibility rules:** In the November **2024 *Rajive Raturi* judgment,** the Supreme Court held that accessibility is a facet of the fundamental right to life and dignity. It also noted that accessibility rules had remained largely toothless.
4. **Inherent AI bias:** Research involving 21 language models showed that disability-related inputs made models more error-prone, negative in tone and more likely to stereotype.
5. **Poor representation in datasets:** The CLIP image model was 15 percentage points less accurate on photographs taken by blind and low-vision users. Objects important to disabled lives, such as white canes and Braille displays, appeared up to 17 times less often in training datasets.
6. **Risk of discriminatory responses:** AI systems may give inappropriate responses when users disclose their disability.
7. **Lack of human fallback:** A survey of 2,462 users of the NClude platform found that only 543 users completed previously closed tasks through AI alone, while others needed staff assistance.
8. **Energy and infrastructure concerns:** India's growing data-centre capacity will increase electricity and grid requirements. Power cuts can seriously affect persons dependent on powered wheelchairs, oxygen machines and other essential equipment.

Way Forward

1. **Every government AI system should be tested for disability bias.**
2. **Training datasets should contain genuine disability representation and should be gathered with consent.**
3. **AI systems should have human fallback mechanisms** so that users are not left helpless when technology fails.
4. **Government websites and apps must be made accessible** instead of treating accessibility as an exception.
5. **Data centres should adopt renewable energy and consider their impact on electricity grids and heat.**
6. **Persons with disabilities must have a voice** in deciding the future of AI, including the data used to train models and the infrastructure supporting them.

Conclusion: AI should **empower persons with disabilities rather than make them surrender existing tools in the name of technological progress**. Their participation, genuine representation in datasets, accessible digital services and protection from disability bias are essential for an inclusive AI future.

Question: Artificial Intelligence has the potential to empower persons with disabilities, but its present development may also create new forms of exclusion. Discuss.

Source: The Hindu

Why is Buxa bringing tigers back?

Source: The post **"Why is Buxa bringing tigers back?"** has been created based on **"Why is Buxa bringing tigers back?"** published in "**The Hindu**" on 6th October 2026.

UPSC Syllabus: GS-3-Environment

Context: Tiger reintroduction is an important conservation strategy for restoring **ecologically viable and self-sustaining tiger populations** in suitable habitats. Buxa Tiger Reserve in West Bengal has been selected for such an initiative because of its suitable habitat, strategic location and connectivity with important tiger landscapes.

About Buxa Tiger Reserve

1. Buxa Tiger Reserve is situated in the **Jalpaiguri District, West Bengal.**
2. It is **located at the confluence of three major bio-geographic zones:** The lower Gangetic plains, Central Himalayas and the Brahmaputra valley.
3. It has corridor connectivity **across the border with the forests of Bhutan in the North, on the East it has linkages with the Kochugaon forests, Manas Tiger Reserve and on the West with the Jaldapara National Park.**
    a. Important corridors are **Buxa-Chilapata Corridor, Buxa-Titi Corridor and Buxa-Ripu Corridor.**
4. It was declared a tiger reserve in **1983** and is the **15th tiger reserve of India**.
5. It covers about **760.87 sq. km** and is connected with the **forests of Bhutan, Manas Tiger Reserve and Jaldapara National Park**.
6. It is **crossed by major rivers like the Sankosh, Raidak, Jayanti, and Dima.**
7. It is covered mainly by **moist tropical forests.**

Reason behind selecting Buxa Tiger reserve for Tiger reintroduction

1. Buxa Tiger Reserve historically supported tigers, but their population declined due to **habitat degradation, fragmentation, changes in land use and reduced prey availability**.
2. The reserve **forms an important part of the larger landscape** connecting **tiger habitats across the India-Bhutan region.**
3. A recent assessment found that there were **no resident tigers in Buxa**, making reintroduction necessary for restoring the population.

Process of Reintroducing Tig

1. A **three-year-old tigress, T138**, was released from **Valmiki Tiger Reserve in Bihar** into Buxa.
2. Initially, the tiger will be kept in an enclosure for about **2–3 months** to acclimatise to the new environment.
3. It will subsequently be released into the wider reserve.
4. **Radio/telemetry monitoring, camera traps and field-based monitoring** will be used to track movement, adaptation and behaviour.
    a. Further releases are planned to establish a **breeding population**.
5. Valmiki Tiger Reserve was considered suitable for bringing the tigress because it shares similarities with Buxa in terms of **habitat and terrain**.
6. However, the experience also highlights that translocation must consider ecological compatibility, as an earlier attempt to move a tiger from the **Sundarbans to Buxa** was unsuccessful.

Experience of tiger reintroduction in India

1. Tiger reintroduction has been attempted in several Indian reserves.

   a. **Sariska and Panna** are important examples **where reintroduction programmes have helped restore tiger populations.**
   b. These programmes involved cooperation between the **National Tiger Conservation Authority (NTCA), State Governments and Wildlife Institute of India (WII)**.
2. However, success has not been uniform, and some translocations have faced difficulties in adaptation and survival.

Major challenges

1. **Human settlements:** Several villages and human habitations occur within and around the reserve.
2. **Human-wildlife conflict:** The movement of tigers into human-dominated areas could increase conflict.
3. **Infrastructure:** Railways and roads passing through or near the landscape can fragment habitats and increase risks to wildlife.
4. **Commercial traffic:** Heavy traffic on roads connecting Bhutan and West Bengal poses an additional threat.
5. **Prey availability:** A sufficient prey base is essential for sustaining a tiger population.
6. **Habitat degradation:** Fragmentation and changes in land use can reduce the quality of the tiger habitat.
7. **Adaptation of translocated animals:** Tigers may face difficulties in adapting to a new environment, as demonstrated by unsuccessful translocation experiences.

Way Forward

1. **Scientific site assessment:** Before further releases, habitat quality, prey availability and carrying capacity should be assessed scientifically.
2. **Phased reintroduction:** Tigers should be released gradually, with adequate acclimatisation and post-release monitoring.
3. **Strengthen monitoring: Camera traps, telemetry and field surveillance** should be used continuously to track movement, survival and breeding.
4. **Improve prey base:** Habitat restoration and protection of prey species should receive priority.
5. **Reduce human-wildlife conflict:** Villages around the reserve should be involved through awareness, early-warning systems and timely compensation.
6. **Manage infrastructure:** Wildlife-friendly measures such as **animal passages and regulated traffic** should be adopted in vulnerable areas.
7. **Landscape-level conservation:** Cooperation with **Bhutan and neighbouring protected areas** should be strengthened to maintain wildlife corridors.
8. **Adaptive management:** The NTCA, WII and State authorities should regularly evaluate the programme and modify the strategy based on field evidence.

Conclusion: The reintroduction of tigers in Buxa can restore an important **tiger population and strengthen the India-Bhutan conservation landscape**. However, its success will depend not merely on releasing tigers but on ensuring **adequate habitat, prey availability, scientific monitoring, community participation and effective management of human-wildlife conflict**.

Question: What is the significance of tiger reintroduction and translocation as a wildlife conservation strategy in India? Discuss the major challenges associated with such programmes and suggest suitable measures for their effective implementation.

Source: The Hindu

The Looming Crisis of World Unemployment

UPSC Syllabus: Gs Paper3 - Indian Economy and issues relating to planning, mobilisation, of resources, growth, development and employment.

Introduction

The world is approaching a major employment challenge as developing countries add a large number of young workers while job creation remains insufficient. Over the coming decade, the gap between new labour-market entrants and available jobs could weaken the demographic dividend, increase social pressures and deepen migration. India faces this challenge directly because its large young workforce needs enough productive, labour-absorbing employment opportunities.

Current Situation: The Growing Global Employment Gap

1. **Massive job deficit:** Over the coming decade, **1.2 billion young people** in the Global South will reach working age, against only **400 million projected jobs**.
2. **800 million opportunity gap:** The resulting **800 million shortfall** could turn the world's largest potential demographic advantage into a major source of economic and social instability.
3. **Failure of the traditional model:** The demographic dividend once supported higher productivity, savings and capital formation, as seen in the **East Asian economic miracle**.
4. **Weak labour absorption:** Developing economies are struggling because domestic markets, infrastructure and institutions cannot absorb new workers as quickly as populations are expanding.
5. **Stalling economic mobility:** Traditional pathways from low-income agriculture to productive urban employment are weakening, making it harder for young workers to move into better-paid activities.
6. **Narrow demographic window:** The employment opportunity is temporary, making timely job creation essential before the working-age advantage begins to weaken in many countries.

Causes: Why Is Job Creation Falling Behind?

1. **Premature deindustrialisation:** Automation, robotics and advanced industrial software are reducing manufacturing jobs before developing countries reach the industrial income levels of earlier economies.
2. **Loss of manufacturing's traditional role:** Light manufacturing once absorbed large numbers of unskilled and semi-skilled workers, but its ability to provide this employment bridge has weakened.
3. **Changing skill demand:** The global economy increasingly rewards **high-skilled, technology-driven labour**, while many young people lack quality vocational training, tertiary education and digital infrastructure.
4. **Weak private-sector environment:** High capital costs, unstable regulations and taxation problems restrict entrepreneurs from starting, expanding and hiring through small and medium-sized enterprises.

5. **Limited long-term investment:** Complex legal systems and weak property rights discourage long-term foreign investment and push capital towards speculative rather than employment-generating activities.

6. **Infrastructure constraints:** Power failures, poor roads and port congestion raise business costs, limiting the ability of small firms to compete in domestic and global markets.

India's Employment Challenge

1. **Large working-age population:** India adds millions of young people to its workforce each year and has a **median age below 30**, creating a major but time-bound opportunity.

2. **Growth without enough jobs:** India has struggled to match its economic growth with sufficient employment creation, making job generation central to its demographic transition.

3. **Skill-market mismatch:** India must better connect workforce skills with market needs, as skill mismatch remains an immediate employment challenge.

4. **Persistent underemployment:** A large workforce does not automatically ensure productive livelihoods, making labour-absorbing value creation necessary during the shrinking demographic window.

5. **Low female participation:** Low female labour-force participation limits the effective use of India's growing human-resource potential.

6. **Agriculture's employment burden:** Agriculture still absorbs **nearly half the population** while contributing only **16% of GDP in FY24**, showing the need for more productive employment opportunities.

Consequences: From Demographic Dividend to Demographic Crisis

1. **Youth frustration and distrust:** Prolonged exclusion from productive economic life can weaken trust in governments and increase frustration among young people.

2. **Social and political instability:** Unemployment can fuel **social polarisation, criminal activity, extremist ideologies and civil unrest**, threatening social stability.

3. **Rising migration pressure:** Lack of livelihoods in the Global South can increase forced migration towards the Global North and intensify political tensions.

4. **Wider global tensions:** Employment failure in developing countries can create cross-border pressures, making domestic job creation an increasingly important global stability issue.

5. **Lost demographic opportunity:** Without productive employment, large young populations may become a source of instability instead of generating productivity, savings and development.

Way Forward

1. **Private-sector-led job creation:** Governments should unlock private capital and create conditions where **small and medium-sized enterprises** can start, expand and generate employment.

2. **Institutional and regulatory reform:** Simpler regulations, transparent governance and stronger institutional integrity can reduce barriers that restrict enterprise and investment.

3. **Better infrastructure:** Modern physical and digital infrastructure can create jobs during construction while reducing business costs and improving participation in supply chains.

4. **Agriculture and rural value chains:** High-value farming, agri-tech, cold chains, food processing and climate-resilient agriculture can create remunerative rural employment and reduce distress migration.

5. **Health and care economy:** Expanding healthcare, nursing, community health and elder care can create non-outsourceable jobs, especially for young women, while strengthening human capital.

6. **Tourism and cultural economy:** Sustainable tourism can generate decentralised employment for transport providers, hospitality workers and artisans because it remains labour-intensive.

7. **Green and modern manufacturing:** Solar components, electric two-wheelers, energy-efficient materials, light assembly and decentralised production can absorb labour when combined with agile skill-building.

8. **International cooperation:** Developed economies and multilateral institutions should provide affordable long-term finance and technology transfers, while developing countries pursue institutional reforms.

Conclusion

A young population becomes a demographic dividend only when economies create enough productive jobs. The global response must combine private investment, skills, infrastructure, institutional reform and labour-intensive sectors. For India, timely action is essential to use its shrinking demographic window, expand productive employment and prevent demographic potential from becoming a source of persistent unemployment and instability.

Question for practice:

Examine the emerging global employment crisis, its causes and consequences, with special reference to India, and suggest measures to harness the demographic dividend.
Source: The Hindu

Legislative Privileges Vs Free Speech

UPSC Syllabus: Gs Paper 2- Constitution of India

Introduction

Legislative privileges are special powers and immunities given to Parliament and State Legislatures to ensure their independent functioning. The constitutional issue arises when these privileges are used against **citizens, journalists or critics**, potentially affecting their fundamental rights, especially **freedom of speech under Article 19(1)(a)**. On **6 October 2026**, the Supreme Court closed the long-pending seven-judge reference after the 2003 Tamil Nadu Assembly resolution was withdrawn. The larger constitutional questions therefore remain open for future consideration.

What are Legislative Privileges?

1. **Purpose of privileges:** Legislative privileges protect the **free and independent functioning of legislatures** by preventing external obstruction during their proceedings.
2. **Constitutional basis: Articles 105 and 194** provide privileges and immunities to Parliament and State Legislatures respectively, including protections necessary for legislative functioning.
3. **Privileges against non-members:** These powers can be exercised against **non-members**, including citizens, journalists and others, when their actions are treated as breaches of legislative privilege.
4. **State-specific framework:** Under **Article 194(3)**, a State Legislature can define its privileges through law; otherwise, the constitutional provision determines their applicable scope.

Why is there a Conflict with Free Speech?

1. **Freedom of speech: Article 19(1)(a)** protects freedom of speech and expression, including the press's ability to report and comment on legislative affairs.
2. **Personal liberty: Article 21** becomes important when legislative privilege results in the **arrest or imprisonment of citizens**, as such action directly affects personal liberty.
3. **Equality and fairness: Article 14** requires legislative action affecting individuals to satisfy constitutional standards of **fairness and non-arbitrariness**.
4. **Competing constitutional interests:** The central issue is whether privileges under **Articles 105 and 194** can override fundamental rights when exercised against speech outside the House.
5. **Purpose versus misuse:** Petitioners argue that privileges should protect **legislative functioning**, not protect governments, political parties or individual legislators from legitimate public scrutiny.

How did the Issue Arise? — 2003 Tamil Nadu Case

1. **Triggering dispute:** In 2003, *The Hindu* published reports on Tamil Nadu Assembly proceedings and an editorial criticising the functioning of the government led by **J. Jayalalithaa**.
2. **Privilege proceedings:** The Tamil Nadu Assembly treated the publications as **breach of privilege and contempt of the House**, leading to action against senior journalists.
3. **Imprisonment order:** Five journalists of *The Hindu* and the editor of *Murasoli* were sentenced to **15 days' imprisonment**, with arrest warrants issued against them.

4. **Supreme Court intervention:** The journalists approached the Supreme Court, which **stayed their arrest** and found that the matter raised wider constitutional questions requiring consideration by a larger Bench.

5. **Long constitutional dispute:** The case eventually raised the broader question of how far legislative privilege can operate when it conflicts with **fundamental rights of citizens outside the House**.

Why did the Supreme Court Need to Examine it?

1. **Searchlight Case, 1959:** In *M.S.M. Sharma v. Sri Krishna Sinha*, the Court held that legislative privilege could prevail over Article 19(1)(a) in matters concerning publication of legislative proceedings.

2. **Special Reference, 1964:** The Court later held that fundamental rights do **not automatically yield** to legislative privileges and recognised judicial examination of detention arising from privilege proceedings.

3. **Judicial review:** The 1964 decision also indicated that legislatures could not proceed against judges and lawyers merely for performing their **constitutional and professional duties**.

4. **Conflicting principles:** These judgments created uncertainty over whether legislative privileges enjoy priority over fundamental rights or remain subject to **constitutional limitations and judicial scrutiny**.

5. **Need for authoritative ruling:** The issue was therefore referred to larger Benches and eventually a **seven-judge Constitution Bench** for an authoritative interpretation.

Evolving Judicial Approach and Present Legal Position

1. **Functional approach:** In **Sita Soren (2024)**, the Supreme Court held that legislative privileges must have a **functional relationship with the legitimate duties of the House**, rather than operate as personal immunities.

2. **Limits on immunity:** The Court held that parliamentary immunity cannot protect **bribery**, because accepting a bribe is separate from legitimate legislative functioning.

3. **Relevance to free speech:** This functional approach supports the argument that legislative privilege cannot automatically become an **absolute shield against journalists, citizens or public critics**.

4. **Withdrawal of the 2003 resolution:** The Tamil Nadu Assembly had **withdrawn its 7 November 2003 resolution on 30 July 2004.** This subsequent development was not specifically brought to the Supreme Court's notice when the matter was referred to the seven-judge Bench.

5. **Why the reference was closed:** When the matter came up on **6 October 2026**, the Court noted that the resolution forming the basis of the case had already been withdrawn. Since the **original cause of action no longer survived**, the Court closed the reference as **infructuous**.

6. **What remains unresolved:** The Supreme Court did **not decide the larger questions of law** concerning legislative privileges and fundamental rights, and kept them open for consideration in an appropriate future case.

Why Does the Issue Matter?

1. **Press freedom:** Excessive use of privilege against journalists can affect **independent reporting** and create fear around criticism of legislative functioning.
2. **Legislative accountability:** Legislatures perform public functions, so their proceedings and decisions remain important subjects of **public discussion and scrutiny**.
3. **Protection of citizens:** When privilege proceedings can result in arrest or imprisonment, clear constitutional safeguards are necessary to protect **personal liberty and fairness**.
4. **Balance of powers:** The issue requires a balance between **legislative autonomy and judicial review**, without allowing either institution to undermine the constitutional role of the other.
5. **Democratic functioning:** A clear legal framework can ensure that legislative privileges protect genuine legislative work while preserving **fundamental rights and democratic accountability**.

Conclusion

Legislative privileges are necessary to protect **independent legislative functioning**, but they should not become an unrestricted power against legitimate criticism. The **functional approach** provides a basis for balancing legislative autonomy with fundamental rights. A future constitutional ruling should clearly define when privilege can operate against citizens, while protecting **free speech, press freedom, personal liberty and legislative accountability**.

Question for practice:

Discuss the constitutional conflict between legislative privileges and the fundamental right to freedom of speech and expression.

Source: Indian Express; The Print

Rewilding the Great Indian Bustard: Key Challenges

Source: The post **"Rewilding the Great Indian Bustard: Key Challenges"** has been created based on **"Rewilding the Great Indian Bustard: Key Challenges"** published in "**Indian Express**" on 7th October 2026.

UPSC Syllabus: GS-3- Environment

Context: October 4 was a major milestone in the conservation of the critically endangered Great Indian Bustard (GIB), as two captive-bred male birds were released into the wild for the first time in Rajasthan's Desert National Park near Jaisalmer.

About Great Indian Bustard (GIB)

1. The Great Indian Bustard (GIB) is a **critically endangered, large ground-dwelling bird** found in savannahs, grasslands and deserts.

2. It is **endemic to the Indian subcontinent.**
3. It is found in **Rajasthan (Desert National park), Gujarat, Madhya Pradesh, Karnataka, and Andhra Pradesh** in India and parts of Pakistan.
4. Its population has declined from an estimated **1,260–1,400 in the early 1970s to around 150 today**, making its conservation an urgent priority.

Significance of the Rewilding Initiative

1. **First captive-to-wild release:** On October 4, 2026, two captive-bred male GIBs were released into the wild in Rajasthan's **Desert National Park (DNP)**, marking the first pilot rewilding effort.
2. **Part of Project GIB:** The initiative is being undertaken by the **Centre, Wildlife Institute of India, and the governments of Rajasthan and Gujarat** as part of long-term conservation efforts.
3. **Conservation breeding:** Since 2019, wild GIB eggs have been collected, artificially incubated and hand-reared at centres in Rajasthan. These efforts have resulted in the birth of **98 birds so far**.
4. **Scientific rewilding:** Rewilding aviaries and soft-release facilities have been developed to allow young birds to adapt to natural conditions and reduce human imprinting.
5. **Technology-based monitoring:** The released birds have been fitted with transmitters that provide information on their **location and movement patterns**, allowing scientists to monitor their adaptation and survival.
6. **Scope for replication:** If successful, the Rajasthan experiment can provide valuable lessons for similar conservation efforts in other range states such as **Gujarat, Maharashtra, Madhya Pradesh, Karnataka and Andhra Pradesh**.

Challenges to Long-term Recovery

1. **Habitat loss:** Conversion of open grasslands into croplands, mining areas and other land uses has considerably reduced suitable GIB habitats.
2. **Power-line collisions:** GIBs have poor frontal vision and heavy bodies, making it difficult for them to detect and avoid power lines. Collisions with renewable-energy infrastructure have therefore become a major threat.
3. **Weak protection of grasslands:** Unlike forests, grasslands are often not perceived as important protected ecosystems and remain vulnerable to degradation and conversion.
4. **Unsuitable afforestation:** Planting trees in natural grasslands can alter the open habitat required by GIBs. Experts have also warned against treating grasslands as degraded land that needs to be converted into forests.
5. **Mining pressure:** Limestone mining threatens the open and flat landscapes essential for GIBs. Proposed mining operations in the northern part of DNP are a concern.
6. **Livelihood concerns:** Grassland degradation and conservation measures also affect **pastoralists and livestock-rearing communities**, making community participation important.
7. **Need for power-line mitigation:** The Supreme Court has identified **14,013 sq km in Rajasthan and 740 sq km in Gujarat as GIB priority areas** and ordered **80 km of power lines in Rajasthan to be buried underground by 2027–28**. Delays in implementing these measures could undermine rewilding efforts.
8. **Small and fragmented population:** With only around **150 GIBs remaining in the wild**, the populations outside Rajasthan, including those in Gujarat, Maharashtra, Karnataka, Telangana and Andhra Pradesh, face the risk of local extinction.

Way Forward

1. **Protect and restore grasslands** by preventing their conversion into croplands, mining areas and other incompatible land uses.
2. **Complete power-line mitigation measures** by undergrounding identified lines and developing designated power-line corridors.
3. **Expand scientific rewilding** after carefully evaluating the survival and adaptation of the birds released in Rajasthan.
4. **Improve habitats in other range states** before undertaking similar reintroduction programmes in Gujarat, Maharashtra, Madhya Pradesh, Karnataka and Andhra Pradesh.
5. **Avoid inappropriate afforestation** in natural grasslands and recognise grasslands as valuable ecosystems in their own right.
6. **Regulate mining activities** in critical GIB habitats to maintain the open landscapes required by the species.
7. **Strengthen scientific monitoring** through transmitters and regular tracking of released birds to assess their movement, survival and adaptation.
8. **Involve local communities and pastoralists** in grassland conservation so that ecological protection is balanced with livelihood requirements.
9. **Adopt a landscape-level conservation approach** by protecting the bird, its habitat and the ecological conditions necessary for its long-term survival.

Conclusion: The release of captive-bred Great Indian Bustards is a **significant first step in rewilding the species**, but captive breeding alone cannot ensure its recovery. The success of the programme will ultimately depend on **protecting and restoring grasslands, reducing power-line collisions, regulating mining and involving local communities**. Therefore, rewilding must be integrated with **long-term habitat and ecosystem conservation** to secure the future of the Great Indian Bustard.

Question: The rewilding of the Great Indian Bustard (GIB) marks an important step towards conserving India's critically endangered grassland bird. Discuss the significance of this initiative and examine the major challenges in its long-term recovery.

Source: Indian Express

Break the chain: On leprosy in India

Source: The post **"Break the chain: On leprosy in India"** has been created based on **"Break the chain: On leprosy in India"** published in "**The Hindu**" on 7th October 2026.

UPSC Syllabus: GS-2-Governance

Context: India brought the prevalence of leprosy below **1 case per 10,000 population by 2005**, after which the WHO declared it eliminated as a public health problem. However, continued transmission, childhood cases and disability show that elimination at the national level has not meant complete interruption of transmission.

About Leprosy

1. Leprosy is a **chronic neuro-muscular disorder.**
2. It is also known as **Hansen's disease.**
3. It is **caused by several strains of Mycobacterium leprae.**
4. It primarily **affects the skin and peripheral nerves** (the nerves outside the brain and spinal cord).

5. It has a **long incubation period** which **makes detection difficult.**
6. It **can be cured with Multi-Drug Therapy(MDT).**

Present Status

1. The prevalence of leprosy among **adults and children and the Grade-2 Disability (G2D) rate have declined** over the last decade, but transmission continues in several pockets.
2. India accounted for around **46% of all leprosy cases reported among children globally in 2025**, making childhood transmission a major concern.
3. Only **148 districts** have achieved 'interruption of transmission', against the projected **300 districts**.
4. The disease burden is unevenly distributed, with **Chhattisgarh, Jharkhand, Odisha and Maharashtra** accounting for disproportionate shares.
5. In 2025–26, more than **70 crore people were screened** in highly endemic areas. Around **24,367 cases** were detected through this exercise, while ASHA workers identified nearly **40 lakh suspected cases** and **48,027 cases were confirmed**.
6. Single-dose **rifampicin post-exposure prophylaxis** was administered to **91.1% of the 16.9 lakh eligible contacts**.
7. Despite these efforts, the 2025–26 report showed that overall incidence was **41% above projections**, childhood incidence was **91.6% above projections**, and the G2D rate was **34% above projections**.

Reasons for Persistent Transmission

1. **Complacency after elimination:** After WHO recognised **India as having eliminated leprosy as a public health problem in 2005,** surveillance was integrated into the general health system, weakening focused leprosy surveillance.
2. **Prevalence masking transmission:** Multi-drug treatment shortened the period for which patients remained officially registered. Consequently, prevalence declined even while transmission continued.
3. **Delayed diagnosis:** Stigma surrounding leprosy discourages people from seeking timely medical care, resulting in nerve damage and disability before treatment.
4. **Misdiagnosis:** Many healthcare practitioners are unfamiliar with leprosy pathology and may incorrectly treat it as an ordinary skin condition.
5. **Persistent stigma:** Social stigma contributes to concealment of disease and delays in diagnosis, thereby allowing transmission to continue.
6. **Geographical concentration:** Endemic pockets, particularly in certain States and districts, continue to sustain transmission.
7. **Inadequate focus on interruption of transmission:** A reduction in prevalence alone can give a misleading picture of progress if new infections continue to emerge.

Government Initiatives and Progress

1. **Door-to-door screening:** Rising disability in the early 2010s prompted intensified household-level screening.
2. **Post-exposure prophylaxis:** Single-dose rifampicin was administered to **91.1% of the 16.9 lakh people** identified as likely contacts in 2025–26.
3. **ASHA-based surveillance:** ASHA workers identified nearly **40 lakh suspected cases**, strengthening community-level detection.
4. **Digital surveillance:** The government has operationalised digital systems for better tracking and surveillance.

5. **Possible use of MIP vaccine:** The government is considering the use of the **MIP vaccine** to accelerate pathogen clearance in highly infectious patients.
6. **National Strategic Plan:** The **National Strategic Plan (NSP) and Roadmap for Leprosy 2023–2027** appropriately focuses on interrupting transmission, in line with the WHO approach.

Way Forward

1. **Prioritise interruption of transmission:** The government should treat interruption of transmission as the primary objective, rather than relying mainly on declining prevalence.
2. **Strengthen surveillance:** Dedicated surveillance should be strengthened in highly endemic districts and vulnerable communities.
3. **Ensure early diagnosis:** Door-to-door screening and active case detection should be intensified in areas where late diagnosis and transmission remain high.
4. **Focus on children:** Since childhood cases indicate recent transmission, children should receive special attention through systematic screening and contact tracing.
5. **Strengthen contact management:** Post-exposure prophylaxis and systematic monitoring of contacts should be expanded to prevent new infections.
6. **Improve healthcare capacity:** Medical practitioners and frontline health workers should be trained to recognise the clinical manifestations of leprosy and distinguish it from common skin conditions.
7. **Combat stigma:** Public awareness campaigns should emphasise that leprosy is **curable** and that early treatment can prevent disability, thereby encouraging people to seek care.
8. **Target high-burden areas:** Resources should be concentrated in States and social settings where transmission and late diagnosis remain persistent.
9. **Maintain ambitious targets:** The government should not dilute detection efforts or revise elimination targets merely to improve reported indicators. Instead, investments should be increased to meet the existing **2026–27 projections**.
10. **Use data-driven surveillance:** Digital surveillance should be used to identify transmission hotspots, monitor contacts and assess progress at the district level.

Conclusion: India's achievement of **elimination as a public health problem in 2005 was an important milestone, but it did not mean that transmission had stopped**. The reported overshooting of projections in 2025–26 **— overall incidence by 41%, childhood incidence by 91.6% and Grade-2 disability by 34% —** shows the need for renewed action. India must therefore **"break the chain" of transmission through early detection, contact management, stronger surveillance, better clinical capacity and reduction of stigma**, with interruption of transmission as the central goal of its leprosy strategy.

Question: Despite India achieving elimination of leprosy as a public health problem in 2005, its continued transmission remains a concern. Discuss the reasons for persistent transmission of leprosy in India and suggest measures to achieve the targets under the National Strategic Plan and Roadmap for Leprosy 2023–2027.

Source: The Hindu

The China-U.S. Rapprochement

UPSC Syllabus: Gs Paper 2- International Relations

Introduction

The **U.S. and China have intensified high-level engagement in 2026**, reflecting a shift towards managing tensions after years of strategic rivalry. Their engagement covers trade, technology, economic relations and wider geopolitical concerns. However, this rapprochement does not end competition over **global influence, advanced technology, military power and the future international order**. The key issue is whether rivalry can be managed without causing wider instability.

Current Status of the China-U.S. Rapprochement

1. **2026 summit diplomacy: Beijing (May) and Washington (September)** marked intensified leader-level engagement, while **Shenzhen (November) and Miami (December)** were planned as further meetings.
2. **Managed strategic competition:** The two powers are moving towards mechanisms that can manage competition within agreed limits without ending their broader strategic rivalry.
3. **Economic dialogue:** The **Bessent-He channel has held eight meetings**, roughly once every two months, creating a regular mechanism for managing economic tensions.
4. **Trade-war de-escalation:** After both sides imposed **125% tariffs in April 2025**, they stepped back from a wider trade war to protect their economic interests.
5. **Fragile tariff truce:** The **Busan Tariff Truce** remains temporary, with its original 12-month period extended by only two months, leaving trade tensions unresolved.
6. **Technology restrictions:** The U.S. continues to restrict China's access to **advanced technologies, including advanced chips**, where China remains several years behind the U.S.
7. **Restrictive investment regime:** Bilateral foreign investment rules remain **deeply restrictive on both sides**, showing that economic engagement remains limited despite improved political dialogue.

Drivers Behind the Rapprochement

1. **China's economic weakness:** Weak consumption, a **six-year residential construction recession** and stagnant private investment have increased Beijing's dependence on public investment and net exports.
2. **Need for domestic stability:** With Xi Jinping seeking a record **fourth term in 2027**, China wants a stable external environment to reduce pressure on its domestic economy.
3. **Risk of renewed trade war:** Beijing wants to prevent another major U.S. trade offensive because exports remain an important support for its economic growth.
4. **U.S. economic interests:** Washington also faces costs from prolonged trade conflict, economic decoupling and disruption of global supply chains, creating incentives for limited cooperation.

5. **Shared interest in stability:** Both powers recognise that uncontrolled rivalry can produce wider economic and geopolitical disruptions, making managed competition preferable to open confrontation.

6. **Changing strategic balance:** China sees itself as a **near-peer** after resisting U.S. pressure, while Washington increasingly recognises that China cannot simply be contained through sustained confrontation.

Significance for the Global Order

1. **Potential G2 framework:** Greater U.S.-China coordination could increasingly shape **global geopolitics, geoeconomics and technology**, giving the two powers greater influence over international outcomes.

2. **Possibility of stability:** Better management of rivalry could reduce the risks of trade wars, military escalation and wider disruption in the international system.

3. **Limits on decoupling:** Continued economic engagement may prevent the high costs associated with complete separation of the two major economies.

4. **Technology as strategic competition:** Artificial intelligence and advanced chips remain central to the rivalry, with both sides treating technological leadership as a source of global power.

5. **Global South dilemma:** Countries outside the two major powers may face pressure to navigate between competing U.S.- and China-led economic and technological systems.

6. **Risk of great-power dominance:** A strong bilateral understanding could allow the two powers to protect their interests while reducing the strategic space available to third countries.

Implications for India

1. **Reduced U.S. dependence on India:** If Washington manages a temporary accommodation with Beijing, India may become less central to the U.S. strategy of balancing China.

2. **Changing Indo-Pacific priorities:** Greater U.S. attention to the Philippines and other regional partners could reduce India's relative importance within Washington's Asian strategy.

3. **Pressure on India's strategic space:** A U.S.-China accommodation could reduce India's room to shape the Indo-Pacific independently, as both major powers may prioritise their own bilateral interests.

4. **Limits on Indian ambitions:** U.S. positions on India's regional role and growth indicate that Washington may not support unlimited expansion of Indian strategic influence.

5. **Persistent Chinese challenge:** China continues to challenge India through territorial disputes, economic dependence, regional ambitions and its close relationship with Pakistan.

6. **Trade vulnerability:** India's trade deficit with China has reached **$100 billion**, showing the economic dependence that can reduce India's strategic flexibility.

7. **Need for geopolitical insurance:** These Chinese pressures make India's Indo-Pacific partnerships important for protecting its interests and maintaining strategic options.

Challenges to India's Strategic Autonomy

1. **Risk of asymmetric dependence:** Excessive reliance on Washington could turn India into a junior partner instead of allowing it to act as an independent strategic power.
2. **Economic concessions:** India's proposed commitment to purchase **$500 billion of American goods** raises concerns about whether economic policy is sufficiently aligned with national interests.
3. **Technology dependence:** Restructuring India's AI and digital infrastructure around a U.S.-led technology stack could create new forms of strategic dependence.
4. **Domestic capability gaps:** Weaknesses in advanced industries, innovation, manufacturing and strategic sectors limit India's ability to negotiate with major powers on equal terms.
5. **Policy and institutional weaknesses:** Poor handling of global finance, trade and supply-chain disruptions, along with weakened institutions, can reduce India's strategic effectiveness.
6. **Risk of semi-peripheral status:** Without stronger economic and technological capabilities, India may remain a major market and partner rather than becoming a power capable of shaping global rules.

Way Forward for India

1. **Build industrial strength:** India should develop a durable industrial base and advanced strategic sectors to reduce external dependence and strengthen its bargaining power.
2. **Recalibrate economic policy:** Trade, investment and industrial policies should be treated as instruments of **statecraft**, linking economic strength with strategic autonomy.
3. **Diversify partnerships:** India should deepen bilateral relationships across major and middle powers instead of depending excessively on either Washington or Beijing.
4. **Strengthen governance:** Better governance, stronger institutions and greater policy coherence are necessary to convert India's economic potential into global influence.
5. **Promote technological capability:** India needs stronger domestic innovation and advanced technology capacity to compete effectively in strategic sectors such as AI and digital infrastructure.
6. **Develop strategic agency:** India should move beyond balancing major powers and build enough national capability to **shape the emerging global order independently**.

Conclusion

The China-U.S. rapprochement marks a shift towards **managed strategic competition rather than a stable G2 partnership**. Economic and geopolitical pressures encourage both powers to limit escalation, but their core rivalry remains. India therefore needs **stronger domestic capabilities, diversified partnerships and strategic autonomy** to protect its interests and shape the emerging global order.

Question for practice:

Discuss the emerging China-U.S. rapprochement and its implications for the global order and India's strategic autonomy.

Source: The Hindu; **Indian Express**

Indian Research Can Shape the World

UPSC Syllabus: Gs Paper 3- Science and Technology

Introduction

India has often depended on technologies developed elsewhere, leading to delayed entry, foreign licences and dependence on external know-how. However, the growing integration of **fundamental science and technology** has shortened the path from discovery to application. This creates an opportunity for India to move beyond catching up and shape emerging technologies. A strong research ecosystem, therefore, can help India convert its scientific talent into **global technological leadership, economic strength and self-reliance**.

Changing Science–Technology Landscape: From Discovery to Innovation

1. **From separation to integration:** Science and technology were once largely separate, but fundamental research and practical applications now increasingly develop together.
2. **Shorter research-to-technology cycle:** The gap between scientific discovery and technological application has shortened, making **fundamental research a direct source of innovation**.
3. **CRISPR as an example:** Research on bacterial defence mechanisms led to **CRISPR within a few years**, showing how basic research can produce transformative technologies.
4. **First-mover opportunity:** India must invest in fundamental research to create the **next technological wave**, rather than repeatedly adopting technologies developed elsewhere.

India's Emerging Research and Innovation Ecosystem

1. **Growing innovation performance:** India has recorded **five consecutive years of double-digit growth in innovation indicators**, while research output increased by **7.6%**, showing stronger domestic research momentum.

2. **Improving global position:** India improved its Global Innovation Index ranking from **40th in 2023 to 38th in 2025** and ranks first among lower-middle-income economies and Central and South Asia.

3. **NEP 2020 focus:** National Education Policy (NEP) 2020 places **research, inquiry-based learning, critical thinking and innovation** at the centre of educational reform to build future research capacity.

4. **Interdisciplinary research:** NEP seeks to reduce rigid disciplinary boundaries and promote problem-based learning across **STEM (Science, Technology, Engineering and Mathematics), social sciences and humanities**, strengthening wider innovation capabilities.

5. **ANRF institutional support:** The **Anusandhan National Research Foundation (ANRF)** aims to bridge funding gaps, build research capacity and promote collaboration among academia, industry and government.

6. **Research funding initiatives:** ANRF received **₹966 crore in revised estimates for 2024–25** and supports programmes covering early-career researchers, partnerships, inclusivity and distinguished researchers.

Research Deficit: Persistent Gaps in India's Innovation Ecosystem

1. **Low R&D intensity: Gross Expenditure on Research and Development (GERD) more than doubled between 2010–11 and 2020–21**, but remained only **0.6–0.8% of GDP**, below the global average.

2. **Weak performance against peers:** India still trails **China, South Korea and Singapore** in infrastructure, human capital, research and business sophistication despite strong potential in knowledge creation.

3. **Uneven innovation pillars:** Infrastructure improved from **84th in 2023 to 61st in 2025**, but human capital and research fell from **48th to 54th**, showing uneven progress.

4. **Weak market ecosystem:** Market sophistication declined from **20th in 2023 to 38th in 2025**, indicating weaknesses in credit, investment, trade and market diversification needed for innovation.

5. **Institutional constraints:** India's institutional ranking declined from **54th in 2024 to 58th in 2025**, reflecting continuing problems in the regulatory and policy environment.

6. **Limited research impact:** Publications have increased, but many are in **lower-impact journals**, while patent filings remain modest, limiting research visibility and application.

7. **Concentration and regional inequality:** The top **19 IITs and IISc** account for **28.70% of publications and 30.84% of citations**, while several eastern and northeastern states continue to record low R&D investment.

8. **Weak industry–academia linkage:** Private-sector R&D was only about **36% of total R&D spending in 2020–21**, while dependence on imported technologies weakens domestic R&D and technology commercialisation.

From Research to Global Impact: Four Strategic Priorities

1. Quality Education at Scale

- **Research-based learning:** Expand quality education and create experimental **research foundries** where students work with real instruments and real problems.

- **AI-enabled access:** Use AI to reach students poorly served by existing institutions and widen access to learning.

2. Open National Laboratories

- **Break institutional isolation:** Make national laboratories accessible to **researchers, students and companies outside** their walls.
- **Three-zone model:** Use **green zones for open interaction, amber for collaboration and red for strategic work**, with most activities in the first two.

3. **Flexible Research Governance**

- **Reduce compliance burden:** High-quality institutions should receive greater freedom from excessive **General Financial Rules compliance**.
- **Outcome-based accountability:** Evaluate institutions through **research outcomes rather than procedural compliance at every step**.

4. **Faster Research Regulation**

- **Speed up approvals:** Make approvals for research involving **biological materials and clinical trials** faster and more predictable.
- **Support smaller institutions:** Reduce regulatory burdens because excessive delays and costs disadvantage **small and medium-sized institutions**.

The Way Forward

1. **Raise R&D investment:** Move towards **1.5% of GDP for R&D by 2030** through stronger public funding, private-sector incentives and innovative financing.
2. **Democratise research:** Allocate ANRF resources transparently to **state universities and colleges** through seed grants, laboratories, mentorship and regional innovation clusters.
3. **Strengthen research-to-market links:** Create joint university-industry R&D centres and link incentives with **commercialisation, patents, start-ups and practical outcomes**.
4. **Build research human capital:** Strengthen faculty training, research internships and fellowships while attracting Indian researchers abroad through **competitive salaries and laboratory autonomy**.
5. **Support national development:** Build indigenous capabilities in **semiconductors, AI, renewable energy and defence while** using research to address health, agriculture, nutrition and climate challenges.
6. **Make excellence systemic:** Convert successful pockets of research excellence into wider institutional practice so that innovation becomes the **norm rather than an exception**.

Conclusion

India has the scientific talent and a growing research base to **move beyond technological catch-up.** NEP 2020 and **Anusandhan National Research Foundation (ANRF)** provide an institutional foundation, but higher R&D investment, wider research opportunities, flexible regulation and stronger industry linkages are essential. **Converting scientific knowledge into technologies** can strengthen self-reliance, economic competitiveness and solutions to social challenges, enabling India to shape future global innovation.

Question for Practice:

Evaluate whether India's research ecosystem can enable it to move from technological catch-up to global technological leadership.
Source: The Hindu ; ORF

AI companions and child safety

Source: The post **"AI companions and child safety"** has been created based on **"AI companions and child safety"** published in "**The Hindu**" on 8th October 2026.

UPSC Syllabus: GS-2-Governance

Context: AI chatbots are increasingly becoming emotional companions for children because they are available throughout the day and appear empathetic and responsive. This has created new concerns regarding **child safety, psychological well-being and regulatory accountability**.

About AI chatbots

1. AI chatbots use AI models **to interpret natural language, maintain context and generate responses.**
2. They can handle a **wider variety of questions and conversations.**
3. Well-known examples **include ChatGPT and Claude,** which allow users to ask open-ended questions and receive conversational responses.

Emerging concerns

1. **Emotional dependence:** Prolonged interaction with AI companions may create emotional dependence among children.
2. **Psychological manipulation:** Algorithmic responses may influence vulnerable children in harmful ways.
3. **Harmful advice:** AI interactions may expose children to inappropriate or dangerous advice.
4. **Difficulty in detecting harm:** Unlike conventional cybercrime, psychological harm may develop gradually through thousands of seemingly harmless interactions.
5. **Platform accountability:** The products of technology companies are becoming deeply embedded in children's emotional lives, raising questions about their responsibility when harm occurs.

Regulatory gaps in India

1. India's existing laws, including the **Information Technology Act, 2000, Digital Personal Data Protection Act, 2023, and Protection of Children from Sexual Offences Act, 2012**, address important aspects of digital safety but do not provide a **comprehensive framework for psychological risks from AI companions**.
2. Existing cybercrime mechanisms may not be adequately equipped to examine **algorithmic behaviour and chatbot interactions** as evidence.
3. Therefore, accountability for AI-related psychological harm remains an emerging challenge.

Constitutional and regulatory concerns

1. **Article 21** guarantees the **right to life and personal liberty,** giving renewed significance to protecting children's safety in the digital environment.
2. **Article 39(f)** emphasises conditions in which children can develop with **freedom and dignity** and are protected against exploitation.
3. Therefore, child safety must extend beyond physical safety and personal-data protection to include **emotional and psychological safety**.

Way forward

1. India should establish **age-appropriate safeguards** for AI companions.
2. There should be **crisis-response mechanisms and independent safety assessments**.
3. Effective **parental oversight** should be encouraged while respecting children's privacy and evolving autonomy.
4. Cybercrime agencies should be equipped to examine **algorithmic behaviour and chatbot interactions**.
5. California's **Senate Bill 1119 ("Adam's Law")**, enacted in 2026, provides safeguards such as **crisis-detection protocols, parental controls, notifications regarding disabled safety settings and independent safety audits**. India can examine such developments but should develop a framework suited to its **own institutional capacity and digital realities**.
6. Platforms should have clear **accountability mechanisms** when prolonged AI interaction causes harm.
7. Regulation should remain **balanced**, as excessive restrictions could discourage innovation and burden emerging enterprises.

Conclusion: The objective should not be to prevent children from using AI but to ensure that **technological progress is accompanied by accountability, safety and protection of children's dignity and well-being**. The central challenge is ensuring that institutions responsible for child protection can keep pace with rapidly evolving AI technologies.

Question: With the growing use of AI companions by children, discuss the emerging risks and the need for a balanced regulatory framework in India.

Source: The Hindu

How does detention differ from arrest?

Source: The post **"How does detention differ from arrest?"** has been created based on **"How does detention differ from arrest?"** published in "**Indian Express**" on 8th October 2026.

UPSC Syllabus: GS-2-Polity

Context: Leader of Opposition Rahul Gandhi was detained recently as Opposition leaders protested in New Delhi demanding the resignation of Chief Election Commissioner Gyanesh Kumar over alleged irregularities in the Election Commission's Special Intensive Revision (SIR) exercise.

About Detention and Arrest

1. **Arrest** is a **formal act of taking a person into custody in connection with an offence** and **marks the beginning of criminal proceedings.**

    a. **Once a person is arrested, a range of constitutional and statutory safeguards immediately come into existence.**
2. **Detention** generally **involves temporary custody, particularly for maintaining law and order or preventing an offence**, and may end without registration of a case.
3. During protests, **a person may be taken into custody for several hours and released without an FIR.**
4. Therefore, detention can appear similar to arrest but **may legally be treated as an exercise of preventive police powers.**
5. Detention and arrest both involve restriction of individual liberty, but they have different legal meanings.
6. The **BNSS does not specifically define "detention"**; instead, **it provides police with powers to stop, remove or temporarily hold persons in certain situations.**

Police powers related to detention under BNSS

1. **Section 170 BNSS:** Police **can take preventive action before an offence** is committed when they know of a plan to commit a cognizable offence and believe it cannot otherwise be prevented.
2. **Section 172 BNSS:** Police may **detain or remove** a person who resists, refuses, ignores or disregards a lawful direction. The person must be taken before a magistrate or, in petty cases, released within **24 hours**. This provision is new compared with the earlier CrPC.
3. **Section 163 BNSS:** Police **may impose prohibitory orders to address law-and-order concerns.** For example, during the recent protests such an order was imposed across New Delhi.
    a. **Section 223 BNS:** Disobedience of **such a lawful order is an offence** and may lead to an FIR and arrest.

Judicial safeguards

Courts have repeatedly held that police powers cannot be exercised arbitrarily:

1. **Joginder Kumar v. State of UP (1994):** The existence of the power to arrest does not by itself justify its exercise.
2. **Arnesh Kumar v. State of Bihar (2014):** Police should not automatically arrest persons in offences punishable with imprisonment up to seven years.
3. **Mazdoor Kisan Shakti Sangathan v. Union of India (2018):** Restrictions on protests should be **regulatory**, rather than completely eliminating the right to protest.

Constitutional & legal Rights of detained and arrested persons

1. **Article 22:** An arrested person must be produced before a magistrate within **24 hours**, informed of the grounds of arrest and provided the right to legal representation.
    a. The Supreme Court has held that **written grounds of arrest must be supplied**, and violation of Article 22 safeguards can make an arrest unconstitutional.
    b. **Article 22(1):** Provides the right to consult and be defended by a lawyer of one's choice.
2. **Section 38 BNSS:** Allows an arrested person **to meet an advocate of their choice during interrogation,** though not throughout the interrogation.
    a. Persons unable to afford a lawyer are entitled to **free legal aid at the State's cost**.
3. **Section 43(5) BNSS:** A woman cannot ordinarily be arrested between **sunrise and sunset**, except in exceptional circumstances and with prior permission of a judicial magistrate.

4. **D.K. Basu v. State of West Bengal (1997):** Safeguards include visible identification of police officers, an arrest memo attested by a witness, recording of injuries and informing family members. Non-compliance can lead to departmental action or contempt proceedings.

Conclusion: The BNSS gives police important **preventive and law-and-order powers**, but these powers must operate within constitutional limits. Effective policing therefore requires a balance between **public order, the right to protest and protection of individual liberty**.

Question: What is the distinction between detention and arrest under Indian law? Discuss the powers of the police and the constitutional and legal safeguards available to detained and arrested persons.

Source: Indian Express

India's Stakes in the Global Pandemic Agreement

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

Introduction

COVID-19 exposed major gaps in **vaccine access, technology sharing, health-system capacity and global coordination**, creating the need for stronger pandemic governance. The **WHO Pandemic Agreement, adopted in May 2025**, seeks to strengthen international cooperation on pandemic prevention, preparedness and response. For India, the agreement has strategic importance as a major pharmaceutical producer and Global South partner, while raising concerns over **equity, technology access and national sovereignty**.

Global Pandemic Governance: Equity vs Sovereignty

1. **WHO Pandemic Agreement:** The **WHO Pandemic Agreement (PA) was adopted by the World Health Assembly in May 2025** to strengthen global pandemic prevention, preparedness and response (PPPR).

2. **Broad International Support:** The **agreement received 124 votes in favour, none against and 11 abstentions**, reflecting broad support across different income groups.

3. **Emerging Legal Framework:** The agreement creates a **first-of-its-kind global legal framework for pandemic prevention, preparedness and response**, though ratification awaits the Pathogen Access and Benefit-Sharing (PABS) annex.

4. **North–South Divide:** Developing countries seek greater finance and technology access, while developed countries resist some binding commitments on technology transfer and other obligations.

5. **One Health Financing:** African countries sought funding before accepting commitments to monitor human-animal-environment links, a major source of pandemic risks.

6. **Vaccine Access:** Global negotiations address whether private manufacturers can provide vaccines and therapeutics quickly and affordably during future pandemics.

7. **PABS Negotiations:** The unresolved Pathogen Access and Benefit-Sharing (PABS) system **aims to ensure countries contributing biological resources receive fair access to vaccines, medicines and therapeutics.**

8. **Sovereignty and Cooperation:** The central issue is balancing national sovereignty with international solidarity, while ensuring global commitments reflect national circumstances and capacities.

India's Position and Strategic Stakes

1. **Sovereignty with Cooperation:** India supports stronger international coordination while insisting that pandemic measures respect **national sovereignty, domestic law and national circumstances.**.

2. **Equitable Health Access:** India seeks **fair access to vaccines, medicines, diagnostics and therapeutics,** especially for countries with weaker health systems.

3. **Fair PABS System:** Countries providing pathogens and biological resources **should receive timely access to vaccines, technologies and other benefits.**

4. **Technology Dependence:** India manufactures major vaccine volumes but remains dependent on global pharmaceutical companies for patents and on imports for **Active Pharmaceutical Ingredients (APIs).**

5. **Advanced Manufacturing:** Access to Global North technologies is important for India to develop high-grade Personal Protective Equipment (PPE) and medical devices.

6. **Digital Public Infrastructure:** India wants its digital health systems for surveillance, vaccination, supply chains and service continuity recognised as global public goods.

India's Contribution to Global Pandemic Preparedness

1. **Whole-of-Government Approach:** India follows a coordinated **whole-of-government and whole-of-society approach** covering different types of health emergencies.

2. **Health-System Capacity:** India is expanding **laboratory networks, emergency coordination, health workforce, stockpiles and clinical care capacity** for future emergencies.

3. **Domestic Financing:** Pandemic preparedness should remain anchored in national health systems, development plans and domestic financing, with international support complementing national efforts.

4. **COVID-19 Health Assistance:** India supplied **300 million vaccine doses to around 100 countries and two UN entities** and provided medical assistance to **over 150 countries**, demonstrating its role in supporting global health security.

5. **Digital Health Infrastructure:** India's digital health infrastructure, laboratory networks and **One Health** capabilities can provide useful global public goods for pandemic preparedness.

Way Forward

1. **Lead PABS Negotiations:** India should actively shape the **Pathogen Access and Benefit-Sharing (PABS)** framework to secure equitable benefit-sharing, timely access and respect for national sovereignty.

2. **Bridge North–South Differences:** India should balance the interests of **High-Income, Lower-Middle-Income and Low-Income Countries** while seeking greater equity in finance, technology and pandemic responsibilities.

3. **Build South-South Partnerships:** India should develop partnerships on **One Health, surveillance and health workforce strengthening**, creating practical solutions for difficult sovereignty-related issues.

4. **Use Multilateral Platforms:** India can use the **Group of Twenty (G20)** and **Partners for Multilateralism** to build wider support for equitable pandemic governance.

5. **Reduce Technology Dependence:** India should strengthen access to advanced technologies and domestic capabilities in **vaccines, medical devices, Personal Protective Equipment and Active Pharmaceutical Ingredients**.

6. **Strengthen Domestic Architecture:** India should improve **pandemic surveillance, health financing, laboratories, workforce and biological-material regulation** to strengthen its global negotiating position.

7. **Expand Digital Health Cooperation:** India should share its digital health capabilities with developing countries and promote **digital public infrastructure as a global public good**.

Conclusion

The Pandemic Agreement can either reproduce **COVID-19-era inequalities** or create a more inclusive global health order. India should combine **equity, sovereignty, domestic capacity and South-South cooperation**. Its pharmaceutical strength, digital infrastructure and health-system experience can support global leadership, while a credible PABS system remains central to equitable pandemic preparedness.

Question for practice:

Discuss India's stakes in the Global Pandemic Agreement and the measures needed to strengthen its role in global pandemic governance.

Source: The Hindu; ddnews

Property Taxation Needs Structural Reform

UPSC Syllabus: Gs Paper 3- Indian Economy and issues relating to planning, mobilisation of resources

Introduction

India's urban centres face rising demands for **infrastructure and public services** due to rapid urbanisation and ageing infrastructure. Property tax is the most important own-source revenue of municipal bodies and is vital for **municipal creditworthiness and urban investment**. Yet, India's property tax collection remains low despite technology and process-based reforms. This shows that stronger **municipal capacity, timely elections and financial governance** are also needed.

Present Status: Low and Underutilised Property Tax Potential

1. **Low Revenue Collection:** India's cumulative property tax revenue is only 0.15–0.2% of GDP, compared with 0.6% in middle-income countries and 0.3% in low-income countries.
2. **Urban Investment Gap:** Weak property tax performance limits municipal revenues, affecting their creditworthiness and ability to bridge the growing gap in urban investment.
3. **Rising Service Demands:** Rapid urbanisation, ageing infrastructure and rising public-service demands require stronger municipal revenues for roads, water, sanitation and waste management.
4. **Large Revenue Potential:** The IMF estimates that India could increase property tax revenue tenfold, creating greater capacity for investment in urban infrastructure.

Existing Property Tax System

1. **Three Stages of Taxation:** Property taxation involves enumeration, valuation and assessment, and billing and collection, with weaknesses at each stage affecting final revenue outcomes.
2. **Incomplete Property Enumeration:** Unregistered properties, outdated records and manual record-keeping reduce the accuracy of the tax base and limit municipal revenue collection.
3. **Limited Technology Effectiveness:** GIS mapping through satellite imagery and drones can identify properties, but regular physical inspections and repeated mapping remain necessary.
4. **Area-based Valuation:** Most municipalities use a base rate per square foot per month, rather than directly linking property tax to current market values.
5. **Weak Tax Buoyancy:** Municipal base rates are revised infrequently compared with stamp-duty-linked circle rates, reducing the responsiveness of property tax revenue.
6. **Poor Collection Efficiency:** Online collection and outsourcing have been promoted, but tax collection remains weak and credible efficiency estimates are difficult without proper accounts.

7. **Narrow Tax Base:** Excessive exemptions for categories such as government properties and religious institutions further reduce the number of properties contributing to municipal revenue.

Structural Factors Behind Poor Tax Performance and Limits of Existing Reforms

1. **Municipal Staff Shortage:** Shortages of municipal staff, inadequate skills and weak capacity building limit physical verification, property assessment and effective maintenance of tax records.
2. **Importance of In-house Assessors:** Chennai research found that **municipal tax assessors achieve better outcomes than outsourced assessors**, partly because they possess institutional memory.
3. **Limits of Technology:** GIS mapping and digital systems cannot replace regular physical verification and capable municipal staff, limiting the impact of technology-led reforms.
4. **Irregular Municipal Elections:** Research across **Bengaluru, Pune and Ghaziabad** found that base-rate revisions did not occur when elected municipal councils were absent.
5. **Weak Financial Reporting:** Poorly maintained financial accounts make it difficult to determine **credible collection efficiency** and properly assess municipal tax performance.
6. **Political Reluctance:** Property tax directly affects citizens and is politically sensitive, creating reluctance to increase taxes despite growing municipal revenue needs.
7. **Affordability Concerns:** Higher property taxes can create financial pressure for **asset-rich but cash-poor taxpayers**, requiring targeted relief during reform.

Way Forward

1. **Strengthen Municipal Human Resources:** Municipalities need adequate **trained tax assessors and capacity building** to improve enumeration, assessment and maintenance of property records.
2. **Combine Technology with Verification:** GIS and satellite mapping should be supported by **regular physical inspections** to identify properties accurately and keep records updated.
3. **Modernise Property Valuation:** Property valuation should better reflect current property values, while municipal base rates should be **revised regularly** to improve tax buoyancy.
4. **Ensure Timely Elections:** Regular municipal elections can strengthen local accountability and enable elected councils to take necessary decisions on **property tax and base-rate revisions**.
5. **Improve Financial Reporting:** Municipalities should maintain proper financial accounts and make **financial data publicly available** to improve transparency and assess collection performance.
6. **Rationalise Exemptions:** Property tax exemptions should be limited to **well-defined categories**, thereby broadening the tax base and improving transparency and equity.
7. **Protect Vulnerable Taxpayers: Progressive rates and deferments** for asset-rich but cash-poor taxpayers can address affordability concerns while supporting property tax reform.

8. **Link Tax with Services:** Additional revenue should be reinvested in visible improvements such as roads, water supply, drainage and waste management to build public trust.

9. **Use Global Experiences:** Lagos increased property tax revenue fivefold through digital mapping and modernised administration, while South Korea uses property transaction taxes of 1–7%.

Conclusion

Property tax reform requires more than **technology, digitisation and process improvements**. Stronger municipal staff, timely elections, better valuation, wider tax coverage and transparent financial reporting are equally important. A fairer system can strengthen municipal finances and improve urban services. Linking higher collections with visible infrastructure improvements can also build **public trust and support sustainable urban growth**.

Question for practice:

Examine why India's property tax system needs structural reforms beyond technology and process-based reforms.

Source: The Hindu; businessline

US green card suspension: What it means for Indian IT workers on H-1B visas

Source: The post **"US green card suspension: What it means for Indian IT workers on H-1B visas"** has been created based on **"US green card suspension: What it means for Indian IT workers on H-1B visas"** published in "**Business Standard**" on 9th October 2026.

UPSC Syllabus: GS-2-International Relations

Context: Recently, US administration suspended processing under the employment-based immigration programme known as Program Electronic Review Management (PERM) for selected technology and IT services companies. The action comes as the US administration intensifies scrutiny of H-1B hiring and alleges abuse of programmes used to employ foreign workers.

About Program Electronic Review Management (PERM) and its Importance

1. **Program Electronic Review Management (PERM)** is the **US Department of Labor's process** for certifying that an employer can sponsor a foreign worker for a permanent job without adversely affecting American workers' wages, working conditions or employment opportunities.
2. The employe**r must establish the required wage and conduct recruitment** to determine whether qualified US workers are available.
3. For most employer-sponsored green cards, **the process has three stages:**
    i. **PERM labour certification:** The employer completes the required wage and recruitment process to test the availability of qualified US workers.
    ii. **I-140 immigrant petition:** After labour certification, the employer generally files an immigrant petition with US Citizenship and Immigration Services (USCIS).
    iii. **Green card:** The worker proceeds to the final stage when eligible and when an immigrant visa is available under the applicable category and priority-date rules.

4. The **suspension disrupts the first stage.** Workers **whose cases have not reached PERM filing may be unable to begin the usual employer-sponsored green card process** while the suspension remains in force.

Impacted Companies and what suspension means

1. The eight companies named in the announcement were:
    a. **Indian IT services companies:** Tata Consultancy Services (TCS), Infosys, Wipro, HCLTech and Cognizant.
    b. **Other technology companies:** Microsoft, Adobe and Capgemini, a French IT services firm.
2. The suspension **targets these named employers. I**t is not **a blanket ban on all Indian nationals or all technology companies.**
3. It is to **note that an employee may continue to hold valid H-1B status even when the green card process is delayed,** provided the employee continues to meet applicable immigration requirements.
    a. However, **the ability to remain in the US depends on the employee's visa status, expiry dates and eligibility for extensions.**
    b. Employees approaching the end of their permitted stay should seek individual immigration advice rather than assume that the suspension has no consequences.

Reasons behind the suspension

1. **Alleged displacement of American workers:** Authorities alleged that some employers used employment-based immigration programmes to replace American workers with lower-paid foreign workers.
2. **Workforce reductions:** The administration questioned the use of large volumes of H-1B and PERM filings alongside workforce reductions.
3. **Wage suppression:** Concerns were raised about recruitment practices and their possible impact on wages and working conditions.
4. **Alleged fraud and non-compliance:** Investigations are continuing into possible fraud and violations of labour certification requirements.
5. **Extensive use of immigration programmes:** Labor Secretary Keith Sonderling highlighted the affected employers' extensive use of employment-based immigration programmes, while Vice President JD Vance pointed to cases requiring further investigation.

Impact on Indian IT professionals working in the US

The impact depends on the stage of the employee's green card application:

1. **Employees who have not started PERM:** These workers **may face the most immediate disruption** because their employers cannot file new PERM applications during the suspension. They **may have to wait before beginning the standard green card process** and cannot establish a priority date through a new PERM filing during this period.
2. **Employees with pending PERM applications:** The Department of Labor has reportedly **halted processing of pending applications** involving the affected employers. These employees **may face delays,** and the precise treatment of individual cases remains unclear.
3. **Employees whose PERM has already been approved:** Their **position may differ from that of employees awaiting labour certification**. The authorities have not clarified whether previously

approved certifications or subsequent immigrant petitions will be affected**. Employees should not assume that existing approvals have automatically been cancelled.**

4. **Employees approaching the H-1B six-year limit:** Under certain condition**s, US rules allow H-1B holders to extend their stay beyond the usual six-year limit** while pursuing employment-based permanent residency. Delays in starting PERM could complicate extension planning for some employees, depending on their circumstances and eligibility.
5. **Uncertainty about the duration:** The **authorities have not clarified how long the suspension will last,** how reinstatement will work or whether previously approved certifications and immigrant petitions will be affected.

Broader impact on the technology industry

1. **Uncertainty in talent mobility:** The **suspension may create uncertainty for Indian professionals** whose employers are sponsoring their permanent residency.
2. **Possible loss of skilled talent:** Restrictions on p**ermanent residency may lead some talented foreign workers to leave US** or discourage others from coming, even temporarily.
3. **Local hiring and workforce development:** Indian technology companies have reportedly **reduced their dependence on H-1B visas in recent years** while expanding local hiring and building a stronger domestic workforce in US.
4. **Business and innovation:** Indian technology companies **work with the majority of US Fortune 500 companies** enabling innovation, business growth and the generation of more local jobs.
5. **Increased compliance scrutiny:** Companies are **advised to review recruitment practices and documentation** to ensure that their PERM programmes comply with applicable requirements.

Implications for India–US technology relations

The key implications are:

1. **Indian professionals may face uncertainty** regarding permanent residency, career planning and continued employment in US.
2. **Indian IT companies may need to strengthen compliance** with labour certification, recruitment and documentation requirements.
3. **US technology sector may face talent-retention challenges** if restrictions discourage skilled professionals from entering or remaining in the country.
4. **Local workforce development may gain importance** as Indian technology companies continue expanding their US-based workforce.

Way forward

1. **Strengthen compliance**: Employers should review their recruitment practices, labour market testing and documentation.
2. **Clarify the suspension:** Authorities need to clarify its duration, reinstatement procedure and treatment of previously approved cases.
3. **Protect skilled talent mobility:** Immigration policies should consider the importance of skilled workers in addressing talent gaps and supporting innovation.
4. **Provide individual guidance:** Affected employees, particularly those approaching the H-1B six-year limit, should seek advice based on their specific immigration status and eligibility.

5. **Maintain a balanced approach:** The protection of American workers should be balanced with the legitimate need for skilled international talent.

Conclusion: The suspension of PERM processing for selected technology companies highlights US administration's concerns about alleged immigration misuse, wage suppression and the displacement of American workers. However, it does not constitute a blanket shutdown of the employment-based immigration system or automatically cancel H-1B visas. The challenge is to ensure compliance with labour laws while preserving skilled talent mobility, innovation and the competitiveness of the technology industry.

Question: US administration's suspension of PERM processing for selected technology companies has raised concerns about Indian IT professionals and skilled talent mobility. Discuss its implications and way forward.

Source: Business Standard

Adequate response: on the RBI and inflation

Source: The post **"Adequate response: on the RBI and inflation"** has been created based on **"Adequate response: on the RBI and inflation"** published in "**The Hindu**" on 9th October 2026.

UPSC Syllabus: GS-3-Indian Economy

Context: The Reserve Bank of India (RBI) has raised the policy repo rate by 25 basis points to 5.50%, marking its first rate hike since February 2023. The Monetary Policy Committee (MPC) has also shifted its policy stance from 'neutral' to 'calibrated tightening', indicating the possibility of further interest rate hikes depending on evolving economic conditions.

About Repo Rate

1. Repo rate is the rate **at which the RBI lends money to commercial banks for a short period** by repurchasing government securities from them.
2. It is **used by the RBI to control inflation** i.e when inflation rises, the RBI increases the repo rate so that the credit-creating capacity of banks comes down resulting in less money supply in the economy.

Reasons for the RBI Repo Rate Hike

1. **Rising retail inflation:** Retail inflation rose to 4.82% in August, remaining above the RBI's medium-term target of 4% for the third consecutive month.
2. **Rising food prices:** Weather-related disruptions and drought concerns in several states pose risks to agricultural output and food prices.
3. **Crude oil price surge:** Crude oil prices crossed $100 per barrel amid geopolitical tensions, increasing the risk of imported inflation and pressure on India's external balance.
4. **Risk of El Niño:** The possibility of El Niño conditions extending into 2027 could adversely affect agricultural production and increase food inflation.
5. **Declining reservoir levels:** Reservoir levels were around 20% below the previous year's levels, raising concerns about agricultural output and the rabi crop.
6. **Geopolitical tensions:** The West Asia conflict and Russia–Ukraine war have increased uncertainty in global markets and contributed to energy-price pressures.

7. **Elevated US interest rates:** The US Federal Reserve raised its policy rate by 25 bps to 3.75–4%. Higher US yields could attract capital away from India and increase pressure on the Indian currency and financial markets.
8. **Foreign investment outflows:** Foreign investors have been withdrawing funds from India amid rising US yields, adding to financial-market pressures.
9. **Broadening inflationary pressures:** Inflation risks have spread beyond food and perishable commodities, with higher energy prices and input costs affecting both agricultural and non-agricultural sectors.
10. **Need for tighter monetary policy:** With inflation risks persisting and global financial conditions remaining tight, the RBI shifted its policy stance from neutral to calibrated tightening, indicating the possibility of further rate hikes depending on evolving conditions.

Significance of the repo rate hike

1. **Containing inflation:** Higher interest rates can moderate borrowing and demand, helping to contain inflationary pressures and prevent price increases from becoming entrenched.
2. **Anchoring inflation expectations:** The rate hike signals the RBI's commitment to price stability and can help prevent expectations of persistent inflation from influencing future pricing decisions.
3. **Managing external pressures:** The policy response may help address pressures arising from elevated US interest rates, foreign investment outflows and currency-market uncertainty.

About Inflation Related Framework

1. India operates under a **Flexible Inflation Targeting (FIT) framework** enshrined in the **Reserve Bank of India Act, 1934.**
2. The **adoption of the FIT framework followed the signing of a Monetary Policy Framework Agreement** between the Government of India and the RBI in 2015.
    a. **Section 45ZB of the amended RBI Act, 1934** provides for an empowered **six-member monetary policy committee (MPC)** to be constituted by the Central Government.
    b. It was constituted in 2016.
    c. It determines the policy repo rate required to achieve the inflation target.
3. **FIT** empowers the central bank **to maintain inflation within a specified target range.**
4. The Government of India and the RBI are required **to review the FIT framework every five years.** The first review was **conducted in March 2021.**
5. The Government of India, **in consultation with the RBI, sets the numerical inflation target at 4%, with a tolerance band of ±2 percentage points,** allowing inflation to range between 2% and 6%.

Impacts of the Repo rate hike

1. **Impact on borrowers: Home, personal and vehicle loan EMIs may rise** as banks pass on higher borrowing costs, particularly for loans linked to external benchmarks. MCLR-linked loans may also become more expensive.
2. **Impact on savers: Deposit rates may rise marginally as banks reassess their funding requirements,** potentially benefiting depositors whose savings have been eroded by inflation.
3. **Implications for economic growth: Higher borrowing costs may moderate consumption and investment.** This creates a challenge for the RBI in controlling inflation without significantly weakening economic activity.

4. **Shift in monetary policy stance:** The **MPC changed its stance from neutral to calibrated tightening,** indicating a greater focus on containing inflation and the possibility of further rate hikes depending on evolving conditions.
5. **Balancing inflation and growth:** Despite the rate hike, **the RBI revised its FY27 GDP growth projection upwards from 6.7% to 7.1%,** reflecting stronger economic activity. However, **elevated crude prices, global interest rates and weather disruptions remain risks to future growth.**

Major challenges before the RBI

1. **Inflation–growth trade-off:** Higher interest rates may help contain inflation but can also weaken economic activity and investment.
2. **Supply-side pressures:** Food prices and other cost pressures may sustain inflation, even when monetary policy is restrictive.
3. **External economic uncertainties:** Higher interest rates in the US may attract capital towards American assets, contributing to foreign portfolio investment outflows from India.
4. **Managing growth expectations:** The RBI revised its GDP growth forecast for 2026–27 to 7.1%, from 6.7%, following stronger-than-expected growth data. This requires careful assessment of growth and inflation risks.

Way forward

1. The RBI **should follow a calibrated approach** and avoid abrupt policy changes.
2. It should **closely monitor inflation expectations, food prices and emerging economic data.**
3. It should **use available policy instruments effectively,** considering their impact on investment, consumption and exports.
4. It should **strengthen policy communication to anchor inflation expectations** and maintain credibility.

Conclusion: The RBI's challenge is not merely to control current inflation but also to prevent inflation expectations from becoming entrenched. A credible and calibrated monetary policy is essential for maintaining price stability while supporting sustainable economic growth.

Question: The RBI's monetary policy must balance inflation control with economic growth. Discuss the significance of the recent monetary policy review in managing inflation expectations and examine the challenges before the RBI.

Source: The Hindu, Indian Express

Calibrating India's Inbound Investment Framework

UPSC Syllabus: Gs Paper 3- Effects of liberalisation on the economy, changes in industrial policy and their effects on industrial growth.

Introduction

Foreign Direct Investment (FDI) supports India's growth by bringing capital, technology, jobs and links to global markets. Gross inward FDI reached $94.8 billion in FY26, and India ranked 11th among global destinations. Yet rising inflows do not guarantee that announced investments become operational projects.

Regulatory differences, slow approvals, compliance costs and delays in dispute resolution can hold back deployment, making domestic reforms essential to India's investment strategy.

Trends and Patterns in India's FDI Inflows

1. **Cumulative investment growth:** India received approximately $1.16 trillion in cumulative FDI inflows between April 2000 and March 2026, reflecting its growing role in the global investment market.

2. **Recent growth in equity inflows:** FDI equity inflows reached approximately $58.84 billion in FY26, rising from $50.02 billion in FY25 and showing continued investor interest.

3. **Leading investment sectors:** Services attracted 16.36% of cumulative FDI equity inflows, followed by computer software and hardware at 15.82%, trading at 6.55%, automobiles at 5.12% and telecommunications at 5.10%.

4. **Major sources of investment:** Singapore contributed 24.72% of cumulative FDI equity inflows, followed by Mauritius, the United States, the Netherlands and Japan, showing the importance of established international investment links.

5. **Uneven geographical distribution:** Maharashtra received 31.35% of cumulative FDI equity inflows, followed by Karnataka, Gujarat, Delhi and Tamil Nadu, indicating that investment remains concentrated in leading economic centres.

6. **Global investment position:** India ranked 11th among global FDI destinations, reflecting its growing importance in international investment flows.

Significance of FDI for India's Economic Development

1. **Capital for development:** FDI provides a major source of non-debt finance for infrastructure, industrial expansion and other development needs without relying entirely on borrowing.

2. **Technology and innovation:** Foreign investment helps Indian businesses access advanced technology, research capabilities and management practices, supporting industrial modernisation and innovation.

3. **Employment and supporting industries:** New investments create jobs and business opportunities for suppliers and service providers, including domestic micro, small and medium enterprises (MSMEs).

4. **Manufacturing and export growth:** Investment in electronics, automobiles and semiconductors strengthens domestic production, expands export capacity and helps Indian firms participate in global value chains.

5. **Improved global competitiveness:** Greater investment, combined with domestic reforms, can strengthen India's position as a manufacturing and technology destination and reduce dependence on imported products.

Government Policies and Initiatives to Attract FDI

1. **Liberalised investment limits:** India has **expanded foreign investment opportunities by allowing up to 100% FDI** in insurance, subject to applicable conditions, and liberalising investment rules in defence, pharmaceuticals and civil aviation.

2. **Manufacturing incentives:** The **Make in India initiative** and **Production-Linked Incentive (PLI) scheme** have supported manufacturing investment, with FDI equity inflows in manufacturing increasing by 69% between 2004–14 and 2014–24.

3. **Semiconductor development:** The **India Semiconductor Mission** provides incentives for chip manufacturing and advanced packaging, with 10 approved projects involving investments of approximately ₹1.6 lakh crore across six states.

4. **Simplified taxation and industrial facilities:** GST has simplified the indirect tax framework, while Special Economic Zones (SEZs) offer infrastructure and fiscal incentives to attract foreign businesses.

5. **Digital investment facilitation:** The Foreign Investment Facilitation Portal provides an online interface for processing FDI proposals requiring government approval, helping investors navigate administrative procedures.

6. **Innovation ecosystem: India's Global Innovation Index ranking improved from 81st in 2015 to 38th in 2025,** reflecting progress in innovation policies, research and development, and support for startups.

Free Trade Agreements and India's Global Economic Integration

1. **Wider market access: FTAs with partners** such as the **UK, New Zealand and the European Union expand opportunities** for Indian exporters and strengthen economic cooperation with major markets.

2. **Investment commitments under trade agreements:** The **India–EFTA Trade and Economic Partnership Agreement (TEPA)** includes a $100-billion investment target, making investment generation an important part of India's trade strategy.

3. **Strategic economic partnerships:** Cooperation with **France, Israel, ASEAN and the Gulf Cooperation Council** covers trade, technology, infrastructure and manufacturing, creating opportunities for cross-border investment.

4. **Strengthening global supply chains:** Trade agreements can encourage foreign companies to establish production facilities in India and connect domestic manufacturers with international markets.

5. **Need for investor protection:** The India–EFTA agreement lacks an independent bilateral investment dispute mechanism, while Switzerland is separately negotiating a bilateral investment treaty with India. These negotiations could inform future investment arrangements with the EU and UK.

Major Challenges in India's Inbound Investment Framework

1. **Centre–State coordination gaps: Different State-level rules and notification timelines** create uncertainty for businesses operating nationwide, particularly when implementing labour laws and other common regulatory requirements.

2. **Delayed commercial dispute resolution:** India had **nearly 48 million pending court cases,** including around six million in High Courts as of April, increasing uncertainty for businesses that depend on timely dispute settlement.

3. Uneven labour-code implementation: **Consolidation of 29 central labour laws into four codes simplified the legislative structure**, but different State implementation timelines complicate national human resource planning.

4. **High product certification costs: Quality Control Orders increased from fewer than 70 to nearly 790,** while **certification for imported components could cost ₹20 lakh** and take six to eight months, disrupting MSME supply chains.

5. **Delays in investment approvals:** The Department for Promotion of Industry and Internal Trade (**DPIIT) coordinates investment facilitation but does not decide every approval.**

6. **Weak conversion of commitments into projects:** Global project finance remains roughly a quarter below its 2021 peak, while India's greenfield data centre investment of $7 billion in early 2025 lagged behind leading destinations.

Recent Reforms to Address Investment Bottlenecks

1. **Tax dispute settlement:** The **Taxation Laws (Amendment) Act, 2021** withdrew outstanding retrospective tax demands against Vodafone and Cairn Energy, while **the Vivad se Vishwas scheme helped reduce direct-tax litigation.**

2. **Commercial dispute resolution:** The **Commercial Courts Act, 2015 and the Mediation Act, 2023** have supported faster dispute resolution, although stronger commercial benches and mediation centres remain necessary.

3. **Rationalising quality controls:** Withdrawal of **selected Quality Control Orders (QCOs) on intermediate goods**, including polyvinyl chloride (PVC), aluminium and zinc, has reduced compliance pressure on manufacturers.

4. **Faster project clearances:** The **revised standard operating procedure introduced in May 2026 sets a 12-week deadline** for investment approvals, although implementation remains uneven.

5. **Targeted investment facilitation:** The revised FDI framework **allows eligible investments with up to 10% non-controlling beneficial ownership from countries sharing a land border with India** through the automatic route, improving certainty for qualifying proposals.

Way Forward

1. **Strengthening Centre–State coordination:** Aligning State rules and implementation timelines can reduce regulatory uncertainty for businesses operating across India.

2. **Improving investor protection:** Singapore's Comprehensive Economic Cooperation Agreement (CECA), which has facilitated over $195 billion in cumulative FDI since 2000, offers lessons on non-discrimination and investor protection. India can use these lessons while developing stronger investment dispute-resolution arrangements in future trade agreements.

3. **Replicating successful industrial policies:** India's mobile-phone industry, where production increased 33-fold to ₹6.27 trillion, demonstrates how coordinated policies can strengthen domestic manufacturing and exports.

4. **Improving administrative coordination:** The Tata Electronics semiconductor facility in Dholera shows how effective coordination among government authorities can accelerate capital deployment in advanced manufacturing.

5. **Reducing compliance burdens:** Rationalising unnecessary certification requirements and simplifying procedures can lower costs for manufacturers and MSMEs while maintaining consumer protection.

6. **Strengthening dispute resolution:** Better staffing of commercial courts and mediation centres can reduce delays and improve business confidence.

7. **Ensuring timely investment deployment:** Consistent implementation of approval deadlines and coordination among government departments can help convert investment commitments into operational projects.

Conclusion

India's investment framework has improved through rising inflows, liberalised policies and wider trade partnerships. However, lasting gains depend on turning commitments into operating projects. Consistent Centre–State coordination, timely approvals, simpler compliance, faster dispute resolution and credible investor protection can help expand manufacturing, employment and exports while strengthening India's role in global value chains.

Question for practice:

Examine the major challenges in India's inbound investment framework and suggest measures to improve foreign investment inflows and accelerate economic growth.

Source: The Hindu; IBEF

Account aggregator 'interoperability':What RBI's move means for asset statement

UPSC Syllabus: Gs Paper 3- Indian Economy

Introduction

The Reserve Bank of India (RBI) has allowed interoperability among account aggregators to simplify financial data sharing and provide individuals with a consolidated view of their financial assets. The initiative will also

enable SEBI-regulated depositories to include bank deposit information in consolidated account statements. Both measures are expected to be implemented by 31 December 2026.

What Are Account Aggregators and Interoperability?

1. **Account Aggregators (AAs):** These are regulated financial technology platforms classified as non-banking financial companies (NBFCs) that enable the secure sharing of customers' financial data between institutions with their explicit consent.

2. **Role in Financial Data Sharing:** They transfer encrypted information from financial information providers, such as banks, to financial information users, such as lenders, without storing, reading or processing customers' data.

3. **Meaning of Interoperability**: It allows customers to access and share financial information across different account aggregators through any one platform of their choice, reducing fragmentation in the financial data-sharing system.

4. **Existing Fragmentation**: Around 15–17 account aggregators operate separately, while consolidated account statements generally provide information on either bank deposits or investments held through demat accounts.

Key Changes Introduced by RBI

1. **Interoperability Among Account Aggregators:** Customers will be able to access and share financial information across different account aggregators through a single aggregator, reducing dependence on separate platforms.

2. **Integration of Bank Deposits into CAS:** RBI will facilitate **Securities and Exchange Board of India (SEBI)**-regulated depositories in including bank deposit information in the Consolidated Account Statement (CAS) provided to demat account holders.

3. **Linking Banking and Investment Information:** Customers will be able to link bank accounts with demat accounts and access consolidated financial information through their chosen account aggregator.

4. **Implementation Timeline:** Both measures are expected to be implemented by 31 December 2026, with initial coverage limited to banks already onboarded to the system.

5. **Coordination Between Regulators:** The reform requires coordination between RBI, which regulates banking activities, and SEBI, which regulates securities depositories, to integrate information from both financial systems.

What Are the Major Benefits?

1. **Consolidated View of Financial Assets:** Investors will be able to access information on bank deposits, stocks, mutual funds, bonds and other covered financial instruments through a more integrated system.

2. **Simplified Investment Tracking:** A consolidated financial overview will reduce the need to check separate statements and platforms, making it easier for individuals to monitor their holdings.

3. **Identification of Overlooked Deposits:** Access to consolidated financial information may help families identify bank deposits that might otherwise remain unnoticed after an account holder's death.

4. **Faster Loan Processing:** Interoperability will make verified financial information easier to share with lenders, reducing fragmentation and helping them complete the loan assessment process more efficiently.

5. **Better Cash-Flow-Based Lending:** Lenders can assess borrowers' actual cash flows and financial behaviour rather than relying mainly on traditional credit scores, collateral or information submitted by borrowers.

6. **Improved Credit Access for MSMEs:** Micro, small and medium enterprises (MSMEs) and first-time borrowers could benefit from better access to formal credit, shorter processing times and more accurate assessment of credit risk.

Way Forward

1. **Expand Bank Coverage:** The facility will initially cover banks already onboarded to the system, with other banks to be added over time. Bringing more banks into the framework will improve access to financial information across institutions.

2. **Integrate Insurance Information:** The **Insurance Regulatory and Development Authority of India (IRDAI)** could work with RBI and SEBI to include insurance policies in consolidated financial statements in the future.

3. **Strengthen Financial Data Sharing:** Wider participation across financial institutions and continued coordination among regulators can reduce fragmentation and make verified financial information more accessible to customers and lenders.

Conclusion

RBI's interoperability initiative is an important step towards a consolidated view of financial assets. By linking bank deposit information with investment statements, it can simplify asset tracking and improve access to verified financial data. Wider bank coverage and future integration of insurance information can strengthen this system, while easier data sharing can support faster lending and broader access to formal credit.

Question for practice:

Discuss how the Reserve Bank of India's move to introduce interoperability among account aggregators can benefit investors and improve access to credit.

Source: [Indian Express]

National SC-ST Hub: Powering Inclusive Entrepreneurship

Source: The post **"National SC-ST Hub: Powering Inclusive Entrepreneurship"** has been created based on **"National SC-ST Hub: Powering Inclusive Entrepreneurship"** published in "**PIB**" on 10th October 2026.

UPSC Syllabus: GS-3-Indian Economy

Context: The National SC-ST Hub (NSSH) has been promoting inclusive entrepreneurship since 2016 by supporting SC/ST-owned enterprises through finance, technology, training, mentoring and market linkages. It facilitates access to government procurement and institutional buyers, helping enterprises improve competitiveness, expand markets and achieve sustainable growth.

About National SC-ST Hub (NSSH) Scheme

1. The National SC-ST Hub (NSSH) Scheme **promotes entrepreneurship and strengthens the capacity of SC/ST entrepreneurs.**
2. The scheme is a **flagship initiative of the Ministry of Micro, Small and Medium Enterprises (MSME).**
3. It was **launched in 2016.**
4. The scheme is implemented by the **National Small Industries Corporation (NSIC), under the Ministry of MSME.**
5. The scheme aims to:
    a. **Promote inclusive entrepreneurship:** The scheme seeks to increase the participation of SC/ST entrepreneurs in India's MSME ecosystem.
    b. **Address structural barriers:** It aims to overcome difficulties faced by SC/ST-owned enterprises in accessing finance, skills, technology and markets.
    c. **Enhance competitiveness:** It helps enterprises improve their business capabilities, operational efficiency and market readiness.
    d. **Promote public procurement participation:** It connects SC/ST-owned Micro and Small Enterprises (MSEs) with government departments, Central Public Sector Enterprises (CPSEs) and institutional buyers.
    e. **Expand market opportunities:** It facilitates access to domestic exhibitions, e-commerce platforms and export networks.

Key Features of the Scheme

1. **Financial and business support**
    a. **Bank Loan Processing Fee Reimbursement:** The scheme reimburses 80% of loan processing fees or ₹1 lakh, whichever is lower, excluding applicable taxes. The benefit is available after loan disbursement and can be claimed multiple times in a financial year. Loans from Scheduled Commercial Banks, NBFCs and State Finance Corporations are covered.
    b. **Bank Guarantee Charges Reimbursement:** It reimburses 80% of eligible Performance Bank Guarantee charges or ₹1 lakh, whichever is lower, excluding applicable taxes, to facilitate participation in government and public sector tenders.
    c. **Testing Fee Reimbursement:** It covers 80% of eligible testing fees or ₹1 lakh, whichever is lower, excluding applicable taxes per financial year. Testing must be conducted through NABL/BIS-accredited, government or PSU laboratories.
2. **Skill development and capacity building**

   a. **Management Training:** SC/ST entrepreneurs and their wards can attend programmes lasting 1–30 days at the top 50 management institutes identified under NIRF. Up to two courses can be supported annually, with reimbursement of 90% of course fees or ₹1 lakh, whichever is lower, per financial year.
   b. **Business Development and Mentoring:** The scheme provides training, mentoring, networking and knowledge support to improve business strategy, pricing, operational efficiency and market positioning.
3. **Market access and export promotion**
   a. **Export Promotion Council Membership:** It reimburses 80% of eligible membership charges or ₹20,000, whichever is lower, excluding applicable taxes per financial year. Applicants must possess a valid Import Export Code (IEC) and Registration-cum-Membership Certificate (RCMC).
   b. **Government-Promoted E-commerce Portals:** It reimburses 80% of membership fees or ₹25,000, whichever is lower, excluding applicable taxes per financial year. Covered platforms include GeM, e-Khadi, TRIFED, Tribes India and MSME Mart.
   c. **Business Accelerator Programme (BAP):** It provides structured mentorship and industry insights to help enterprises adopt data-driven business practices and align with market requirements.
4. **Institutional and procurement support**
   a. **Special Vendor Development Programmes:** These programmes connect SC/ST enterprises with CPSEs and institutional buyers.
   b. **E-tendering Workshops:** These workshops help entrepreneurs understand and participate in electronic tendering processes.
   c. **Awareness Workshops and Exhibitions:** These initiatives improve awareness of government opportunities and provide platforms for showcasing products and services.

Significance of the Scheme

1. **Social and economic empowerment:** It promotes entrepreneurship and economic participation among historically underrepresented communities.
2. **Employment generation:** The growth of SC/ST-owned enterprises can create employment and livelihood opportunities.
3. **Reduction in business costs:** Reimbursements for loan processing, bank guarantees, testing and membership fees reduce financial burdens on enterprises.
4. **Improved market access:** Vendor development programmes, exhibitions and e-commerce platforms connect enterprises with wider markets and institutional buyers.
5. **Greater participation in public procurement:** It enables SC/ST-owned MSEs to compete more effectively for government and public sector contracts.
6. **Improved quality and competitiveness:** Testing support, management training and business mentoring help enterprises improve product standards and operational efficiency.
7. **Promotion of digital entrepreneurship:** Access to government-promoted e-commerce portals encourages digital market participation.
8. **Export opportunities:** Export Promotion Council membership support helps enterprises connect with export networks and explore international markets.

Major initiatives and achievements

1. **Capacity building and training:** The scheme provides training, mentoring, business development and networking support to improve entrepreneurial skills and competitiveness.
2. **Financial and technological support:** The Special Credit Linked Capital Subsidy Scheme (SCLCSS) provides a 25% capital subsidy, capped at ₹25 lakh, for plant, machinery and equipment purchased through institutional credit.
3. **Public procurement opportunities:** The Single Point Registration Scheme (SPRS) facilitates government procurement by providing free tender sets and exemption from Earnest Money Deposit (EMD). The Public Procurement Policy mandates 25% annual procurement from MSEs, including a 4% earmark for SC/ST-owned MSEs.
4. **Marketing and digital access:** The Special Marketing Assistance Scheme (SMAS) supports exhibitions, trade fairs and vendor development programmes. Membership-fee reimbursement for government-promoted e-commerce portals such as GeM, e-Khadi and Tribes India improves digital market access.
5. **Reduction of business costs:** The scheme reimburses eligible expenses relating to bank loan processing, bank guarantees, product testing, export council membership and management training.
6. **Business acceleration:** The Business Accelerator Programme (BAP) provides mentorship on business strategy, pricing, operational efficiency and market positioning.
7. **Key achievements:** By 31 July 2026, the scheme had assisted 1,90,414 beneficiaries and trained 54,499 candidates. In 2025–26, procurement from 12,524 SC/ST-owned MSEs reached ₹4,013.42 crore, compared with ₹99.37 crore in 2015–16. Furthermore, 10,717 candidates were trained in 2025–26, of whom 55% were women.

Conclusion: The National SC-ST Hub is an important initiative for promoting inclusive, competitive and sustainable entrepreneurship. By integrating financial assistance, capacity building and market access, it seeks to help SC/ST-owned enterprises move from potential suppliers to competitive participants in government and institutional markets. Effective implementation and stronger market linkages can further contribute to inclusive MSME growth and social empowerment.

Source: Indian express

WHO's obesity prescription goes beyond the clinic

Source: The post "**WHO's obesity prescription goes beyond the clinic"** has been created based on **"WHO's obesity prescription goes beyond the clinic"** published in "**Indian Express**" on 10th October 2026.

UPSC Syllabus: GS-2-Governance

Context: The World Health Organization (WHO) has issued its first guidelines for managing obesity among children and adolescents, emphasising early intervention, family-centred care and healthier lifestyles. Childhood obesity is an emerging public health concern because it increases the risk of diabetes and other lifestyle-related diseases at an early age. India faces a double burden of malnutrition, where undernutrition and obesity coexist, requiring a comprehensive and inclusive approach to nutrition and healthcare.

Status of Obesity of Children in India

1. According to the World Obesity Atlas 2026, India ranks second globally, after China, in the number of children who are overweight or living with obesity.

2. In 2025, approximately 41 million Indian children had a high BMI, including 14 million living with obesity.
3. By 2040, the number of children living with obesity is projected to reach 20 million, highlighting the urgent need for preventive public-health measures.

Major Causes

1. **Physical inactivity:** Approximately 74% of adolescents aged 11–17 fail to meet recommended physical activity levels.
2. **Unhealthy dietary habits:** Consumption of sugary drinks and unhealthy, calorie-dense foods increases the risk of obesity.
3. **Unhealthy food marketing:** Aggressive promotion of junk food influences children's dietary preferences and consumption patterns.
4. **Inadequate nutritional support:** Suboptimal breastfeeding and limited access to nutritious food can contribute to poor nutritional outcomes.
5. **Socio-economic inequalities:** Limited access to affordable healthy food and safe spaces for physical activity makes prevention more difficult for disadvantaged communities.

Major Challenges

1. **Unhealthy dietary habits:** Increased consumption of unhealthy foods and inadequate physical activity contribute to obesity among children and adolescents.
2. **Aggressive junk-food marketing:** Advertisements and the promotion of unhealthy food products influence children's preferences and encourage poor dietary choices.
3. **Unequal access to nutritious food:** Children from disadvantaged households may have limited access to affordable and healthy food options, leading to poor nutrition.
4. **Poor maternal nutrition:** Inadequate maternal diets and limited nutritional awareness can adversely affect children's nutritional outcomes, highlighting the importance of women's empowerment.
5. **Obesity-related health risks:** Childhood obesity increases the risk of hypertension, abnormal blood lipids, type 2 diabetes and fatty liver disease. The Indian Academy of Paediatrics' 2023 guidelines recommend assessing obese children above 10 for associated conditions.
6. **Overdependence on clinical interventions:** Medicines and surgery alone cannot address the wider social and environmental factors responsible for obesity. The WHO emphasises that healthier diets, physical activity and behavioural support should be the first line of defence.

Way Forward

1. **Strengthen preventive healthcare:** Healthcare professionals should identify obesity-related risks early and provide appropriate counselling and treatment.
2. **Promote healthy schools:** Schools should encourage balanced diets, sports, regular physical activity and nutritional education among students.
3. **Regulate unhealthy food marketing:** The government should strengthen regulations on junk-food advertising and its aggressive promotion, particularly to children.
4. **Improve access to nutritious food:** Policies should make healthy food more affordable and accessible, especially for economically disadvantaged households.
5. **Empower women and families:** Improving maternal nutrition, nutritional awareness and women's access to resources can support better health outcomes for children.

6. **Create supportive environments:** Parents, schools, communities, healthcare professionals and policymakers must work together to make healthy choices easier in everyday life.

Conclusion: India needs to move beyond a treatment-oriented approach towards preventive healthcare and systemic change. Integrating nutrition education, effective regulation, women's empowerment and affordable healthy food can help address childhood obesity while tackling the wider challenge of malnutrition.

Question: Childhood obesity is not merely a medical problem but also a socio-economic and public health challenge. Discuss the major challenges and suggest a comprehensive way forward for addressing it in India.

Source: Indian express

India's 'WorldSkills' Medals Reflect Patient Investment

UPSC Syllabus: Gs Paper 3- Indian economy

Introduction

India's performance at the 48th WorldSkills Competition in Shanghai, China, in September 2026 marked a major milestone in its skill development journey. Securing 10th position, with six silver medals and 20 Medals for Excellence, India entered the world's top ten for the first time. Beyond this record result, the achievement highlights the value of practical skills, sustained investment in skilled people and greater recognition for vocational careers.

WorldSkills Competition and India's Improving Performance

1. **About WorldSkills:** WorldSkills is an international skills competition held every two years, bringing together young professionals to demonstrate practical excellence across technical, industrial, digital, creative and service-related occupations.

2. **India's improving global position:** India progressed from 39th position in 2011 to 19th in 2017 and 13th in 2019 and 2024, before reaching 10th position in Shanghai in 2026.

3. **Record medal performance:** India won six silver medals and 20 Medals for Excellence, improving upon its 2024 performance of four bronze medals and 12 Medals for Excellence.

4. **Expansion into emerging skills:** India competed in 11 skill categories for the first time, including unmanned aerial systems, software testing, aircraft maintenance and intelligent security technology, reflecting its growing focus on specialised and future-oriented occupations.

Significance of India's Achievement

1. **Equal recognition for vocational careers:** The achievement challenges the traditional preference for academic degrees and examination rankings by showing that excellence in practical skills deserves equal social recognition.

2. **Wider opportunities for young people:** The success of competitors from diverse backgrounds demonstrates how practical training, specialised mentorship and industry exposure can help young people achieve professional excellence.

3. **Strengthening industrial competitiveness:** Skilled workers help industries operate physical assets productively, making investment in workforce capabilities important for improving industrial performance.

4. **Exposure to global standards:** International competition provides Indian competitors and experts with experience of advanced technologies, global occupational standards and international best practices.

5. **Expanding opportunities for women:** Women's participation in technical, creative and service-oriented fields, including chemical laboratory technology, logistics, fashion technology and health and social care, reflects widening opportunities in vocational education.

Government Initiatives and the Skilling Ecosystem

1. **IndiaSkills competition pathway:** More than 3.65 lakh candidates registered across 63 skills, with five regional competitions narrowing the field to around 650 national finalists before 70 competitors were selected for Shanghai.

2. **Institutional coordination:** The Ministry of Skill Development and Entrepreneurship (MSDE), the National Skill Development Corporation (NSDC), State governments, Sector Skill Councils, training institutions and industry partners coordinated talent identification, training and preparation.

3. **Industry-supported training:** Specialised training, mentorship, international exposure and industry partnerships helped competitors improve their technical proficiency and prepare for international standards.

4. **PM-SETU scheme:** The ₹60,000 crore Pradhan Mantri Skilling and Employability Transformation through Upgraded Industrial Training Institutes (PM-SETU) scheme aims to upgrade 1,000 government Industrial Training Institutes (ITIs) into 200 hubs and 800 spokes, with industry partners managing the clusters.

5. **Skill-Ex as an investment priority:** Skill-Ex refers to deliberate investment in developing skilled human resources. While capital expenditure (Capex) creates physical assets and operational expenditure (Opex) keeps them running, Skill-Ex develops the workforce needed to use them productively.

Way Forward

1. **Greater industry investment:** Employers should invest in workforce training as seriously as they invest in infrastructure and operations, ensuring workers have the skills required to use industrial assets effectively.

2. **Improved training and assessment:** Lessons from international competitions should be used to strengthen training methods, assessment standards and technical proficiency across India's skilling institutions.

3. **Stronger industry partnerships:** Industry partners should contribute to specialised training, mentorship and training infrastructure to align vocational education with changing occupational requirements.

4. **Wider access to skill development:** The district-to-national competition pathway should continue to identify talented young people from diverse backgrounds and provide opportunities to demonstrate their skills.

5. **Recognition of vocational careers:** Families and society should value vocational professions alongside academic qualifications, allowing young people to pursue careers according to their abilities and interests.

6. **Focus on Skill-Ex:** India should treat investment in skilled human resources as seriously as Capex and Opex, ensuring that physical infrastructure is supported by a competent and productive workforce.

Conclusion

India's WorldSkills performance shows the value of sustained investment in skilled people. Stronger industry partnerships, better training and assessment, and greater respect for vocational careers can help young people build skills. Treating skills as a priority alongside infrastructure can raise productivity and help India become a global skills hub.

Question for practice:
Examine how India's performance at the WorldSkills Competition reflects sustained investment in skill development and discuss the measures needed to establish India as a global skills hub.

Source: The Hindu

What Laws Protect Indian Seafarers Working in Conflict Zones?

UPSC Syllabus: Gs Paper 3- Indian Economy

Introduction

Conflicts in West Asia and the Black Sea have made shipping more dangerous, exposing merchant crews to attacks, injury and death. The risks are especially important for India, a major supplier of seafarers who work aboard foreign-flagged vessels. Their protection raises questions about the reach of Indian law, the duties of flag states, international rules governing navigation and armed conflict, and the government's ability to provide assistance.

Current Status of Indian Seafarers

1. **India's Global Seafaring Workforce:** According to the BIMCO-ICS Seafarer Workforce Report 2026, India has **311,936 seafarers, accounting for 12.16% of the global workforce**, making it the world's second-largest supplier after the Philippines.

2. **Workforce Composition:** India has **140,718 officers and 171,218 ratings**, accounting for 13.41% and 11.29% of their respective global categories.

3. **Growing Global Demand:** The global merchant fleet employs around **2.57 million seafarers** and may require an additional **113,735 officers by 2030**, creating opportunities for India to expand its workforce.

4. **Mission 20% Target:** India aims to raise its share of the global seafaring workforce to **20% under Mission 20%**, making seafarer safety and welfare increasingly important.

Major Challenges in Protecting Indian Seafarers

1. **Attacks on Merchant Vessels:** Armed conflicts expose commercial ships to missiles, drones and other attacks. **11 Indian crew members were among 12 people injured** when the Panama-flagged *MT On Peace* was hit in the Strait of Hormuz.

2. **Deaths and Missing Seafarers:** In 57 incidents linked to conflicts in West Asia and the Black Sea over three months, **15 Indian seafarers were killed and two remained missing**, showing the serious human cost of maritime insecurity.

3. **Foreign-Flagged Vessel Jurisdiction:** Many Indians work on vessels registered in countries such as Panama, Liberia and the Marshall Islands, making protection more complicated because these ships generally fall under their flag states' jurisdiction.

4. **Disruption of Strategic Shipping Routes:** The Strait of Hormuz carries major energy supplies, while the Black Sea supports grain and commodity trade; rerouting increases voyage times, insurance premiums and transportation costs.

5. **Uncertainty During Armed Conflict:** A vessel's legal status may depend on its cargo, conduct and links to parties in a conflict, while attacks may occur before authorities establish the relevant facts.

6. **Limits of Naval Protection:** The Indian Navy cannot escort every commercial vessel carrying Indian citizens, and military escorts in active conflict zones may create diplomatic and security complications.

Legal Framework for Seafarer Protection

1. Merchant Shipping Act, 2025

- **Scope and Applicability:** The Act replaced the Merchant Shipping Act, 1958, and came into force on **15 March 2026**, providing the domestic framework for the safety, welfare and employment of seafarers, primarily on Indian-registered vessels.

- **Right to Repatriation: Section 67** provides for repatriation without cost to seafarers in prescribed circumstances, while shipowners of Indian vessels must maintain financial security to support their return.

- **Protection of Abandoned Seafarers:** The Act allows an Indian ambassador near the place of abandonment to arrange a seafarer's return to a proper port and necessary maintenance, with the costs recoverable from the shipowner.

2. Maritime Labour Convention, 2006

- **Minimum Labour and Welfare Standards:** The **Maritime Labour Convention (MLC), 2006**, adopted by the International Labour Organisation (ILO), establishes minimum standards for wages, employment agreements, working hours, accommodation, food, medical care, occupational safety and complaint procedures.

- **Protection Relating to War Zones:** Under the MLC framework, repatriation provisions cover specified circumstances, including when a ship is bound for a war zone that a seafarer does not consent to enter, subject to applicable legal requirements..

- **Limits of Protection:** The Convention establishes labour and welfare standards but does not guarantee physical protection against missiles, drones or other military attacks.

3. International Maritime Law: UNCLOS and International Humanitarian Law

- **Navigation Rights under UNCLOS:** The **United Nations Convention on the Law of the Sea (UNCLOS), 1982**, governs maritime navigation and territorial waters, recognises the right of innocent passage subject to its provisions, and requires coastal states to publicise known dangers to navigation.

- **Protection under International Humanitarian Law:** During armed conflict, the principles of **distinction and proportionality** guide attacks at sea; merchant seafarers are generally civilians, and commercial ships do not automatically become lawful military targets merely because they enter conflict zones.

- **Jurisdiction and Enforcement Limitations:** Foreign-flagged vessels generally fall under their flag states' jurisdiction on the high seas, while incidents in ports, territorial waters and international waters may involve different authorities; international law does not guarantee protection from every attack.

Government Initiatives and India's Response

1. **Security Advisories and Deployment Restrictions:** In June 2026, the Directorate General of Maritime Administration issued directions restricting the deployment of Indian seafarers to conflict areas, subject to specified exceptions, and requiring monitoring and coordination with Indian missions.

2. **Diplomatic Intervention:** Following the *MV Golden Leo* incident in the Black Sea, India summoned Russia's chargé d'affaires and condemned the killing of Indian seafarers, using diplomatic channels to raise concerns over their safety.

3. **Repatriation and Emergency Assistance:** By early August 2026, **more than 4,000 Indian seafarers had been repatriated from the Gulf region**, supported by emergency communication and coordination mechanisms.

4. **Financial and Medical Support:** The government has provided medical and counselling assistance and announced **₹10 lakh in immediate financial assistance** to the next of kin of deceased seafarers under the Seafarers' Welfare Fund Society's Special High-Risk Area Scheme.

5. **Maritime Risk Management:** The Directorate General of Shipping's standard operating procedures cover risk assessment, reporting, crew protection and coordination with naval and security authorities to improve responses to maritime emergencies.

6. **International Coordination:** India works through diplomatic and maritime channels to assist affected crews, while the International Maritime Organization (IMO) has promoted evacuation arrangements and warned against exposing seafarers to serious risks without credible security guarantees.

Way Forward

1. **Strengthen Risk Assessment:** Shipping companies should assess voyage and security risks before entering high-risk waters and provide seafarers with clear information about prevailing dangers.

2. **Improve Monitoring and Emergency Response:** India should strengthen real-time tracking, emergency communication and coordination with shipping companies and Indian missions to identify threats and arrange timely evacuation.

3. **Ensure Employment and Insurance Protection:** Seafarers should receive adequate information about war risks, insurance coverage and employment conditions before accepting assignments in conflict-affected areas.

4. **Promote Safe-Passage Arrangements:** India should work through the IMO and other international forums to promote credible security arrangements, maritime corridors and timely warnings for commercial vessels.

5. **Strengthen Regional Cooperation:** India should cooperate with other major seafarer-supplying countries, particularly the Philippines, to coordinate diplomatic efforts and improve crew protection.

6. **Use Naval Assistance Where Feasible:** India should retain the capacity to rescue and evacuate its citizens when circumstances permit, while considering the legal, security and diplomatic constraints surrounding foreign-flagged vessels.

Conclusion

India's seafaring workforce is vital to global trade. Its growing size also increases the number of citizens exposed to maritime conflict. Domestic law and international conventions provide important labour, welfare and navigation protections, but cannot guarantee physical safety. India must combine risk prevention, diplomacy, effective evacuation and international cooperation to protect seafarers.

Question for practice:

Discuss the legal framework and government measures for protecting Indian seafarers working in conflict zones.

Source: Business Standards

Can rate hikes control cost-push inflation?

Source: The post **"Can rate hikes control cost-push inflation?"** has been created based on **"Can rate hikes control cost-push inflation?"** published in "**Business Line**" on 12th October 2026.

UPSC Syllabus: GS-3-Indian Economy

Context: Cost-push inflation occurs when the prices of goods and services rise due to an increase in production costs, such as oil, gas, electricity and transportation. The ongoing wars, tariff conflicts and geopolitical uncertainties have increased production costs globally, prompting central banks to raise interest rates.

About Inflation

1. Inflation refers to **a sustained increase in the general price level of goods and services in an economy,** which reduces the purchasing power of money.
2. **Types of Inflation**
    a. **Demand-pull inflation:** It occurs **when aggregate demand grows faster than the economy's ability** to produce goods and services. It is generally associated with strong economic growth and low unemployment.
    b. **Cost-push inflation:** It occurs **when rising production costs, such as wages, raw materials, fuel and transportation, reduce aggregate supply and increase prices.** Wars, natural disasters and higher international commodity prices can trigger it.

Can rate hikes control cost-push inflation?

1. **Reduction in credit demand:** Higher interest rates make borrowing expensive for businesses and consumers, thereby reducing credit demand and overall spending.
2. **Control over prices:** Lower demand may reduce the ability of producers to pass on higher costs to consumers, helping moderate inflation.
3. **Limited effectiveness:** Rate hikes cannot directly reduce the cost of imported oil, gas, electricity or transportation, which are the primary sources of cost-push inflation.
4. **Impact on employment:** Higher borrowing costs discourage investment, slow job creation and may lead to job losses, further reducing consumer demand.
5. **Global economic slowdown:** Persistent inflation, geopolitical uncertainty and the growing influence of AI may contribute to a prolonged slowdown in global output and employment.

Implications for India:

1. **Relative insulation:** India's moderate integration with global trade and financial markets may provide some protection against global economic shocks.
2. **Energy vulnerability:** Dependence on imported energy exposes India to fluctuations in international oil and gas prices.
3. **Fiscal constraints:** High government borrowing and existing welfare commitments limit the scope for additional borrowing and Keynesian fiscal stimulus.
4. **External challenges**: Weakening demand in Western economies may affect Indian exports and economic growth.
5. **Domestic vulnerabilities:** Droughts, floods, El Niño and other natural disasters may threaten economic stability and create additional inflationary pressures.

Way Forward

1. **Diversification of energy sources:** India should promote renewable energy and diversify its sources of oil and gas imports to reduce exposure to global price shocks.
2. **Strengthening supply chains:** The government should improve logistics, transportation and domestic manufacturing to reduce production costs.
3. **Balanced monetary policy:** The RBI should carefully calibrate interest rate changes by considering inflationary pressures, economic growth and employment.
4. **Prudent fiscal management:** The government should provide targeted support to vulnerable sections while maintaining fiscal discipline and avoiding excessive borrowing.
5. **Strategic reserves:** India should strengthen its strategic petroleum reserves to manage temporary disruptions in global energy supplies.
6. **Disaster preparedness:** Investment in climate-resilient infrastructure and disaster management can reduce supply disruptions caused by droughts, floods and other natural calamities.

Conclusion: Interest rate hikes can help control demand-driven inflation but have limited effectiveness against cost-push inflation. A balanced approach combining monetary policy, energy diversification, supply-side measures and prudent fiscal management is therefore necessary.

Question: Can rate hikes control cost-push inflation? Discuss the limitations of monetary policy in controlling cost-push inflation and examine its possible implications for the Indian economy.

Source: Business Line

The next farm revolution must aim at significantly raising farmers' incomes

Source: The post **"The next farm revolution must aim at significantly raising farmers' incomes"** has been created based on **"The next farm revolution must aim at significantly raising farmers' incomes"** published in "**Indian Express**" on 12th October 2026.

UPSC Syllabus: GS-3-Indian Economy

Context: Indian agriculture has achieved significant progress in food security, irrigation and agricultural exports since 2001-2026. India has strengthened its position as a major producer and exporter of agricultural commodities, while the expansion of foodgrain procurement and buffer stocks has helped ensure national food security. However, challenges such as climate change and ground water depletion and Post-harvest challenges, etc continue to affect the sector.

Achievement of Indian Agriculture

1. India's agriculture economy is **valued at around $600 billion and could cross $1 trillion over the next decade** through value-added processing and improved market linkages.
2. **Improved irrigation:** Following the droughts of 2014 and 2015, the government prioritised irrigation and crop insurance through the Pradhan Mantri Fasal Bima Yojana (PMFBY). Nearly 60% of India's gross cropped area is now irrigated.
3. **Food security:** India is the world's largest producer and exporter of rice. Foodgrain stocks remain above prescribed buffer norms despite the provision of free foodgrains under the PM Garib Kalyan Yojana.

4. **Agricultural trade:** In 2025–26, India exported agricultural products worth approximately $53 billion and imported goods worth $40 billion.
5. **Economic growth:** Agricultural GDP grew at an average annual rate of around 4% between 2014–15 and 2025–26.
6. **Exemplified Growth in Gujarat:** Gujarat recorded agricultural growth of over 9% annually, supported by irrigation, rural electrification, roads, agricultural extension and Bt cotton.

Major Challenges

1. **Mismatch between production and demand:** India produces surplus rice and wheat but faces shortages of pulses and oilseeds, increasing dependence on imports.
2. **Unsustainable cultivation:** Paddy cultivation in Punjab and Haryana puts pressure on groundwater. The water table in Haryana is reportedly declining by around 1.7 feet annually.
3. **Unequal incentives:** Subsidies on electricity, fertilisers and irrigation make paddy cultivation lucrative, discouraging farmers from shifting to pulses and oilseeds.
4. **Unfulfilled income goals:** The target of doubling farmers' real incomes remains unachieved. Agricultural growth of around 4% is insufficient to meet the much higher growth rate estimated by the Ashok Dalwai Committee.
5. **Post-harvest challenges:** Diversification into milk, fisheries, poultry, fruits and vegetables requires efficient value chains and access to high-income consumers because these products are perishable.

Way Forward

1. **Promote crop diversification:** Provide incentives of approximately ₹35,000 per hectare to pulses and oilseeds farmers to encourage a shift away from paddy. This could be supported through a 50:50 cost-sharing arrangement between the Centre and states.
2. **Rationalise subsidies:** Redirect existing power, irrigation and fertiliser subsidies towards crops that promote self-sufficiency and environmental sustainability.
3. **Promote agri-photovoltaics:** Install solar panels around 10–11 feet above agricultural land, with sufficient spacing to allow crops to grow underneath. This enables farmers to produce both food and solar energy, becoming annadata as well as urjadata.
4. **Reform PM-KUSUM:** Adapt the scheme along the lines of PM-Surya Ghar, provide comparable subsidies and ensure remunerative feed-in tariffs for solar power.
5. **Scale up successful models:** An ICRIER pilot project in Rajasthan reportedly increased a farmer's income eight to ten times through agri-photovoltaics. Such models can be expanded with suitable safeguards.
6. **Strengthen agricultural value chains:** Improve storage, processing, transportation and market access to raise returns from high-value agriculture.
7. **Conserve natural resources:** Encourage less water-intensive crops and sustainable farming practices to protect groundwater and the environment.

Conclusion: India's next agricultural revolution must focus on income enhancement, crop diversification and sustainable resource use, rather than production alone. Agri-photovoltaics, supported by appropriate policy reforms, can help bring about a new Surya Khet Kranti and contribute to the vision of Viksit Bharat 2047.

Question: Indian agriculture must focus not only on increasing production but also on significantly enhancing farmers' incomes. Discuss the major challenges facing Indian agriculture and suggest measures to achieve sustainable agricultural growth.

Source: Indian Express

The AI Challenge How to Maximise Economic Impact, Spread Gains Evenly

UPSC Syllabus: Gs Paper 2- Science and Technology

Introduction

Global AI investment has centred on advanced models, chips and data centres, encouraging the belief that gains will go to the companies building them. However, the World Bank Group's *World Development Report 2026: The Promise of Artificial Intelligence* argues that development gains depend on applying AI to practical problems at scale. For India, the challenge is to adapt AI to local needs and spread its benefits widely.

AI as a Driver of Inclusive Economic Growth

1. **Productivity and Economic Growth:** AI can sustain economic growth by improving productivity, expanding access to expertise and making public services more effective.
2. **Lower Risk of Job Automation:** Only 4.5% of jobs in low- and middle-income countries are highly exposed to generative AI automation, compared with 14.2% in high-income countries.
3. **Potential for Worker Productivity:** Another 16.2% of jobs in low- and middle-income countries could experience meaningful productivity gains, compared with 18.7% in advanced economies.
4. **Complementing Human Labour:** AI is more likely to support the work of many employees in developing countries than replace them, increasing their capabilities and efficiency.
5. **Affordable, Task-Specific Tools:** AI applications designed for specific tasks can make useful expertise more accessible to businesses, households and public institutions.
6. **Improving Public Service Delivery:** AI can assist teachers, support medical diagnosis, improve agricultural advice and strengthen public administration, expanding access to essential services.

India's Potential to Maximise AI Benefits

1. **Strength in Technology Deployment:** India's experience in deploying technology at population scale provides a strong foundation for applying AI to practical development challenges.
2. **Agricultural Productivity:** In Baramati, AI-supported farming reportedly increased sugarcane yields by 40% while reducing water and fertiliser use by 30%, demonstrating the potential for resource-efficient agriculture.
3. **Healthcare Screening:** AI-based tuberculosis detection has reportedly increased detection by 35%, while Wadhwani AI's screening tools demonstrate the potential to strengthen healthcare delivery.

4. **Weather Forecasting:** India combined multiple AI models to provide monsoon forecasts and farming advisories to millions through text, voice and AI-powered services, predicting the unusual 2025 monsoon.

5. **Multilingual Farmer Services:** Bharat VISTAAR and state-level AI chatbots can provide farmers with locally relevant information in multiple languages, improving access to agricultural advice.

6. **Agricultural and Animal Health Applications:** Gujarat's AgriStack serves 5 lakh farmers, while the Sarlaben animal-health initiative reportedly benefits 3 crore cattle and their farmers.

7. **Applications Across Sectors:** AI is being deployed in education, governance, financial services and public services, showing its potential beyond agriculture and healthcare.

Key Challenges in Scaling AI for Development

1. **Concentration of AI Resources:** Advanced chips, computing power, data, research talent and investment remain concentrated among a few firms and countries, limiting wider access.

2. **Dependence on Major Providers:** Although competition has made leading models relatively affordable, dependence on a small number of providers creates risks and may increase their market power.

3. **Inadequate Physical Infrastructure:** Reliable electricity, connectivity, affordable devices and computing resources are essential for the effective deployment of AI.

4. **Shortage of Local-Language Data:** AI systems need suitable local-language data to respond effectively to India's linguistic diversity and specific development needs.

5. **Gaps in Digital Skills:** People need the skills to use AI effectively, while workers and enterprises require greater capacity to integrate it into their activities.

6. **Limited Institutional Capacity:** Governments need the ability to evaluate, procure and regulate AI systems so that technology delivers measurable public benefits.

7. **Difficulty in Scaling Successful Pilots:** AI applications may work in limited settings but require financing, institutional ownership and integration with existing systems to reach millions of people.

8. **Weak National AI Preparedness:** Only one of the world's 25 low-income countries had published a national AI strategy, indicating gaps in preparedness among countries with substantial potential gains.

Government Initiatives to Strengthen India's AI Ecosystem

1. **Digital Public Infrastructure:** Aadhaar, UPI, DigiLocker and emerging data-sharing systems provide shared infrastructure that lowers costs, enables interoperability and supports innovation.

2. **Open Architecture and Competition:** UPI's open architecture offers a model for AI adoption by reducing dependence on a single provider and supporting competition, portability and flexibility.

3. **IndiaAI Compute Capacity:** The IndiaAI Mission seeks to improve access to computing resources, helping expand AI development and adoption beyond a few large technology companies.

4. **Indigenous Models and Datasets:** The Mission supports indigenous foundation models through the IndiaAI Innovation Centre and datasets through AIKosh, strengthening domestic AI capabilities.

5. **Application Development and Skills:** Its application development and FutureSkills pillars aim to promote practical AI solutions and build the human capabilities needed to use them.

6. **Startup Financing and Research:** IndiaAI Startup Financing, ANRF and RDIF support the broader effort to strengthen innovation, research and deep-tech investment.

7. **Safe and Trusted AI:** The Mission supports bias mitigation, algorithm auditing, explainable AI, privacy-preserving systems and deepfake detection, alongside institutional mechanisms for AI governance and safety.

8. **State-Level AI Innovations:** Andhra Pradesh's Navachetana screens children for developmental delays, Maharashtra's MahaVISTAAR AI supports farmers, Meghalaya's EdskGrid strengthens education governance, and Vyuhaa-Cerviai supports point-of-care cervical cancer screening.

Way Forward

1. **Design for Scale:** Every AI pilot should have a clear route to wider adoption, backed by financing, institutional ownership and integration with existing systems.

2. **Adopt a Full-Stack Approach:** Successful deployment requires software, skilled people and supporting institutions working together, rather than technology operating in isolation.

3. **Test Through Evidence:** India's scale makes rigorous evaluation feasible, allowing policymakers to test applications under real-world conditions before expanding them.

4. **Scale What Works:** Successful interventions should be expanded across states and ministries, while ineffective approaches should be discontinued.

5. **Share Lessons and Failures:** Systematic sharing of results can help governments learn from experience instead of repeatedly rediscovering effective approaches or repeating mistakes.

6. **Adapt AI to Local Needs:** India should prioritise cost-effective tools suited to its languages and development priorities rather than trying to match frontier AI companies' enormous investments.

7. **Strengthen Public Institutions:** Governments must improve their capacity to evaluate, procure and regulate AI while remaining flexible as the technology evolves.

8. **Ensure Inclusive and Responsible Adoption:** AI policies should preserve competition, contain risks, build public trust and ensure that productivity gains reach citizens, enterprises and institutions widely.

Conclusion

India's AI opportunity lies in turning technological advances into broad-based productivity gains. This requires affordable access, local adaptation, strong infrastructure, skilled people and capable institutions. By evaluating solutions, scaling what works and governing AI responsibly, India can spread benefits across sectors and communities and offer useful lessons for the Global South.

Question for practice:

Discuss how India can maximise the economic benefits of artificial intelligence while ensuring that its gains are distributed widely across society.

Source: Indian Express; PIB

India Will Not Succumb to Musk's Pressure Tactics

UPSC Syllabus: Gs Paper 2- International Relation

Introduction

India's dispute with Elon Musk over Starlink's entry reflects a wider conflict between technological innovation, corporate influence and national sovereignty. Satellite communication can improve connectivity in remote areas and support critical operations, but dependence on foreign-owned networks may create security risks. The key challenge is to benefit from advanced satellite technology while protecting national security, ensuring fair competition and retaining control over critical communication infrastructure.

The Starlink Dispute: Competition and Corporate Pressure

1. **Competition for Market Leadership:** Three players—Reliance Jio, Eutelsat OneWeb and Starlink—have received licences to establish satellite communication services in India. The existing telecom players and Starlink are competing to gain an early advantage in this emerging market.

2. **Musk's Allegations Against Indian Businesses:** On October 7, Musk accused Indian business interests of delaying Starlink's launch and criticised Mukesh Ambani on X. However, he offered no evidence to support his allegations.

3. **Government's Position on Competition:** Communications Minister Jyotiraditya Scindia responded on October 9 that India does not allow monopolies in any sector. Starlink had received significant authorisations, but security and spectrum procedures remained outstanding.

4. **Corporate Influence on Policymaking:** Musk used public criticism to pressure Indian authorities over Starlink's entry. His approach raises concerns about powerful business leaders using their public platforms to influence government decisions.

5. **Political Donations and Business Interests:** Reliance has considerable influence in Indian political circles, while Musk has a close relationship with Donald Trump and reportedly donated around $280 million to Trump's 2024 presidential campaign. These connections reflect the wider relationship between corporate wealth and political power.

From American Soft Power to Private Technological Influence

1. **Decline of Traditional American Soft Power:** USAID supported health, food security, education and disaster relief, helping the United States build international goodwill. Musk supported the campaign to dismantle the agency, although he did not single-handedly determine Washington's policy.

2. **Rise of Private Technological Power:** Starlink provides communication infrastructure, SpaceX supports critical space capabilities, and X gives Musk a global platform. Together, these businesses allow him to influence international debates through privately controlled technology.

3. **Social Media as a Tool of Corporate Pressure:** Musk can directly reach policymakers and millions of users without relying on traditional media or diplomatic channels. His posts can portray regulatory disagreements as conflicts between innovation and government resistance.

4. **Amplification Through Online Supporters:** Musk's supporters share and promote his criticism on social media, increasing public pressure on governments. This can make governments appear opposed to innovation even before they explain their regulatory decisions.

5. **Limits of the Technology-First Approach:** Musk's focus on removing unnecessary procedures has helped drive engineering innovation. However, security reviews, parliamentary scrutiny and regulatory safeguards cannot always be treated as obstacles because governments must protect public interests.

National Security: The Core of India's Concerns

1. **Growing Strategic Vulnerabilities:** Conflicts in Ukraine and the Gulf region, along with India's cross-border security experiences, have increased concerns about critical communication infrastructure. India's borders with China and Pakistan make reliable and secure networks particularly important.

2. **Risk of Regulatory Bypass:** Software changes could potentially allow satellite communications to bypass Starlink's Indian gateway and the associated regulatory and security requirements. Such possibilities raise concerns about the effectiveness of national oversight.

3. **Threats to Data Security:** A foreign-owned provider could potentially restrict services or withhold critical information during a conflict. Unauthorised access to sensitive communications could also expose India's security interests to hostile powers.

4. **Benefits of Satellite Connectivity:** Satellite services can improve connectivity in remote mountains, maritime regions and rural areas. They can also support disaster relief, military operations and government networks, making their exclusion undesirable.

5. **Affordability:** Experts cited in the discussion warn that satellite communication services may remain unaffordable for poorer users.

6. **Regulatory Access:** Criminals and non-state actors could also exploit overseas infrastructure to bypass regulatory supervision.

Way Forward

1. **Lessons from Ukraine:** Starlink supported civilian and military communications after Russia's 2022 invasion. However, its coverage was disabled over parts of Ukraine during a September 2022

counteroffensive, disrupting Ukrainian communications and highlighting the risks of depending on privately controlled critical services.

2. **Enforceable Service Continuity:** India should ensure that critical communication networks have enforceable operating arrangements, technical alternatives and continuity plans. These safeguards can reduce the risk of essential services being restricted during emergencies.

3. **Learning from Bangladesh:** Bangladesh's interim leader Muhammad Yunus engaged with Musk over Starlink, and the service was launched commercially in the country. A SpaceX adviser also promoted Yunus as a potential UN Secretary-General, illustrating how commercial engagement can overlap with international political outreach.

4. **Assessing Foreign Ownership and Governance:** Tencent invested in Tesla in 2017, while investigations have reported indirect Chinese investment in Musk's privately held businesses, including SpaceX. These investments do not establish Chinese control, access to sensitive systems or improper influence, but they underline the need to examine ownership and governance carefully.

5. **Clear and Consistent Regulations:** The government should clearly communicate security requirements, licensing conditions and spectrum procedures. Transparent rules and consistent treatment of domestic and foreign companies can reduce uncertainty and prevent perceptions of favouritism.

6. **Timely and Firm Implementation:** Genuine security concerns should be stated openly rather than left to speculation. Swift decisions and consistent implementation can counter corporate pressure more effectively than investor summits and memorandums of understanding alone.

7. **Protecting Strategic Autonomy:** India should benefit from advanced foreign technology without surrendering control over essential decisions to private suppliers. Security safeguards must not become excuses to protect domestic monopolies or unfairly restrict foreign investment.

Conclusion

India's Starlink dispute reflects the need to balance technological progress, fair competition and national sovereignty. The government should maintain transparent regulations, address genuine security concerns and ensure uninterrupted access to critical communication services. Strategic autonomy requires India to welcome innovation without becoming dependent on private providers. Clear communication and firm implementation can help India resist corporate pressure while protecting its national interests.

Question for practice:

Evaluate the challenges India faces in balancing technological innovation, foreign investment and national security in the context of Elon Musk's Starlink.

Source: Businessline

A digital India needs Wi-fi for everyone

Source: The post **"A digital India needs Wi-fi for everyone"** has been created based on **"A digital India needs Wi-fi for everyone"** published in "**Indian Express**" on 13th October 2026.

UPSC Syllabus: GS-2-Governance

Context: India has made significant progress in digital payments and mobile data usage by initiative like PM-WANI, but public Wi-Fi connectivity remains underdeveloped. India has around 4 lakh public Wi-Fi hotspots, compared with over 13 million in France, highlighting the need to expand affordable internet access.

About PM-WANI

1. The **Prime Minister's Wi-Fi Access Network Interface (PM-WANI)** is a **flagship scheme** launched by the **Department of Telecommunications (DoT).**
2. It aims **to accelerate proliferation of internet services by setting up public Wi-Fi Hotspots in the country** with the objective of building digital India and consequential benefits thereon.
3. Under the PM-WANI framework, **Public Data Offices (PDOs) establish, operate and maintain WANI compliant Wi-Fi Hotspots** based on their techno-commercial considerations and deliver internet services to subscribers.
4. **PDOs need to partner with a Public Data Office Aggregator (PDOA)** to deliver internet services.
5. As of 28 February 2026, **4,09,403 public Wi-Fi hotspots were operational, with 207 PDO Aggregators (PDOAs) and 113 App Providers registered.**

Significance of PM-WANI

1. **Digital inclusion:** It can improve internet access for students, workers and low-income households.
2. **Affordable internet:** It enables users to purchase connectivity according to their needs.
3. **Employment generation:** It creates opportunities for local entrepreneurs and small businesses.
4. **Rural connectivity:** It can support access to online education, telemedicine and government services in underserved areas.
5. **Reduced pressure on mobile networks:** Public Wi-Fi uses unlicensed spectrum and can supplement mobile data networks.
6. **Competition:** It can reduce dependence on a few major telecom operators by promoting an open and interoperable network.

Challenges in Implementing PM-WANI

1. **High backhaul costs:** Small Public Data Offices (PDOs) pay more for broadband connectivity than household consumers, making their operations financially unviable.
2. **Resistance from incumbents:** Established telecom operators have limited incentives to support small competitors outside their control.
3. **Weak implementation:** Although the PM-WANI framework was approved in December 2020, its potential remains largely unrealised.
4. **Poor last-mile connectivity:** BharatNet has connected over 2 lakh gram panchayats, but the absence of adequate retail distribution limits its benefits.
5. **Geographical barriers:** Hilly and forested regions may remain difficult to connect through optical fibre.

Importance of Public Wi-Fi

1. **Affordable connectivity:** Public Wi-Fi enables people to purchase small amounts of internet data according to their needs.
2. **Digital inclusion:** It benefits poor households, students attending online classes, and citizens accessing telemedicine and government services.
3. **Better connectivity:** It can serve areas where mobile signals are weak or unreliable.
4. **Reduced dependence:** It reduces excessive dependence on a few telecom companies and provides an alternative connectivity network.
5. **Efficient spectrum use:** Public Wi-Fi uses unlicensed spectrum and reduces pressure on mobile networks.

Way Forward

1. **Integrate BharatNet with PM-WANI:** BharatNet should provide affordable wholesale bandwidth to PDOs and aggregators.
2. **Ensure fair pricing:** The government should implement transparent and capped wholesale tariffs for broadband services.
3. **Enforce service guarantees:** Reliable connectivity and quality of service should be ensured for small operators.
4. **Explore alternative technologies:** Satellite broadband providers and other suitable technologies can help connect remote areas, subject to regulatory approvals.
5. **Promote open networks:** The government should support a consumer-first, interoperable Wi-Fi ecosystem that encourages competition.

Conclusion: PM-WANI has the potential to transform public internet access in India by making connectivity affordable, accessible and inclusive. Its effective implementation, supported by the integration of BharatNet, transparent wholesale pricing and participation of local entrepreneurs, can bridge the digital divide between rural and urban areas. It can also strengthen digital service delivery, promote entrepreneurship and reduce dependence on a few dominant telecom operators. Therefore, the government must demonstrate the political will to prioritise public interest and ensure that existing digital infrastructure benefits every citizen. A strong PM-WANI network can turn the vision of Digital India into a reality by making the internet accessible to all, irrespective of income or geographical location.

Question: "Public Wi-Fi is essential for inclusive digital connectivity in India." Discuss the challenges in implementing PM-WANI and suggest measures to make it more effective.

Source: Indian Express

Unregulated use of GM: A cautionary tale

Source: The post **"Unregulated use of GM: A cautionary tale"** has been created based on **"Unregulated use of GM: A cautionary tale"** published in "**Indian Express**" on 13th October 2026.

UPSC Syllabus: GS 3- Science & Technology

Context: A seed industry-commissioned study reveals that over a quarter of India's cultivated cotton area may comprise unauthorised genetically modified (GM) hybrids containing herbicide-tolerant (HT) and advanced Bt

traits. The study highlights the growing demand for advanced agricultural technology among farmers and the challenges arising from its adoption outside the government's regulatory framework.

About Genetically modified (GM) crops

1. Genetically modified (GM) crops are **developed by introducing specific genetic traits** to improve characteristics such as pest resistance and herbicide tolerance.
2. GM crops are plants **that have had their DNA altered using genetic engineering techniques.**
3. This process involves **inserting one or more genes from a different species into the plant's genome** to confer certain advantageous traits that aren't naturally present in the species e.g. Bt Cotton, which is widely grown in several countries, including India.
4. GM crops are **developed to improve crop yield, enhance nutritional value, reduce the use of chemical pesticides, and increase resistance** to environmental stressors like drought or frost.
5. **Bt cotton is India's major commercially approved GM crop.**
6. However, the growing use of unauthorised HT-Bt cotton hybrids highlights the conflict between farmers' demand for advanced technology and the government's regulatory approach.

Reasons for the growing adoption of unauthorised GM cotton

1. **High Cost of Manual Weeding:** Manual weeding costs farmers around ₹12,000–15,000 per acre, whereas two to three rounds of glyphosate application cost approximately ₹750–850. HT cotton allows farmers to control weeds with less dependence on manual labour.
2. **Labour Shortages:** The shortage of agricultural labour has increased farmers' interest in technologies that reduce the time and cost involved in weed management.
3. **Improved Pest Resistance:** Existing approved Bt cotton hybrids contain Cry1Ac and Cry2Ab genes, but these do not adequately control pink bollworm. The unapproved Vip3A Bt gene has a different mode of action and can provide protection against this pest.
4. **Farmer-Led Demand:** Farmers are prioritising lower cultivation costs and better crop protection. Their adoption of these seeds demonstrates acceptance of HT technology.
5. **Regulatory Restrictions:** The government has not authorised the commercial cultivation of cotton incorporating the glyphosate-tolerance and Vip3A traits. Consequently, farmers are obtaining such seeds through unauthorised traders and breeders.

Major Concerns Associated with Unregulated GM Cotton

1. **Violation of regulatory safeguards:** Unauthorised GM seeds are being produced and sold through illegal channels without the necessary government biosafety and regulatory approvals.
2. **Risks to farmers:** Farmers may become dependent on unreliable seed suppliers and may not receive the quality assurance associated with research-backed seed companies.
3. **Weakening of the organised seed industry:** The decline in approved seed sales undermines genuine seed companies that invest in research and development.
4. **Environmental and biosafety concerns:** Unapproved GM crops may be commercialised without the required assessment of their environmental and biosafety implications.
5. **Regulatory credibility:** Widespread unauthorised adoption indicates a gap between farmers' technological needs and the existing approval system.

Way Forward

1. **Adopt Science-Based Regulation:** Decisions on GM crops should be guided by empirical evidence, transparent risk assessment and independent biosafety evaluation rather than ideological considerations.
2. **Facilitate Regulated Field Trials:** Promising GM technologies should be evaluated through properly designed field trials under strict monitoring and safeguards.
3. **Make Timely Decisions:** The government should establish a responsive approval process that considers emerging challenges faced by farmers without compromising biosafety.
4. **Curb Illegal Seed Markets:** Authorities should strengthen seed traceability, monitor unauthorised breeding and distribution, and take action against illegal suppliers.
5. **Protect Farmers' Interests:** Farmers should have access to quality-assured seeds, reliable technical guidance and information about the benefits and risks of new technologies.
6. **Strengthen Agricultural Research:** Public research institutions and established seed companies should be encouraged to develop improved cotton varieties that address weed management, pest resistance and cultivation costs.

Conclusion: The growing adoption of unauthorised HT-Bt cotton demonstrates that regulatory restrictions cannot eliminate demand for agricultural innovation when farmers face persistent economic and production challenges. At the same time, farmer demand alone cannot substitute for scientific assessment and biosafety approval. India must bridge this gap through timely, transparent and evidence-based regulation, stronger enforcement against illegal seed suppliers and greater investment in agricultural research. A balanced approach can protect farmers, safeguard the environment, support the formal seed industry and strengthen India's long-term cotton productivity and competitiveness.

Question: Unregulated adoption of genetically modified (GM) cotton highlights the gap between farmers' needs and India's regulatory framework. Discuss the reasons, concerns and way forward in light of recent developments.

Source: Indian Express

Warming Himalayas Demand a Rethink on Development

UPSC Syllabus: Gs Paper 3- Infrastructure and Disaster **management**

Introduction

The Indian Himalayan Region (IHR) is facing increasingly frequent and severe climate-induced disasters as temperatures rise, glaciers retreat and mountain slopes become unstable. Warming in Asia's high mountains is occurring at 0.3°C per decade, nearly twice the global average. These changes threaten lives, infrastructure, water security and livelihoods, while exposing the limits of development that fails to account for Himalayan ecological and geological conditions across the region.

Understanding the Warming Himalayan Region

1. **Rapid Glacier Loss:** Ice-loss rates across the Hindu Kush Himalaya (HKH) have doubled since 2000, while Himalayan glaciers are losing mass 65% faster than a decade ago, increasing regional instability.

2. **Uneven Warming Patterns:** The western Himalaya is warming faster than the central and eastern stretches, with night-time minimum and winter temperatures rising at particularly high rates.

3. **Limited Scientific Understanding:** Only about 21 of the estimated 40,000 glaciers across the Himalaya-Karakoram region receive detailed, sustained monitoring, leaving major gaps in understanding changing mountain conditions.

4. **Growing Disaster Concentration:** Although the Himalayas cover around 18% of Indian land, they account for approximately 35% of disasters, showing the region's disproportionate exposure to hazards.

5. **A Shared Natural System:** The Himalayas form part of the global mountain system extending from the Hindu Kush and Karakoram, and their ecological instability threatens communities across national borders.

Causes and Mechanisms of Himalayan Hazards

1. **Rising Temperatures Accelerate Melting:** Higher atmospheric temperatures disturb the balance between winter snow accumulation and summer melting. Ice that once had temperatures of −6°C to −20°C is now closer to −2°C, making it more susceptible to melting.

2. **Meltwater Weakens Glaciers:** Meltwater enters deep shafts called moulins and reaches the bedrock, forming a pressurised layer between the rock and ice. This layer accelerates glacier movement, while water channels within and beneath the ice generate forces that can fracture it.

3. **Permafrost Thaw Destabilises Slopes:** Permafrost acts as geological cement by filling rock fractures with ice, but rising temperatures weaken this natural support and trigger rock avalanches, landslides and debris flows.

4. **Glacial Lake Instability Increases Flood Risks:** Retreating glaciers leave expanding lakes behind unstable deposits of rock and ice, increasing the possibility of sudden floods when their natural barriers fail.

5. **Black Carbon Intensifies Glacier Loss:** Black carbon contributes roughly one-third of Himalayan glacier melt, as soot from sources such as brick kilns absorbs sunlight when deposited on snow and ice.

6. **Hazards Trigger Cascading Disasters:** A mountain collapse can block a river, forming a temporary dam that may later burst and release destructive floods carrying mud, rocks and debris downstream.

Impacts of Himalayan Hazards

1. **Destruction of Lives and Infrastructure:** Climate-related mountain collapses and floods destroy settlements and infrastructure, as demonstrated by devastating floods in Nepal and Tibet that killed more than 1,300 people.

2. **Threats to Downstream Communities:** Mountain collapses can block rivers and form temporary dams. When these dams burst, they release destructive flash floods carrying mud, rocks and debris into downstream communities.

3. **Declining Long-Term Water Security:** The Himalayas supply rivers sustaining hundreds of millions of people across South Asia, but peak water is expected around mid-century in most Hindu Kush Himalaya (HKH) river basins before glacier runoff declines.

4. **Economic Dependence on Mountain Water:** Himalayan water supports roughly 20% of India's GDP, including wheat, rice, tea, hydropower and pilgrimage economies, while mountain states capture only around 5% of this value.

5. **Risks to Mountain Ecosystems and Livelihoods:** Increasing slope instability and changing glacier conditions threaten ecosystems, livelihoods and water security, while creating growing risks for communities and infrastructure downstream.

6. **Unequal Responsibility for Climate Damage:** Nepal contributes roughly 0.1% of global greenhouse gas emissions but faces severe climate-related losses, strengthening its demand for compensation for loss and damage.

Challenges in Himalayan Development

1. **Inadequate Hazard Monitoring:** Limited sustained glacier monitoring and gaps in real-time information prevent timely identification of glacier instability, permafrost thaw and emerging threats to downstream communities.

2. **High-Risk Glacial Lakes:** A 2025 scientific assessment examined 189 high-risk glacial lakes in the Indian Himalayan Region and classified 56 as very high risk. The Central Water Commission monitors 2,485 glacial lakes larger than 10 hectares across India's Himalayan river basins.

3. **Unsafe Infrastructure Planning:** Development projects that ignore changing geological conditions can expose roads, settlements and other infrastructure to unstable slopes, flash floods and cascading mountain hazards.

4. **Risks from Hydropower Construction:** The Avay Shukla and Ravi Chopra committees recommended restricting major hydropower projects or requiring detailed expert review of construction activities above 2,200 metres, reflecting concerns about fragile high-altitude environments.

5. **Questionable River-Linking Projects:** The proposed 8.7-km Chenab-Beas tunnel at 3,140 metres through the Pir Panjal Range requires serious reconsideration because of its location in a fragile Himalayan ecosystem.

6. **Tourism Pressure on Mountain Regions:** The Indian Himalayan Region receives approximately 400 million tourist visits annually, creating a need to prioritise locally retained economic value rather than simply increasing visitor numbers.

Way Forward: Building Climate-Resilient Himalayas

1. **Establish Regional Monitoring Systems:** Himalayan countries should cooperate through shared real-time data exchange, satellite and drone surveillance, and continuous monitoring of glacier instability and permafrost thaw.

2. **Strengthen Early-Warning Mechanisms:** Acoustic and hydrological sensors along glacier-fed rivers should detect sudden subsurface movements and flash surges, enabling authorities to alert downstream communities immediately.

3. **Improve Glacial Lake Management:** Glacial lakes require continuous monitoring and engineered drainage wherever feasible, alongside preparedness plans that specify evacuation and protection of vulnerable infrastructure when hazards emerge.

4. **Adopt Slope-Sensitive Flood Zoning:** Flood zoning should reflect valley slope, placing infrastructure higher above riverbeds in steep valleys and adopting different zoning approaches where gentler slopes spread destruction horizontally.

5. **Regulate High-Altitude Construction:** Hydropower projects above a defined elevation should face strict restrictions or detailed expert review, following recommendations by the Avay Shukla and Ravi Chopra committees concerning construction above 2,200 metres.

6. **Reassess Development Projects:** A moratorium should apply to development projects until they undergo rigorous reassessment of environmental impacts, hazard safety and climate resilience under changing Himalayan geological conditions.

7. **Reduce Black-Carbon Emissions:** India and neighbouring countries should reduce black-carbon pollution, particularly from brick kilns, because this directly addresses a major contributor to accelerated glacier melting.

8. **Promote Sustainable Tourism:** Tourism planning should shift from maximising visitor numbers towards generating economic value that remains within mountain communities and can be reinvested in local development.

Conclusion

The Himalayas cannot remain safe if development ignores their changing climate and geology. Protecting the region requires shared monitoring, effective early warnings, lower black-carbon emissions and strict scrutiny of high-altitude projects. Development must also protect local livelihoods and retain tourism benefits within mountain communities, while respecting ecological limits across this shared natural system.

Question for practice:

Examine the causes and impacts of warming in the Himalayas and suggest measures to promote climate-resilient development in the region.

Source: The Hindu; BBC

A Common Language for Justice

UPSC Syllabus: Gs Paper 2- Constitution of India

Introduction

The debate over Hindi as the Supreme Court's official language raises questions about constitutional authority, judicial efficiency and access to justice. English remains prescribed for proceedings in the Supreme Court and High Courts, while citizens may face barriers when they cannot fully understand it. The central issue is how India can preserve consistency in judicial proceedings while making court processes and judgments accessible across its many languages.

Constitutional and Legal Framework Governing Judicial Language

1. **Article 348(1)(a):** English is the prescribed language for proceedings in the Supreme Court and High Courts until Parliament provides otherwise by law. Parliament has not enacted such a law to replace English.

2. **Article 348(2):** The Governor may authorise Hindi or another official language of the State for High Court proceedings, with the President's prior consent. However, this provision does not itself authorise judgments, decrees or orders in that language.

3. **Section 7 of the Official Languages Act, 1963:** It allows the use of Hindi or a State's official language for High Court judgments, decrees and orders, subject to the President's prior consent and an authoritative English translation issued under the High Court's authority.

4. **Existing use of Hindi:** Hindi was authorised in the Rajasthan High Court in 1950 and subsequently in Uttar Pradesh (1969), Madhya Pradesh (1971) and Bihar (1972), following consultation with the Chief Justice of India.

5. **Role of the Chief Justice of India:** A Cabinet Committee decision of 21 May 1965 stipulated that the Chief Justice of India's consent should be obtained for proposals to introduce languages other than English in High Courts.

6. **Rejection of other language proposals:** In 2012, the Supreme Court's Full Court rejected proposals to introduce Tamil, Gujarati, Hindi, Bengali and Kannada in five High Courts. In 2016, it reaffirmed its earlier position after Tamil Nadu sought reconsideration.

Why English Continues as the Common Language of Higher Judiciary

1. **Constitutional continuity:** English remains the prescribed language under Article 348, providing a common framework for proceedings across the Supreme Court and High Courts.

2. **Judicial communication:** In Madhu Limaye & Anr. v. Ved Murti & Ors. (1970), the Supreme Court held that an intervener insisting on arguing in Hindi could not participate because the Bench could not follow his arguments.

3. **Consistency of legal precedents:** Existing judgments and legal materials are largely available in English, making a sudden transition to another language difficult without reliable translations.

4. **Administrative convenience:** The Constituent Assembly debates reflected concerns that different languages could create difficulties in legislation, legal interpretation and communication between High Courts and the Supreme Court.

5. **International legal engagement:** The 216th Report of the Law Commission considered English's global importance and the need for Indian judicial personnel to be proficient in the language.

6. **Judicial familiarity:** The Law Commission's examination of compulsory Hindi noted that many judicial personnel were not sufficiently familiar with Hindi, making an immediate transition difficult.

Challenges of the Existing Language System

1. **Barriers to public participation:** Citizens and lawyers with limited English proficiency may struggle to present arguments or understand proceedings before higher courts, reducing their ability to participate effectively.

2. **Limited understanding of judgments:** Complex legal language and English-based judgments can make court decisions difficult for ordinary citizens to understand, creating distance between the judiciary and the public.

3. **Colonial legacy:** English gained prominence under British rule through colonial legal and administrative systems, including legislative codification associated with the Charter Act of 1833 and Macaulay's role in legal drafting.

4. **Gap between original intent and current practice:** English was retained partly for administrative convenience, but its continued dominance raises questions about the persistence of an arrangement initially viewed as temporary.

5. **Limits of a single-language replacement:** Replacing English with Hindi alone would not address the needs of citizens speaking other Indian languages. Any reform must account for India's linguistic diversity.

Initiatives Taken to Improve Access to Justice in Indian Languages

1. **AI-assisted translation:** SUVAS (Supreme Court Vidhik Anuvaad Software) supports the translation of Supreme Court judgments into 16 languages.

2. **Translation of judgments:** As of December 2, 2023, 31,184 Supreme Court judgments and 4,983 High Court judgments had been translated into regional languages.

3. **Translation committees:** The Supreme Court and High Courts have established committees to support AI-assisted legal translation.

4. **Common legal vocabulary:** The Bharatiya Bhasha Samiti is developing a common core vocabulary to facilitate the translation of legal material.

5. **Regional-language accessibility:** The Supreme Court has begun providing brief descriptions of its reports in Hindi, with plans to extend the initiative to other regional languages.

Way Forward

1. **Gradual Legal Reforms:** Parliament should consider changes to the existing language framework in consultation with State governments and the judiciary, while following constitutional procedures.

2. **Technological Infrastructure:** Courts should strengthen the infrastructure needed to translate judgments, legislation and court proceedings into Indian languages using AI-assisted tools.
3. **Training and Capacity-Building:** Judges, lawyers and court staff should receive appropriate training to manage multilingual proceedings and use translation technologies effectively.
4. **Accuracy of Legal Translation:** Translation systems should preserve the precise meaning of legal terms, judgments and precedents to avoid inconsistencies in legal interpretation.
5. **Standardisation of Legal Terminology:** Courts should adopt consistent legal terminology across Indian languages to improve the clarity and reliability of translated legal materials.
6. **Linguistic Inclusiveness:** Language reforms should recognise India's linguistic diversity rather than replace English with Hindi alone, ensuring that speakers of different Indian languages can access justice.
7. **Learning from Global Practices:** India can study the use of national or official languages in the judicial systems of Rwanda, Tanzania, Egypt, France and Germany, while adapting relevant practices to its multilingual context.

Conclusion

India must balance judicial consistency with linguistic inclusion. English provides a common language for higher courts, but limited proficiency can restrict participation and understanding. Gradual reforms, accurate translations, trained personnel and shared legal terminology can improve access to justice. Any change must follow constitutional procedures and respect Parliament's and the judiciary's respective roles.

Question for practice:

Discuss the challenges associated with the use of English in the Indian judiciary and the measures needed to make justice more accessible in Indian languages.

Source: The Hindu; PIB

India's problem of overtreatment and overmedication

Source: The post "**India's problem of overtreatment and overmedication "** has been created based on **"India's problem of overtreatment and overmedication "** published in "**The Hindu**" on 14th October 2026.

UPSC Syllabus: GS-2-Governance

Context: In India, Over-treatment and Over-medication is increasing healthcare expenditure, exposing patients to avoidable risks and diverting resources from essential primary healthcare. The problem arises from a combination of fragmented healthcare services, financial incentives, patient expectations and inadequate medical coordination. This needs to be addressed.

About Over-treatment and Over-medication

1. **Over-treatment** refers **to unnecessary medical tests, procedures and interventions that provide little** or no benefit to patients.
2. **Over-medication** occurs when patients are **prescribed or consume medicines** that are unnecessary or inappropriate for their medical condition.

Causes of over-treatment and over-medication

1. **Unnecessary testing: Excessive screening and diagnostic tests** can cause false-positive results, anxiety, overdiagnosis and unnecessary treatment.
2. **Fragmented healthcare: Excessive dependence on specialists leads to multiple prescriptions** without considering the patient's overall health.
3. **Polypharmacy:** Polypharmacy is the concurrent use of multiple medications by a patient. **A 2021 review reported polypharmacy among about 49% of older adults in India,** while a **2025 study found that nearly one-third took five or more prescribed medicines.**
4. **Commercialisation of healthcare: Fee-for-service payments and the sale of tests and procedures** can encourage unnecessary medical interventions.
5. **Health insurance: Insurance may encourage patients and hospitals** to prefer costlier interventions, even when they are not medically necessary.
6. **Patient expectations: Patients may consider multiple medicines and investigations** essential for **satisfactory treatment.**
7. **Defensive medicine: Doctors may order additional tests** to avoid missing rare diagnoses, despite the risks associated with testing.

Consequences

1. Unnecessary medical interventions can cause **avoidable complications, infections and treatment-related harm.**
2. Excessive medicines can i**ncrease adverse drug reactions** and may expose patients to inappropriate or unnecessary medication.
3. Rising medical expenditure **creates financial stress for patients and increases pressure** on health insurance systems.
4. Over-treatment can **reduce trust between doctors and patients** and divert resources from essential healthcare.

Way forward

1. **Strengthen primary healthcare:** General physicians should coordinate treatment and refer patients to specialists when necessary.
2. **Promote evidence-based medicine:** Doctors should follow clinical guidelines and prescribe medicines only when medically justified.
3. **Improve medical coordination:** Electronic health records and shared medical histories can prevent duplicate tests and prescriptions.
4. **Encourage deprescribing:** Doctors should regularly review medicines and discontinue unnecessary prescriptions under appropriate supervision.
5. **Reform incentives:** Payment systems should reward quality, patient outcomes and appropriate care rather than the volume of procedures.
6. **Raise awareness:** Patients should be encouraged to ask about the necessity, benefits, risks and alternatives of proposed treatments.
7. **Strengthen regulation:** Medical associations, professional bodies and policymakers should promote rational prescribing and develop India-specific clinical guidelines.

Conclusion: Over-treatment and over-medication are not merely medical problems; they also reflect weaknesses in healthcare delivery, financing and regulation. India must shift from a treatment-intensive

approach towards patient-centred, evidence-based and affordable healthcare. Strengthening primary care, improving medical coordination and promoting rational prescribing can protect patients, reduce unnecessary expenditure and ensure that healthcare resources are used where they are most needed.

Question: Over-treatment and over-medication have emerged as major challenges to India's healthcare system. Discuss the causes, consequences and measures needed to address this problem.

Source: The Hindu

India-U.S. ties and the hurdle of American unilateralism

Source: The post **"India-U.S. ties and the hurdle of American unilateralism"** has been created based on **"India-U.S. ties and the hurdle of American unilateralism"** published in "**The Hindu**" on 14th October 2026.

UPSC Syllabus: GS-2-International Relations

Context: India and the United States have developed a comprehensive strategic partnership covering trade, defence, technology and regional security. However, differences over trade policies, immigration, strategic autonomy and American unilateral actions have created tensions. The challenge is to protect mutual interests while respecting each other's sovereignty and strategic priorities.

Major areas of cooperation

1. Defence cooperation: Both countries have strengthened defence partnerships through military agreements, joint exercises and cooperation in defence technology. Initiatives such as the India–U.S. Defence Acceleration Ecosystem (INDUS-X) aim to promote defence innovation and industrial collaboration.

2. Trade and investment: The United States is an important economic partner for India. Bilateral trade in goods and services creates opportunities for investment, employment and economic growth in both countries.

3. Critical and emerging technologies: Cooperation in semiconductors, artificial intelligence, telecommunications and other advanced technologies can strengthen India's technological capabilities and reduce strategic vulnerabilities.

4. Regional and global security: Both countries share concerns regarding regional instability, maritime security and the rise of strategic competitors. Their cooperation contributes to maintaining a favourable balance of power in the Indo-Pacific.

Major challenges in bilateral relations

1. Trade disputes and tariffs: Differences over tariffs, market access and trade restrictions have created friction. American demands for greater access to Indian markets sometimes conflict with India's domestic economic priorities.

2. Immigration and labour certification: Restrictions affecting Indian professionals and technology companies have raised concerns about employment opportunities and the movement of skilled workers.

3. American unilateralism: Washington's tendency to impose tariffs, sanctions and policy conditions without sufficient consultation can undermine mutual trust and create uncertainty in bilateral relations.

4. Strategic autonomy: India's continued defence and energy engagement with Russia has occasionally conflicted with American expectations. India seeks to diversify its partnerships and make independent foreign policy decisions.

5. The Pakistan factor: Differences over Pakistan and regional security remain sensitive. India's concerns about cross-border terrorism may not always align with Washington's diplomatic approach.

6. Gap between announcements and implementation: Ambitious initiatives in defence and critical technologies may face delays due to regulatory barriers, technology-transfer restrictions and differences in strategic priorities.

Way forward

1. Promote mutual respect: Both countries should recognise each other's sovereignty, national interests and legitimate security concerns.

2. Resolve trade disputes through dialogue: Regular negotiations should address tariffs, market access and investment barriers while avoiding sudden unilateral measures.

3. Strengthen technology cooperation: Both sides should translate agreements into measurable outcomes through technology transfer, joint research and defence manufacturing.

4. Respect India's strategic autonomy: The United States should recognise India's independent foreign policy choices, while India should continue engaging constructively with Washington on shared interests.

5. Institutionalise strategic dialogue: Regular high-level consultations can prevent disagreements from escalating and improve coordination on regional and global issues.

Conclusion: India–U.S. relations are important for economic development, technological advancement and Indo-Pacific stability. However, their long-term success depends on moving beyond transactional interests towards a balanced partnership based on mutual respect, trust, reciprocity and respect for strategic autonomy. American unilateralism should not overshadow the shared benefits of bilateral cooperation.

Question: India–U.S. relations have expanded significantly in recent years, but American unilateralism continues to create challenges. Discuss the major areas of cooperation and discord between the two countries and suggest a way forward.

Source: The Hindu

Margin caps on cancer drugs, could there be more on the anvil?

Source: The post **"Margin caps on cancer drugs, could there be more on the anvil?"** has been created based on **"Margin caps on cancer drugs, could there be more on the anvil?"** published in "**The Hindu**" on 15th October 2026.

UPSC Syllabus: GS-2-Governance

Context: The Central Government has approved a cap on trade margins of non-scheduled anti-cancer drugs to address high medicine prices and make cancer treatment more affordable. The move comes amid concerns raised by the Supreme Court regarding excessive mark-ups and the need to protect patients from high out-of-pocket healthcare expenditure.

Key features of the government's move

1. The Centre has approved a cap on trade margins of non-scheduled anti-cancer drugs at 30% of the Maximum Retail Price (MRP).
2. The measure is expected to reduce medicine prices by up to 70% and help cancer patients save approximately ₹2,500 crore annually.
3. A committee of experts under the Directorate General of Health Services (DGHS) is finalising the list of medicines to be covered, while the National Pharmaceutical Pricing Authority (NPPA) will take the final decision.
4. The National List of Essential Medicines (2022) includes 388 drugs, covering 63 anti-cancer drugs.

Rationale behind the measure

1. **Excessive trade mark-ups:** NPPA data analysis indicates that non-scheduled anti-cancer drugs carry an average trade mark-up of approximately 170%, reaching up to 700% in certain cases.
2. **Price variations:** Medicine prices and discounts vary substantially across retail pharmacies, hospitals and e-pharmacies.
3. **High financial burden:** Cancer treatment imposes a significant out-of-pocket expenditure burden on patients and their families.
4. **Supreme Court intervention:** The issue gained attention following a breast cancer drug Ribociclib case in Kerala and petitions seeking regulatory action against high prices of medicines and medical devices.
5. **Previous success:** In February 2019, the NPPA capped trade margins on 42 selected non-scheduled anti-cancer drugs, reducing MRPs by up to 91% and reportedly generating annual savings of ₹984 crore across 526 brands.

Possibility of extending price controls

1. The Supreme Court has reportedly questioned why similar trade margin caps cannot be extended to other non-scheduled medicines and medical consumables in the interest of patients.
2. State regulators in Maharashtra, Rajasthan and Karnataka have also raised concerns about steep mark-ups on medicines and consumables used in hospitals.
3. The anti-cancer drug market comprises approximately 225 drugs and 500 formulations, with an estimated annual turnover of ₹12,500 crore. Scheduled cancer drugs account for around ₹2,250 crore, while the remaining market comprises non-scheduled drugs.

Concerns and challenges

1. **Pharmaceutical industry:** The Indian Pharmaceutical Alliance has argued that medicine prices in India are among the lowest globally and has called for adequate trade margins.
2. **Hospitals:** The Association of Healthcare Providers of India has emphasised the need for evidence-based pricing, pointing to high operating costs and capital investments. It has stated that many hospitals have operating margins of 8–12%.

3. **Balanced regulation:** Pricing decisions must distinguish between excessive mark-ups and legitimate costs involved in manufacturing, distribution and healthcare delivery.

Way Forward

1. **Evidence-based regulation:** The government should extend margin caps to other medicines and medical consumables after examining market data, cost structures and patient affordability.
2. **Transparent pricing:** Hospitals, pharmacies and e-pharmacies should disclose medicine prices and applicable discounts to reduce information asymmetry and unjustified price variations.
3. **Strengthen monitoring:** The NPPA and State drug regulators should regularly monitor trade margins and take action against excessive mark-ups.
4. **Stakeholder consultation:** The government should consult pharmaceutical companies, hospitals, distributors and patient groups to balance affordability with the financial sustainability of healthcare services.
5. **Improve access to affordable medicines:** The government should strengthen the availability of quality generic medicines and affordable treatment options for vulnerable patients.
6. **Periodic review:** The impact of price controls on medicine prices, availability and supply should be assessed regularly to prevent shortages and ensure continued access to essential treatments.

Conclusion: The government's decision is an important step towards affordable and equitable healthcare. Extending similar controls to other medicines and medical consumables may be considered through evidence-based regulation, transparent pricing and stakeholder consultation, while ensuring the sustainability of pharmaceutical supply chains and healthcare institutions.

Question: The government's move to cap trade margins on non-scheduled anti-cancer drugs is aimed at making healthcare more affordable. Discuss the rationale behind this measure and examine the possibility of extending similar price controls to other medicines and medical consumables.

Source: The Hindu

Electric mobility – the way ahead

Source: The post **"Electric mobility – the way ahead"** has been created based on **"Electric mobility – the way ahead"** published in "**The Hindu**" on 15th October 2026.

UPSC Syllabus: GS-2-Governance

Context: The transition towards electric mobility is not merely a shift from conventional vehicles to electric vehicles but a broader transformation of India's energy system, industrial development and urban transportation. E-mobility is essential for strengthening energy security, promoting economic growth and achieving environmental sustainability. As the national capital, Delhi must take the lead in this transition by developing clean, efficient, accessible and integrated mobility solutions.

About Electric mobility

1. Electric mobility refers to the transition from conventional fossil-fuel-powered vehicles to electric vehicles (EVs).

2. EVs do not produce exhaust emissions from their tailpipes and generally have fewer moving parts than conventional vehicles.
3. Electric mobility includes electric two-wheelers, three-wheelers, cars, buses and other vehicles used for passenger and goods transportation.
4. It is essential for India's environmental sustainability, energy security and economic growth.
5. With rising mobility needs, air pollution and urban congestion, electric mobility offers an opportunity to build a cleaner, more efficient and sustainable transport system.

Significance of electric mobility

1. **Environmental sustainability:** Electric mobility can reduce vehicular emissions, improve air quality and contribute to India's fight against climate change.
2. **Energy security:** It can reduce dependence on fossil fuels by promoting cleaner energy sources and more efficient transport systems.
3. **Economic opportunities:** The EV ecosystem can generate employment in engineering, electronics, software, battery manufacturing, component production, logistics and specialised services.
4. **Industrial development:** Domestic EV manufacturing can attract investment, promote technological innovation and strengthen India's participation in global value chains.
5. **Sustainable urbanisation:** Electric mobility can help address traffic congestion, urban expansion and air pollution while improving the quality of urban life.

Progress made by India

1. **Government initiatives:** The FAME programme and the PM E-DRIVE scheme have supported the expansion of electric mobility.
2. **Financial support:** The PM E-DRIVE scheme, with an outlay of ₹10,900 crore, supports electric vehicles, charging infrastructure and related testing infrastructure.
3. **Domestic manufacturing:** India has started moving towards greater adoption of Made-in-India electric vehicles and the development of domestic manufacturing capabilities.
4. **Technological development:** Progress in EV production and supporting infrastructure provides opportunities to strengthen the country's automotive and technology sectors.

Challenges in electric mobility

1. **Inadequate infrastructure:** Limited charging facilities and supporting infrastructure can discourage the widespread adoption of electric vehicles.
2. **Battery technology:** Battery performance, alternative materials, energy storage and recycling require continued technological development.
3. **Domestic technological capabilities:** India needs to strengthen its capabilities in battery manufacturing, electronics, software and EV components to sustain electric mobility at scale.
4. **Integrated urban mobility:** Traffic congestion, air pollution, urban expansion and the growing demand for transportation require coordinated planning.
5. **Affordability and accessibility:** The success of electric mobility cannot be measured only by the number of EVs on the road; citizens must also have access to reliable public transport and convenient charging facilities.

Special significance for Delhi

1. **Air quality improvement:** As one of the world's major metropolitan regions, Delhi faces serious challenges relating to air pollution, congestion and urban expansion. Electric mobility can help reduce vehicular emissions and improve the daily lives of citizens.
2. **Cleaner public transport:** Electric buses and other forms of cleaner mobility can make public transport more sustainable and efficient.
3. **Integrated transport system:** Delhi needs to combine electric mobility with reliable public transport, last-mile connectivity, charging infrastructure and intelligent traffic management.
4. **Opportunity for innovation:** With more registered vehicles than the other three metropolitan cities, Delhi can serve as a platform for bringing government, industry, academia and technology companies together to develop scalable urban mobility solutions.

Way Forward

1. **Expand charging infrastructure:** The government should establish reliable and accessible charging facilities across cities and along major transport routes.
2. **Strengthen domestic manufacturing:** India should develop indigenous capabilities in battery technology, alternative materials, electronics, software and EV components.
3. **Promote battery recycling:** Efficient recycling systems should be developed to recover valuable materials, reduce waste and support a sustainable battery ecosystem.
4. **Encourage research and innovation:** Universities, research institutions, entrepreneurs and technology companies should collaborate to develop solutions suited to Indian cities.
5. **Prioritise public and shared transport:** The adoption of electric buses and other shared transport services should be encouraged to benefit the millions of people who depend on them daily.
6. **Integrate urban planning:** Electric mobility should be linked with public transport, last-mile connectivity, intelligent traffic management and wider urban infrastructure.
7. **Ensure affordability:** Policies should ensure that electric mobility remains accessible to ordinary citizens and is not limited to private vehicle owners.
8. **Strengthen coordination:** Government, industry, academia and financial institutions should work together to mobilise investment, build long-term capabilities and translate policy commitments into large-scale implementation.
9. **Adopt a citizen-centric approach:** The success of electric mobility should be measured through reliable public transport, convenient charging facilities, cleaner air and more efficient movement across cities.

Conclusion: Electric mobility is not merely about replacing conventional vehicles; it represents a broader transformation of energy use, industrial development and urban transportation. India must combine policy support, domestic innovation, reliable infrastructure and integrated public transport to achieve a cleaner, more efficient and sustainable mobility system. Delhi can play an important role in demonstrating how coordinated efforts can translate electric mobility policies into practical solutions for citizens.

Question: Electric mobility is not merely a shift from conventional vehicles to electric vehicles but a broader transformation of India's energy system, industrial capabilities and urban development. Discuss its significance, challenges and the way forward, with special reference to Delhi.

Source: The Hindu

A contested UNSC seat poses a test for India

Source: The post **"A contested UNSC seat poses a test for India"** has been created based on **"A contested UNSC seat poses a test for India"** published in "**The Hindu**" on 16th October 2026.

UPSC Syllabus: GS 2 – International Relations

Context: India's candidature for a non-permanent seat on the UNSC for the 2028–29 term is an important test of its diplomatic influence and ability to build international consensus. The contest is complicated by competing candidates, regional divisions and differences in countries' foreign policy priorities.

Major challenges faced by India

1. **Intense electoral competition:** India faces a challenging diplomatic contest as countries seek to secure support for their respective candidatures. Tajikistan has already announced its candidature for the 2028–29 term, making the contest more competitive.
2. **Lack of regional consensus:** The Asia-Pacific Group has several countries with different strategic interests and diplomatic alignments. Therefore, securing broad regional support for India's candidature may prove difficult.
3. **Uncertainty over diplomatic support:** India cannot assume that its traditional partners will automatically vote in its favour. Voting decisions are often influenced by national interests, bilateral relations and changing geopolitical circumstances.
4. **Influence of China:** China's growing diplomatic influence in the region may affect the calculations of other countries. India must therefore strengthen its engagement with regional states to secure adequate support.
5. **Competing regional candidates:** There is a wider regional contest involving **countries** such as Bangladesh, the Philippines and Kyrgyzstan. Their respective diplomatic interests make the electoral situation more complex.
6. **Differences over Israel and Palestine:** The Gaza conflict and Israel's actions have created divisions among countries. India's position must be considered in the context of its strategic partnerships, diplomatic interests and relations with countries that strongly support the Palestinian cause.
7. **Difficulty in securing the required votes:** Election to a non-permanent UNSC seat requires a two-thirds majority of the General Assembly members present and voting. Therefore, India must secure support beyond its immediate regional partners.

India's diplomatic strengths

1. **Experience in the UNSC:** India has served as a non-permanent member of the UNSC eight times. This experience demonstrates its familiarity with multilateral diplomacy and international security issues.
2. **Engagement with the Global South:** India has established diplomatic relationships with developing countries across Asia, Africa and other regions. These relationships can help India build wider support for its candidature.
3. **Advocacy of UN reforms:** India has consistently supported reform of the UNSC to make it more representative of contemporary global realities. Its demand for a greater role in global governance provides an important basis for its diplomatic outreach.
4. **Established international partnerships:** India's relationships with several countries and regional groupings provide opportunities to negotiate support. However, these partnerships need to be strengthened through sustained engagement rather than being taken for granted.

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Way forward

1. **Strengthen diplomatic outreach:** India should intensify bilateral consultations with countries in the Asia-Pacific region and other parts of the world to understand their concerns and build support.
2. **Build consensus among developing countries:** India should deepen its engagement with African, Asian and Caribbean countries and strengthen its relationships with members of the Global South.
3. **Adopt a balanced diplomatic approach:** India should carefully manage its strategic partnerships and differences over international conflicts while maintaining constructive engagement with countries having different positions.
4. **Continue advocating UNSC reforms:** India should maintain its demand for a more representative Security Council, including expansion of both permanent and non-permanent membership.
5. **Evaluate electoral options carefully:** India must assess the evolving diplomatic situation and the possibility of competing candidates withdrawing or contesting the election. Any decision should be based on a realistic assessment of support and diplomatic interests.

Conclusion: India's candidature for a non-permanent UNSC seat is a test of its diplomatic outreach, regional influence and ability to build consensus. Sustained engagement with developing countries, balanced foreign policy and continued advocacy for UN reforms can strengthen India's position. Ultimately, India's long-term objective should remain the creation of a more representative and effective Security Council that reflects contemporary global realities.

Question: A contested UNSC seat poses a test for India. In the light of India's bid for a non-permanent seat on the United Nations Security Council (UNSC) for the 2028–29 term, discuss the challenges faced by India and suggest the way forward.

Source: The Hindu

A reality check on AI boom: Eight risks to look out for

Source: The post **"A reality check on AI boom: Eight risks to look out for"** has been created based on **"A reality check on AI boom: Eight risks to look out for"** published in "**Indian Express**" on 16th October 2026.

UPSC Syllabus: GS 3- Science and technology

Context: Artificial Intelligence is transforming economies, industries and governance through rapid technological advancements. AI models are expanding faster than their financing, governance mechanisms and social acceptance, raising concerns about the sustainability of the AI boom.

About AI Boom

1. The AI boom refers to the rapid growth in the development, adoption, investment and use of Artificial Intelligence (AI) across different sectors of the economy.
2. It is driven by advances in AI technology, the availability of large amounts of data, improved computing power and increasing investment by governments and private companies.

Eight major risks associated with the AI boom

1. Economic uncertainty and high interest rates

a. AI companies are operating amid economic uncertainty, high valuations of technology stocks, rising energy prices and fiscal pressures in the United States.
b. Higher interest rates increase borrowing costs and affect homebuyers as well as companies investing in expensive data centres, which are essential for AI development.

2. Revenue growth lagging behind capital expenditure

a. AI companies are investing heavily in computing infrastructure, while their revenue growth may not be sufficient to justify these investments.
b. There are concerns regarding OpenAI's lower-than-expected annualised revenue, Anthropic's operating losses and the decline in Meta's free cash flow.
c. This gap between expenditure and revenue raises questions about the long-term financial sustainability of AI companies.

3. Increasing cost of financing infrastructure

a. Major US hyperscalers are expected to spend approximately $725 billion on capital expenditure in 2026, particularly on data centres.
b. As companies increasingly depend on debt, private credit and complex financing arrangements, their exposure to financial risks is growing.
c. If AI investments fail to generate expected returns, losses could affect banks, insurers and pension funds, creating wider financial instability.

4. Overvaluation of AI companies

a. The high valuations and proposed trillion-dollar public listings of leading AI companies reflect strong investor expectations about their future growth.
b. However, the postponement of the anticipated IPOs of OpenAI and Anthropic indicates that investors are reassessing the gap between market valuations and actual financial performance.
c. Excessive speculation could lead to a sharp correction in AI-related stocks and investor losses.

5. Regulatory uncertainty

a. Governments may impose restrictions, safety requirements and regulatory controls on advanced AI models.
b. There are regulatory slowdowns affecting three frontier models and the growing emphasis on internal safety controls and external audits.
c. Unpredictable regulatory interventions could delay product launches, increase compliance costs and affect business confidence.

6. Legal liability and risks from rogue AI

a. AI systems may cause harm through cyberattacks, copyright violations, privacy breaches and other unintended consequences.
b. Such incidents can expose AI companies, their directors and officers to substantial legal claims and financial liabilities.
c. The absence of clear accountability mechanisms may complicate the identification of responsibility when AI systems cause harm.

7. Military use of AI and ethical concerns

a. The use of autonomous AI in conflicts such as Ukraine, Gaza and Iran raises concerns about human oversight, civilian casualties, proportionality and accountability.
b. The use of AI as a revenue-generating technology in warfare may encourage its deployment without adequate consideration of humanitarian consequences.
c. The growing role of autonomous systems highlights the need for international norms governing AI-enabled warfare.

8. Public opposition to data centres

a. The rapid expansion of data centres has generated opposition from local communities due to concerns about drinking-water availability, electricity shortages, noise pollution, land use and limited permanent employment.
b. Such concerns have already prompted protests and reversals of some projects.
c. At the same time, the rapid expansion of China's data-centre capacity raises strategic concerns for the United States and other countries regarding technological competitiveness and national security.

Way forward

1. **Ensure sustainable investment:** AI companies should align capital expenditure with realistic revenue projections and avoid excessive dependence on speculative valuations and debt.
2. **Strengthen financial transparency:** Companies should disclose their financing arrangements and exposure to financial risks to reduce the possibility of wider financial instability.
3. **Establish predictable regulations:** Governments should introduce clear, consistent and risk-based regulatory frameworks that promote innovation while ensuring safety and accountability.
4. **Create legal accountability:** Clear rules should determine responsibility for AI-related cyberattacks, privacy violations, copyright infringement and other forms of harm.
5. **Ensure human oversight in warfare:** The use of autonomous AI in military operations should incorporate meaningful human scrutiny, civilian protection and accountability.
6. **Promote sustainable data centres:** Data-centre development should account for water availability, electricity requirements, environmental impacts and the concerns of local communities.
7. **Build public trust:** AI companies should improve transparency, address workforce concerns and demonstrate tangible social and economic benefits.

Conclusion: AI has immense potential to transform economic growth, public services and scientific research. However, its long-term success depends on whether technological progress is supported by sustainable financing, responsible regulation, ethical deployment and public acceptance. The objective should be to promote responsible AI innovation rather than an unchecked AI boom.

Question: Artificial Intelligence is transforming the world, but its rapid growth raises several concerns. Examine the challenges posed by the AI boom and suggest a way forward.

Source: Indian Express

'Innovate Today, Nourish Tomorrow' for Food Security

UPSC Syllabus: Gs Paper 3- Food Security

Introduction

World Food Day, observed on 16 October, carries the 2026 theme "Innovate Today, Nourish Tomorrow." It draws attention to a food crisis in which an estimated 645 million people faced hunger in 2025, while one-third of the world's population could not afford healthy diets. India has moved from food scarcity to production, but food security also depends on nutrition, climate resilience, distribution and access to food.

Current Status of Food Security: Global Challenges and India's Progress

1. **Global Hunger Amid Food Abundance:** Despite sufficient agricultural output, millions cannot afford nutritious diets. In 2025, a healthy diet cost an average of $4.28 per person per day, compared with the international extreme poverty line of $3 under purchasing power parity (PPP).

2. **Climate Risks, Conflict and Economic Shocks:** Climate change reduces crop yields and disrupts growing seasons, while wars damage harvests, displace farmers and interrupt supply chains. Economic shocks and food-price inflation further weaken purchasing power.

3. **The Double Burden of Malnutrition:** Asia had 292 million people facing chronic hunger in 2025, while 35% of women of reproductive age and 65% of children aged 6–23 months lacked minimally diverse diets. Some Pacific countries face high childhood stunting alongside rising adult obesity.

4. **India's Transition from Scarcity to Surplus:** India moved from dependence on foreign food assistance in the 1960s to becoming a major agricultural producer. The Green Revolution, high-yielding seed varieties, expanded irrigation and assured prices supported this transformation.

5. **Growth in Agricultural Production:** India's foodgrain production reached 376.56 million tonnes in 2025–26, according to the supplied figures. India is also a leading producer of rice, milk, millets, pulses, fruits and vegetables.

6. **Agricultural Exports and Global Trade:** India's agricultural exports reached a record **$52.55 billion in 2025–26**, up from $51.12 billion in 2024–25, strengthening its role in global agricultural trade.

7. **Agriculture and Rural Livelihoods:** Fruit and vegetable production increased by more than 64 million metric tonnes over the past decade, expanding agricultural output and strengthening the economic base of rural areas.

India's Initiatives for Food Security and Nutritional Security

1. **Legal Entitlement to Food:** The National Food Security Act (NFSA), 2013, provides subsidised foodgrains to up to 75% of the rural and 50% of the urban population, covering approximately 81 crore people.

2. **Free Foodgrain Distribution under PMGKAY:** The Pradhan Mantri Garib Kalyan Anna Yojana provides free foodgrains to eligible beneficiaries. The scheme was extended from January 2024 for five years, with a stated government expenditure of ₹11.80 lakh crore.

3. **Digitisation of Food Distribution:** Digitised ration cards, Aadhaar seeding and One Nation One Ration Card strengthen the Targeted Public Distribution System. Migrant workers can access their foodgrain entitlements across the country.

4. **Universal Rice Fortification:** The government has extended the universal supply of fortified rice under central schemes until December 2028. The rice contains iron, folic acid and vitamin B12 to help address micronutrient deficiencies, including anaemia.

5. **Biofortification of Crops:** The Indian Council of Agricultural Research has developed more than 100 varieties of biofortified crops. These varieties aim to improve nutritional quality through crop development.

6. **Promotion of Millets as Shree Anna:** Millets require relatively little water and can grow under difficult climatic conditions. Their promotion through processing, agri-start-ups and exports creates opportunities for climate-resilient farming and dietary diversification.

7. **Self-Reliance in Pulses:** The National Mission for Self-Reliance in Pulses has an allocation of ₹11,440 crore for 2025–26 to 2030–31, with the goal of achieving self-sufficiency in pulses by 2031.

8. **Reducing Edible Oil Imports:** India imports approximately 55–60% of its edible oil consumption. The National Mission on Edible Oils–Oil Palm promotes cultivation in northeastern states and the Andaman and Nicobar Islands to increase domestic production.

Role of Innovation in Transforming India's Agri-Food Systems

1. **Digital Agriculture and AgriStack:** The Digital Agriculture Mission, with an allocation of ₹2,817 crore, supports digital land records, agricultural information and technology-based farming services. These tools can improve farm management and production decisions.

2. **Direct Financial Support to Farmers:** PM-KISAN has transferred more than ₹3 lakh crore to over 11 crore farmers, according to the supplied figures. Direct benefit transfers help farmers meet expenses such as purchasing seeds and fertilisers.

3. **Digital Advisory and Dairy Management:** The Food and Agriculture Organization (FAO) supports digital agricultural advisory services and trains extension workers. Its Clean Milk Scorecard helps dairy farmers assess cattle management, hygiene and milk production practices.

4. **Reducing Food Losses:** FAO measures food losses and assesses their environmental impacts. Composting, bioenergy and recycling can convert agricultural waste into useful resources while improving resource efficiency.

5. **Innovative Financing and Private Investment:** The International Fund for Agricultural Development (IFAD) combines production support, market access, finance and small-scale infrastructure to attract investment into rural value chains. Every dollar invested by IFAD in India has leveraged more than three dollars in total investment, while its global projects with strong private-sector participation have delivered income gains of 64%.

6. **Improving Food Distribution through Technology:** The World Food Programme (WFP) supports Grain ATMs, supply-chain optimisation and solutions developed through IIT Delhi's Public Services Lab. These innovations aim to improve the efficiency of India's public food distribution system.

7. **Nutrition-Sensitive Food Assistance:** WFP assesses food baskets and recommends dietary diversity, including nutrient-rich millets and other nutricereals. Its work also seeks to improve food assistance for children and pregnant women.

Major Challenges to Sustainable Food and Nutritional Security

1. **Affordability of Healthy Diets:** High food costs push vulnerable households towards cheaper, energy-dense and highly processed alternatives. Poor-quality diets are linked to more than 12% of deaths worldwide, making affordability a major nutrition concern.

2. **Climate Vulnerability and Resource Constraints:** Monsoon dependence, extreme weather and changing growing seasons threaten agricultural productivity. Fragmented landholdings and limited resources make it difficult for some farmers to adopt resilient farming practices.

3. **Micronutrient Deficiencies and Poor Dietary Diversity:** Adequate calorie intake does not guarantee sufficient vitamins, minerals and other nutrients. Anaemia, childhood stunting and inadequate dietary diversity show the need to improve nutritional outcomes alongside food production.

4. **Dependence on Imported Agricultural Commodities:** India's reliance on imported pulses and edible oils exposes domestic supplies to external market conditions. Greater domestic production is necessary to reduce this vulnerability.

5. **Limited Investment in Rural Value Chains:** Private investment is often weak in the early stages of food systems, where risks are high and small farmers need finance and infrastructure. This restricts access to markets and opportunities to raise rural incomes.

6. **Food Losses and Supply-Chain Inefficiencies:** Post-harvest losses waste agricultural output and resources, reducing farmers' earnings and the food available for consumption. Better storage, handling and distribution are necessary to address these losses.

7. **Unequal Access to Nutritious Food:** Fresh produce and protein remain scarce or unaffordable in some local food environments. Low purchasing power and limited market access disproportionately affect vulnerable households, women and young children.

Way Forward

1. **Move from Food Sufficiency to Nutritional Security:** Food policies should ensure affordable, safe and diverse diets rather than focusing only on calorie availability. Fortification, biofortified crops and nutrition-sensitive food assistance can help address hidden hunger.

2. **Scale Up Climate-Resilient Agriculture:** Promote water-efficient crops, climate-resilient varieties, millets and improved agricultural advisory services. These measures can help farmers manage changing weather conditions and sustain productivity.

3. **Strengthen Smallholder Farmers and Women:** Improve access to finance, infrastructure, technology, training and markets, especially for small farmers and women. Traditional knowledge should complement scientific advances to develop locally suitable solutions.

4. **Improve Food Value Chains:** Better storage, processing, supply-chain management and market access can reduce food losses and increase farmers' earnings. Composting, bioenergy and recycling can also improve resource efficiency.

5. **Make Healthy Diets More Affordable:** Food assistance should consider dietary diversity and nutritional requirements, particularly for children and pregnant women. Stronger local markets, purchasing power and nutrition-sensitive social protection can improve access to healthy food.

6. **Integrate Agriculture with Health and Sanitation:** India's food security programmes can benefit from stronger links with primary healthcare, clean water, sanitation and nutrition education. Community-based approaches in countries such as Indonesia show how integrated services can reduce food insecurity.

7. **Promote International Cooperation:** India can share agricultural technologies, digital distribution systems and financing models with developing countries. Global partnerships should help adapt innovations to local farming conditions and support progress towards SDG 2: Zero Hunger by 2030.

Conclusion

India's progress in food production and public distribution provides a strong foundation, but food security must also ensure affordable, diverse and nutritious diets. The next step is to combine climate-resilient farming, better value chains, targeted social protection and support for smallholders and women. Innovation should make food systems more inclusive, sustainable and resilient.

Question for practice:

Examine the role of innovation in strengthening food security and nutritional security in India, highlighting the major challenges and the way forward.
Source: The Hindu

Kigali Amendment: India's Cooling Transition and Climate Commitments

UPSC Syllabus: Gs Paper 3- Ecology, and Environment

Introduction

The Kigali Amendment to the Montreal Protocol marks its 10th anniversary on 15 October 2026. Adopted in 2016, it aims to phase down hydrofluorocarbons (HFCs), powerful greenhouse gases used in refrigeration and air-conditioning. Although HFCs do not deplete the ozone layer, they contribute significantly to global warming. As cooling demand increases, India faces the challenge of meeting its growing cooling needs while reducing refrigerant emissions and electricity consumption through energy-efficient technologies.

Background and Current Status of the Kigali Amendment

1. **Montreal Protocol, 1987:** The Protocol aimed to phase out chlorofluorocarbons (CFCs) and other ozone-depleting substances, helping protect the ozone layer from harmful ultraviolet radiation.

2. **Progress in Phasing Out Ozone-Depleting Substances:** Countries have eliminated nearly 99% of controlled ozone-depleting substances under the Montreal Protocol, helping the ozone layer recover and demonstrating the value of international cooperation.

3. **Transition from CFCs to HFCs:** HFCs became common refrigerants because they do not deplete ozone, but many have hundreds or thousands of times the warming impact of carbon dioxide.

4. **Adoption and Entry into Force:** Adopted in Kigali, Rwanda, on 15 October 2016, the amendment entered into force in January 2019 to control HFC production and consumption.

5. **Early Efforts to Control HFCs:** As HFC use increased, the Federated States of Micronesia and Mauritius proposed bringing these gases under the Montreal Protocol in 2009, paving the way for the Kigali Amendment.

6. **Binding Phase-Down Schedule:** The amendment sets legally binding schedules to progressively reduce HFC production and consumption rather than eliminate all use immediately, with developing countries receiving longer compliance periods.

7. **Differentiated Timelines:** Developing countries receive longer compliance periods, recognising their different technological and financial capacities while maintaining the overall objective of reducing HFC emissions.

8. **International Participation:** By early October, 175 parties had joined the amendment, indicating substantial global support but leaving scope for wider participation.

Significance of the Kigali Amendment

1. **Climate Change Mitigation:** Full implementation could prevent approximately 0.3°C–0.5°C of global warming by 2100. Many HFCs have hundreds or thousands of times the 100-year warming impact of carbon dioxide, weight for weight.

2. **Combined Benefits of Sustainable Cooling:** Using lower-warming refrigerants and more energy-efficient equipment addresses both refrigerant emissions and electricity-related emissions, potentially doubling the climate benefit.

3. **Lower Electricity Consumption:** Energy-efficient cooling appliances reduce household running costs and limit the additional electricity-generating capacity needed to meet rising cooling demand.

4. **Strengthening Global Climate Action:** The Kigali Amendment builds on the Montreal Protocol's successful approach of binding targets, technological progress and financial support to reduce HFC emissions and limit global warming.

India's Cooling Challenge and Commitments

1. **Rising Cooling Demand:** India's cooling demand is projected to more than double by 2035 under current policies, increasing pressure on electricity infrastructure and climate commitments.

2. **Significant Electricity Consumption:** Cooling accounts for slightly more than 10% of India's annual electricity demand, while air-conditioners can consume up to one-third of power on hot summer nights.

3. **Ratification and Compliance:** India ratified the amendment in September 2021 and must freeze HFC production and consumption in 2028.

4. **Baseline for Compliance:** India's HFC reduction targets are measured against a baseline calculated using the average HFC production and consumption during 2024–2026, plus 65% of the historical HCFCs (hydrochlorofluorocarbons) baseline.

5. **Phased Reduction Targets:** India must reduce HFC production and consumption against its agreed baseline by 10% in 2032, 20% in 2037, 30% in 2042 and 85% in 2047.

6. **Early Improvement in Appliance Efficiency:** Since cooling equipment may remain in use well into the 2030s, stronger efficiency standards can reduce household electricity bills and limit future demand for power generation.

7. **Prevent Inefficient Equipment Imports:** Weak efficiency standards can attract appliances that fail to meet requirements in stricter markets, leaving Indian consumers with unnecessarily high electricity bills over the equipment's lifetime.

8. **India Cooling Action Plan:** Launched in 2019, the plan targets a 20%–25% reduction in cooling demand, a 25%–30% reduction in refrigerant demand and a 25%–40% reduction in cooling-related energy requirements by 2037–38.

Key Challenges in Implementation

1. **Balancing Cooling Demand and Climate Goals:** India must expand access to cooling while meeting HFC reduction targets, avoiding a transition that increases electricity consumption and associated emissions.

2. **Pressure on Electricity Infrastructure:** Rising air-conditioning use during summer evenings can strain power systems, especially when cooling demand remains high after solar electricity generation declines.

3. **High Transition Costs:** Manufacturers must modify production processes and adopt suitable technologies, while high equipment prices can make efficient cooling less affordable for consumers.

4. **Refrigerant Leakage and Disposal:** Refrigerants can escape during equipment servicing and disposal, requiring recovery, reuse or safe destruction beyond restrictions on newly produced HFCs.

5. **Technology and Safety Barriers:** Some alternatives, such as propane, have low warming potential but present flammability risks, while proprietary synthetic alternatives can involve high technology and licensing costs.

6. **Limited Finance and Technology Access:** Developing countries need funding and suitable technologies to modify manufacturing processes, while domestic industries must also bear transition costs beyond the support provided by the Multilateral Fund.

7. **Unequal Access to Cooling:** Higher appliance prices can limit access for low-income households, creating a difficult balance between environmental compliance and protection from extreme heat.

Financing and Institutional Support

1. **Role of the Multilateral Fund:** Established in 1990 and operational since 1991, the Fund receives contributions from developed countries to help developing countries meet the additional costs of complying with the Montreal Protocol.

2. **Emission Reductions Supported by the Fund:** The Fund estimates that its work helped developing countries avoid emissions equivalent to approximately 50 billion tonnes of carbon dioxide between 1995 and 2021.

3. **Cost-Effectiveness of Financial Support:** The Fund's expenditure amounted to approximately **US$0.07 per tonne of carbon dioxide-equivalent emissions avoided**, although this figure covers the Fund's expenditure rather than all transition costs.

4. **Support for India's Industrial Transition:** Access to finance and suitable technologies can help Indian manufacturers modify production processes and train cooling-equipment technicians while meeting growing market demand.

Way Forward

1. **Improve Appliance Efficiency:** India should strengthen efficiency standards before treaty deadlines to reduce electricity consumption, lower household running costs and limit future power-generation requirements.

2. **Promote Passive Cooling:** Cool roofs, external shading, suitable windows and wall insulation can reduce indoor temperatures and dependence on mechanical cooling.

3. **Strengthen Building Regulations:** Effective implementation of energy-efficient building codes can reduce cooling requirements in new buildings and improve long-term energy performance.

4. **Develop Sustainable Cooling Technologies:** Manufacturers should adopt refrigerants with lower global warming potential while addressing safety requirements, technological barriers and affordability concerns.

5. **Improve Refrigerant Recovery and Management:** Training technicians and strengthening servicing practices can prevent refrigerant leakage, while recovered gases should be reused or safely destroyed when reuse is impractical.

6. **Expand Financial and Technological Support:** The Multilateral Fund should continue supporting developing countries in converting factories, training technicians and adopting suitable technologies, helping manufacturers manage transition costs.

7. **Strengthen International Cooperation:** The Friends of the Kigali Amendment coalition, revived in New York on 23 September and supported by the Climate and Clean Air Coalition, can promote wider participation, mobilise finance and improve access to efficient cooling equipment and refrigerant recovery.

8. **Develop International Action on Methane:** The Montreal Protocol could provide a model for a binding agreement to reduce methane emissions from oil and gas operations through emission measurement and leak repair, using existing technologies.

9. **Adopt Sector-Specific Measures for Short-Lived Climate Pollutants:** Methane reduction from cattle should account for small farmers' incomes and food production, while black carbon control requires action on sources such as diesel engines and household cooking fuels.

Conclusion

The Kigali Amendment offers India an opportunity to align affordable cooling with climate commitments. Success depends on meeting HFC reduction targets, improving appliance efficiency, managing refrigerants safely and supporting manufacturers through the transition. Strong implementation and international cooperation can help India reduce emissions while meeting rising cooling needs fairly and sustainably.

Question for practice:

Evaluate the significance of the Kigali Amendment in addressing climate change and examine the challenges India faces in implementing its commitments.

Source: Indian Express

Balancing foreign investment with tax sovereignty

Source: The post **"Balancing foreign investment with tax sovereignty"** has been created based on **"Balancing foreign investment with tax sovereignty"** published in "**Indian Express**" on 17th October 2026.

UPSC Syllabus: GS 3– Indian Economy

Context: Bilateral Investment Treaties (BITs) are agreements between two countries that provide protection to foreign investors and help create a predictable investment environment. However, excessive investor protection may restrict a country's regulatory autonomy, particularly its power to formulate and implement tax policies. India's experience with the Cairn Energy and Vodafone cases shows how foreign investors can use international investment protection mechanisms to challenge certain government decisions, including tax-related measures.

About Bilateral Investment Treaties (BITs)

1. Bilateral Investment Treaties (BITs) are **reciprocal agreements between two countries to promote and protect foreign private investments** in each other's territories.
2. BITs provide minimum guarantees for foreign investments, including national treatment, which ensures equal treatment of foreign and domestic investors, and fair and equitable treatment under international law.
3. They also protect foreign investments against expropriation (unlawful seizure or takeover of assets) by the host country.

Key concerns associated with BITs

1. **Conflict with tax sovereignty:** BITs may allow foreign investors to challenge government tax measures through international arbitration, potentially limiting India's ability to exercise its sovereign taxation powers.
2. **Unequal treatment of investors:** Foreign investors may enjoy access to international arbitration and other protections that are not equally available to domestic investors, creating concerns about fairness.
3. **Misuse of investor protection provisions:** Broad provisions such as fair and equitable treatment may be invoked by investors to challenge regulatory decisions, even when the government's actions are aimed at legitimate public objectives.
    a. **Examples of tax disputes:** The Cairn and Vodafone cases illustrate how foreign investors have challenged India's tax-related actions through international investment dispute mechanisms.
4. **Risk of expropriation claims:** Investment treaties protect investors against the unlawful taking of their assets. However, such protections must be distinguished from a government's legitimate right to change tax policies and regulations.
5. **Forum shopping:** Investors may choose bilateral investment treaties rather than tax treaties to pursue disputes through more favourable mechanisms. It has been noted that 134 tax-related investor-state dispute settlement (ISDS) cases were admitted over the preceding decade, and tax treaties were available for dispute resolution in 53 per cent of these cases.
6. **Inconsistency with India's position:** India has maintained at various international forums that tax matters should not be subject to investment arbitration. Including tax disputes within BIT mechanisms may therefore conflict with this position.
7. **Pressure on developing countries:** Developing countries may face pressure to provide extensive investment protections, even when these protections restrict their ability to implement domestic policies in the public interest.

Way forward

1. **Explicitly exclude tax disputes from BITs:** India should clearly exclude taxation matters from investment treaty arbitration while preserving its legitimate right to frame tax policies.
2. **Strengthen the Mutual Agreement Procedure (MAP)**: India should improve state-to-state dispute resolution under MAP to facilitate the settlement of cross-border tax disputes through dialogue between the countries concerned.
3. **Adopt balanced dispute resolution mechanisms:** India can consider approaches such as Brazil's cooperation and investment facilitation agreements, which rely on state-to-state resolution and joint committees rather than investor-state arbitration.
4. **Ensure equal access to justice:** Foreign investors should not receive preferential access to faster dispute resolution at the cost of domestic investors. Any reduction in dispute resolution timelines should benefit the broader justice system.
5. **Improve domestic legal remedies:** India should ensure that investors have access to transparent, predictable and effective domestic legal processes before international dispute mechanisms are considered.
6. **Maintain a balanced investment framework:** BITs should protect investors against arbitrary treatment while preserving India's ability to regulate taxation in the public interest.
7. **Assess the actual benefits of BITs:** India should evaluate the effectiveness of BITs in attracting foreign investment, as empirical evidence does not conclusively establish that such treaties substantially increase investment inflows.

Conclusion: India needs to strike a balance between protecting foreign investment and preserving its tax sovereignty. A transparent investment framework, effective domestic remedies and stronger state-to-state dispute resolution can improve investor confidence without compromising the rights of domestic taxpayers or the government's legitimate regulatory powers.

Question: Bilateral Investment Treaties (BITs) play an important role in attracting foreign investment but may also constrain a country's tax sovereignty. Discuss the key concerns and suggest a way forward for India

Source: Indian Express

Metrics to Minds — Restoring Purpose to Universities

UPSC Syllabus: Gs Paper 2- Issues relating to development and management of Social Sector/Services relating to Education,

Introduction

India's higher education system increasingly relies on standardised entrance examinations and numerical indicators to assess students, teachers and researchers. Examinations such as NEET, JEE and UGC NET aim to ensure uniform selection, while publication counts and research scores influence academic recruitment. However, these methods may overlook critical thinking, originality and intellectual depth. The key challenge is to balance fair assessment with academic judgment and institutional autonomy.

Current Status of Assessment and Recruitment in Higher Education

1. **Centralised Entrance Examinations:** NEET, JEE and UGC NET assess lakhs of candidates through standardised formats, including multiple-choice questions, across different academic disciplines and stages of education.

2. **Metric-Based Faculty Recruitment:** Selection committees increasingly use publication counts and research scores for appointments and promotions, making measurable output an important indicator of academic performance.

3. **Numerical Weight for Doctoral Degrees:** Some faculty selection matrices allocate **30 marks to a PhD**, although this weight may not adequately reflect the quality of the thesis or the candidate's research.

4. **Publication Identifiers and Academic Merit:** ISBN (International Standard Book Number) and ISSN (International Standard Serial Number) identify books and serial publications respectively, but these identifiers alone do not establish the scholarly quality of published work.

Initiatives and Regulatory Reforms

1. **UGC Regulations, 2018:** The University Grants Commission discontinued the earlier API-based Performance Based Appraisal System (PBAS) and introduced a revised framework incorporating research scores.

2. **National Education Policy (NEP), 2020:** The policy provides a framework for improving higher education through **multidisciplinary learning, institutional autonomy and stronger teaching and research**.

3. **Proposed Unified Higher Education Regulator:** The Viksit Bharat Shiksha Adhishthan (VBSA) Bill, 2025, proposes replacing the UGC, AICTE (All India Council for Technical Education) and NCTE (National Council for Teacher Education) with a unified regulatory structure. Its implications for academic autonomy and regulatory compliance remain under consideration.

4. **National Credit Framework (NCrF):** The framework facilitates credit accumulation and transfer across academic, vocational and skill-based education, providing greater flexibility in learning pathways.

5. **National Higher Education Qualifications Framework (NHEQF):** The framework provides a structure for higher education qualifications and supports the integration of general, vocational and experiential learning.

6. **Malaviya Mission Teacher Training Programme:** The programme aims to strengthen faculty competencies and improve teaching practices in higher education.

7. **Professor of Practice Guidelines:** These guidelines allow higher education institutions to involve industry experts in teaching, bringing professional experience into academic learning.

Major Challenges in the Higher Education System

1. Limitations of Standardised Examinations

- **Neglect of Critical Thinking:** Multiple-choice examinations may reward memorisation and mastery of test techniques rather than **independent reasoning, creativity and deep understanding**.
- **Concerns About Classroom Engagement:** Memorisation-heavy testing may weaken wider reading, classroom discussion and students' willingness to question teachers, although the claimed decline is based on personal observation rather than historical comparison.

2. Declining Quality of Academic Research

- **Publication-Driven Research:** Minimum publication requirements for appointments and promotions encourage academics to produce papers to meet deadlines rather than develop original ideas.
- **Weak Journal Review Processes:** Some journals publish across unrelated disciplines without rigorous peer review, allowing researchers to meet formal requirements without adequate academic scrutiny.

3. Weakening of Doctoral Standards

- **Quality of Doctoral Research:** The marks allocated to a PhD may not adequately reflect the thesis's originality, the strength of its arguments or the quality of research derived from it.

- **Poor Supervision and Viva Voce:** Supervisors may approve theses without properly reading them, while superficial viva voce examinations weaken the credibility of doctoral assessment.

4. Bias in Academic Leadership Selection

- **Preference for Quantifiable Achievements:** Patent counts and publication numbers may favour STEM candidates even when these indicators do not reflect the broader responsibilities of university leadership.
- **Unequal Research Opportunities:** Scientists working in large laboratories may publish jointly with numerous research candidates, gaining publication counts that independent humanities scholars cannot easily match.
- **Narrow Academic Outlook:** Excessive specialisation may leave academic leaders without sufficient exposure to literature, humanities and the wider intellectual purpose of universities.

5. Nepotism and Regulatory Concerns

- **Networking Over Academic Judgment:** Personal connections can influence some university appointments, allowing networking to outweigh merit and weakening confidence in recruitment fairness.
- **Risk of Excessive Centralisation:** A unified regulatory structure may simplify governance, but excessive central control could reduce institutional autonomy and increase compliance burdens without necessarily improving academic quality.

Way Forward

1. **Decentralise Entrance Examinations:** Allow university departments to design discipline-specific admission processes that assess candidates' aptitude rather than relying exclusively on common national rankings.
2. **Restore Peer-Based Faculty Selection:** Qualified academics should conduct rigorous, unhurried interviews that assess subject knowledge, reasoning, teaching ability and intellectual depth.
3. **Prioritise Research Quality:** Evaluate originality, methodological rigour and scholarly contribution rather than relying mainly on publication counts, research scores or journal identifiers.
4. **Strengthen Doctoral Evaluation:** Supervisors must examine theses carefully, while independent experts should conduct meaningful viva voce examinations to verify the quality of doctoral research.
5. **Adopt Relevant Leadership Criteria:** Vice-chancellor selection should assess academic breadth, leadership ability and understanding of the university's wider educational purpose rather than rely on patent counts alone.
6. **Ensure Transparent and Accountable Decisions:** Selection committees should follow clear procedures, remain free from favouritism and justify their decisions through sound academic judgment.

7. **Balance Regulation with Autonomy:** Regulatory reforms should maintain common quality standards while preserving the freedom of universities and departments to make academic decisions.

8. **Avoid Overreliance on Punishment:** Harsher laws and penalties for examination agencies may address individual failures but cannot replace reforms in assessment, recruitment and institutional accountability.

Conclusion

Universities must balance fair assessment with academic judgment rather than rely excessively on standardised tests and numerical scores. Greater departmental autonomy, rigorous peer review and transparent recruitment can help identify genuine talent and improve research quality. Institutions must remain accountable for their decisions, ensuring that higher education develops independent thinkers and meaningful scholarship.

Question for practice:

Discuss the limitations of standardised examinations and metric-based academic assessment in India's higher education system and suggest measures to restore academic autonomy and quality.

Source: The Hindu

Why Bond Yields Are Rising in All Major Countries — Except China

UPSC Syllabus: Gs Paper 3 - Indian economy

Introduction

Government bond yields are rising across major economies, increasing borrowing costs for governments, households and businesses. Rising oil prices, inflation concerns, growing public debt and increased borrowing for Artificial Intelligence (AI) investments are contributing to this trend. However, China is experiencing falling bond yields. This contrast reflects differences in inflation, domestic consumption, economic growth and investment patterns, with important implications for borrowing costs and economic stability.

What Are Government Bonds and Bond Yields?

1. **Government Bonds:** These are loans given by investors to governments, which are generally considered relatively safe borrowers because investors expect them to repay their debt.

2. **Bond Yields:** Bond yields represent the returns investors expect from lending money to the government. They change with bond prices: when prices fall, yields rise, and when prices rise, yields fall.

3. **Link with Borrowing Costs:** Rising government bond yields generally increase borrowing costs across the economy because governments set a key benchmark for other borrowers. This can make loans more expensive and slow economic growth.

Recent Trends in Bond Yields

1. **United States Records High Yields:** The 10-year US Treasury yield reached 5.34%, its highest level since 2002, while its third-quarter rise approached 90 basis points.

2. **Multi-Decade Highs in Major Economies:** Bond yields reached multi-decade highs in Germany, the United Kingdom, Japan and France, reflecting rising inflation concerns and government borrowing needs.

3. **Changes in Ten-Year Bond Yields:** Between June and September, average ten-year bond yields increased by 0.52 percentage points in the United States, 0.50 in Germany, 0.40 in the United Kingdom and 0.34 in Japan.

4. **Increase in South Korean Yields:** South Korea's average 10-year government bond yield increased from 4.18% in June to 4.45% in September, reflecting the wider upward movement.

5. **Growth in World Trade:** Global trade growth has strengthened because of the information technology investment boom, which has increased US imports of capital goods and supported trade in Mexico, Korea, Canada and Indonesia.

Major Factors Driving Bond Yields Up

1. **Rising Oil Prices and Inflation:** Renewed increases in oil prices linked to US–Iran tensions have raised inflation concerns, leading investors to expect further interest rate increases.

2. **Expectations of Higher Interest Rates:** Investors demand higher returns when inflation rises because it reduces the purchasing power of future repayments, while central banks raise interest rates to contain price increases.

3. **Growing Government Debt:** The United States' public debt has exceeded $40 trillion, while debt-to-GDP ratios have reached or exceeded 100% across the Group of Seven (G7) economies, except Germany.

4. **Higher Government Borrowing Requirements:** Governments face rising borrowing and spending needs, increasing concerns about debt sustainability and the cost of future interest payments.

5. **Rising Borrowing for AI Investments:** Five major technology companies—Alphabet, Amazon, Meta, Microsoft and Oracle—issued $220 billion in debt during 2026 to finance data centres and AI models, more than double their combined issuance in the previous year.

6. **Demand for Higher Returns:** When governments and companies seek more loans, investors can demand higher interest rates to supply the required funds, pushing bond yields upward.

7. **Bond Vigilantes and Fiscal Discipline:** Bond vigilantes are investors who demand higher returns from governments they consider financially irresponsible, putting pressure on policymakers to control public debt and inflation.

China: An Exception to the Global Trend

1. **Falling Bond Yields:** Unlike major economies experiencing rising yields, China has seen its government bond yields decline, reflecting different domestic economic conditions and investor behaviour.

2. **Low Inflation and Deflation:** China's consumer inflation rate was 0% in 2025, compared with 0.2% in both 2023 and 2024, while inflation is expected to reach only around 1% in 2026.

3. **Limited Pressure to Raise Interest Rates:** Low inflation reduces the need for China's central bank to increase short-term lending rates, unlike central banks responding to rising prices elsewhere.

4. **Slower Economic Growth:** China's growth has moderated over the past decade, replacing earlier double-digit growth rates and reducing the demand pressures that typically contribute to higher inflation.

5. **Export-Led Growth and Weak Domestic Consumption:** China relies heavily on foreign demand for its exports, while domestic consumption remains weaker than policymakers would prefer, limiting inflationary pressure within the economy.

6. **Excess Savings and Limited Investment Options:** China has excess savings but fewer attractive investment opportunities because of the property market slowdown and restrictions on overseas investment.

7. **Higher Demand for Government Bonds:** Chinese investors increasingly buy government bonds as safe investments, raising their prices and lowering yields; however, these falling yields also signal weak domestic demand and economic concerns.

Consequences of Rising Bond Yields

1. **Higher Government Debt-Servicing Costs:** Rising yields make refinancing existing debt more expensive, with the United Kingdom's interest bill reaching almost 4% of economic output, roughly twice its pre-pandemic decade average.

2. **More Expensive Household Loans:** Higher bond yields influence mortgage, student and car loan rates, making borrowing costlier and reducing households' ability or willingness to spend.

3. **Pressure on Businesses and Economic Growth:** Higher borrowing costs make business investment less attractive and can reduce spending, slowing economic activity across the wider economy.

4. **Pressure on Government Spending:** Increasing interest payments absorb public funds that could otherwise support areas such as AI, defence and clean energy, creating difficult budgetary choices.

5. **Effects on Stock Markets and Investors:** Higher bond yields can make stocks less attractive compared with bonds, while hedge funds operating across multiple markets may face additional financial pressure.

Way Forward

1. **Reduce Government Debt:** Governments should take concerted steps to reduce public debt, as high debt burdens increase investor concerns and borrowing costs.

2. **Control Inflation:** Policymakers should contain inflation because investors demand higher returns when they believe inflation is not being managed effectively.

3. **Boost Economic Growth:** Governments should strengthen economic growth to improve their ability to manage debt and bring down long-term borrowing costs.

4. **Use Bond Purchases During Market Stress:** Governments can use bond buybacks, while central banks can purchase government bonds to address severe market stress and disorderly increases in borrowing costs.

5. **Maintain Fiscal Discipline:** Governments should follow responsible borrowing and spending policies to reassure investors and reduce pressure from bond vigilantes.

6. **Recognise the Limits of Central Bank Support:** Governments should address their underlying debt problems instead of relying on central banks to rescue their bond markets.

Conclusion

Rising bond yields reflect inflation concerns, higher oil prices, public debt and borrowing for AI investments. They raise financing costs for governments, households and businesses and can slow economic growth. China's falling yields reflect low inflation, weak domestic consumption and excess savings. Long-term relief requires debt reduction, fiscal discipline and stronger growth.

Question for practice:

Examine the reasons behind the rise in government bond yields across major economies, with China being an exception, and discuss their economic implications and the way forward.
Source: Indian Express; Reuters

A case for joining the global carbon coalition

Source: The post **"A case for joining the global carbon coalition"** has been created based on **"A case for joining the global carbon coalition"** published in "**The Hindu**" on 19th October 2026.

UPSC Syllabus: GS 2– International Relations

Context: In July 2023, nearly 500 Indian companies across seven industrial sectors submitted their first-ever compliance reports under the National Carbon Credit Trading Scheme (CCTS). Joining the Open Coalition on Compliance Carbon Markets (OCCCM) can help India strengthen its domestic carbon market and prepare for evolving international carbon pricing and trade measures.

About Open Coalition on Compliance Carbon Markets (OCCCM)

1. **The OCCCM is a voluntary, international, member-led partnership** aimed at accelerating global decarbonisation through compliance carbon pricing and carbon markets.
2. It **brings together countries and jurisdictions** that operate or are establishing emissions trading systems and carbon taxes.
3. **Key objectives**

- **Promote interoperability:** Improve compatibility between national carbon markets and their methodologies.
- **Facilitate knowledge exchange:** Enable countries to share technical expertise and best practices in carbon pricing.
- **Ensure market integrity:** Promote transparent, credible and high-integrity carbon markets.
- **Accelerate decarbonisation:** Encourage emission reductions and investment in clean technologies.
- **Promote inclusive development:** Support a sustainable and fair economic transition.

Significance of joining the OCCCM

1. **Strengthening carbon pricing:** India can learn from international experiences in designing and implementing effective carbon pricing mechanisms.
2. **Improving compliance mechanisms:** The coalition can facilitate the exchange of knowledge on monitoring, reporting and verification (MRV) systems, carbon accounting methodologies and carbon credit integrity.
3. **Enhancing coordination:** Participation can improve alignment between India's domestic compliance carbon market and the carbon pricing frameworks of other countries.
4. **Supporting decarbonisation:** Carbon pricing, along with complementary policy instruments, can reduce the economy-wide cost of climate change mitigation and encourage innovation.
5. **Generating fiscal revenue:** Carbon pricing can generate government revenue that can support climate change mitigation and adaptation efforts.
6. **Improving market interoperability:** India can explore linking its Carbon Credit Trading Scheme (CCTS) with other domestic carbon pricing systems, potentially generating revenue from jurisdictions with stronger mitigation targets.

Preparing for emerging global challenges

1. **Addressing the CBAM challenge:** Participation can help India understand the implications of the European Union's Carbon Border Adjustment Mechanism (CBAM) and prepare its industries for evolving carbon-related trade requirements.
2. **Learning from global practices:** India can examine alternative approaches to carbon border pricing, including uniform or differentiated carbon prices and incentives or penalties for member and non-member countries.
3. **Protecting trade competitiveness:** Better carbon accounting and compliance mechanisms can help Indian industries respond to international carbon standards and border taxes.
4. **Influencing global decisions:** Membership can enable India to participate in discussions on carbon pricing rules instead of remaining an outsider to decisions that may affect its economy.
5. **Building international partnerships:** Cooperation with like-minded developing countries can help India address geopolitical divisions and strengthen its voice in global climate negotiations.
6. **Preparing for future developments:** Early participation can help India anticipate regulatory changes as carbon pricing spreads across countries.

Challenges and considerations

1. The OCCCM's governance structure includes high-level meetings, executive-level meetings and a Secretariat, which makes active participation essential for influencing its decisions.

2. The coalition does not explicitly mention CBAM, although its discussions on carbon pricing, carbon accounting and domestic compliance markets are relevant to preparing for it.
3. India must ensure that its participation protects domestic economic interests while remaining consistent with its national decarbonisation priorities.

Way forward

1. **Strengthen the domestic carbon market:** India should improve the implementation of the CCTS by ensuring transparent carbon credit trading, reliable monitoring and robust verification mechanisms.
2. **Improve industrial preparedness:** The government should help Indian industries, particularly export-oriented sectors, adopt low-carbon technologies and improve emissions reporting.
3. **Develop credible carbon accounting:** India should establish transparent and reliable carbon measurement and reporting systems that are compatible with international practices.
4. **Engage proactively with the coalition:** India should actively participate in OCCCM meetings and contribute to discussions on carbon pricing, market interoperability and compliance standards.
5. **Protect developing-country interests:** India should work with other developing economies to advocate for fair carbon pricing rules that recognise different levels of development and climate responsibilities.
6. **Support vulnerable industries:** The government should facilitate access to cleaner technologies, finance and capacity-building support to prevent carbon pricing from disproportionately affecting smaller firms.
7. **Integrate climate and trade policies:** India should coordinate its domestic decarbonisation policies with emerging international trade measures to maintain export competitiveness while meeting its climate commitments.

Conclusion: India should join and actively engage with the OCCCM to strengthen its carbon market, improve international coordination and prepare for emerging global carbon pricing and trade measures. A proactive approach can help India shape international rules, protect domestic economic interests and advance its decarbonisation goals while ensuring a just and inclusive transition.

Question: Discuss the significance of India joining the Open Coalition on Compliance Carbon Markets (OCCCM). How can it help India strengthen its carbon pricing framework and prepare for emerging global trade measures?

Source: The Hindu

Developing Minds in a Digital World, a Changing India

UPSC Syllabus: Gs Paper 2- Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

Introduction

India's children are growing up in a digital environment where smartphones, social media, online education and Artificial Intelligence (AI) increasingly shape learning and social interaction. For a country with approximately 65 crore people under 25, this shift offers access to knowledge but raises concerns about developing minds. The central task is to use technology to improve learning while protecting attention, independent thinking, human interaction and healthy development.

Current Status: Growing Digital Engagement Among Children

1. **Increasing screen exposure:** Digital devices increasingly shape children's education, recreation and social interaction. Teenagers spend around eight hours daily on screens, two hours more than in 2015, while children aged 8–12 spend approximately five hours, one hour more than a decade earlier.

2. **Early introduction to screens:** Children are exposed to digital devices during their earliest developmental years, when attention, language and emotional responses are still developing.

3. **Growing role of Artificial Intelligence (AI):** Students use AI platforms to generate ideas, organise arguments, write essays and summarise information for educational purposes.

4. **Digital learning in schools:** Online classes, digital assignments and educational technology have increased the role of screens in formal education, particularly since the COVID-19 pandemic.

5. **Parental influence on screen use:** Parents sometimes use screens to distract or calm children, while children's screen habits are also influenced by adults' own digital use.

6. **Developing digital capabilities:** Many young people can filter information, navigate complex digital environments and switch between different information sources.

Major Concerns: Impact on Developing Minds

1. **Brain development and neuroplasticity:** The brain remains sensitive to experiences during childhood and adolescence. The prefrontal cortex, which supports attention, planning, decision-making and impulse control, continues to mature into early adulthood.

2. **Attention and reward mechanisms:** Short videos, autoplay, infinite scrolling and social feedback encourage repetitive checking and may make sustained attention more difficult.

3. **Cognitive and language development:** Research has associated higher screen exposure with poorer language and literacy outcomes, although these findings do not establish that screen use alone causes them.

4. **Brain structure and connectivity:** A 2020 *JAMA Pediatrics* study of 47 preschoolers aged three to five associated higher screen use with lower white matter integrity and poorer language and literacy scores.

5. **Emotional and behavioural difficulties:** Heavy screen use may be associated with irritability, difficulties in emotional regulation and sleep problems.

6. **Reduced human interaction:** Excessive screen use can displace conversations, physical play and interaction with caregivers, which are important for language and social development.

7. **Dependence on AI:** When Artificial Intelligence replaces independent reasoning, students may lose opportunities to learn through mistakes, revise arguments and develop critical thinking skills.

8. **Reduced imagination and reflection:** Constant digital stimulation leaves fewer opportunities for boredom, daydreaming and unstructured activities that support creativity and independent thought.

Implications: Consequences for Individuals and Society

1. **Long-term learning and adaptability:** Reduced independent cognitive engagement may weaken students' ability to apply knowledge, solve unfamiliar problems and adapt to changing situations.
2. **Overall child development:** When screen use displaces sleep, physical activity and meaningful social interaction, children's physical, emotional and social development may be affected.
3. **Developmental uncertainty:** An ongoing All India Institute of Medical Sciences (AIIMS) study reported an association between high screen exposure before age one and signs of autism by age three. However, this does not establish causation, as autism has multiple contributing factors.
4. **Commercial interests versus child welfare:** Companies have financial incentives to sustain user engagement, raising concerns about whether children's developmental needs receive sufficient priority in digital product design.

Opportunities and Challenges: Technology and the Science of Learning

Opportunities

1. **Wider access to learning:** Digital platforms provide access to information, educational resources and new ways of communicating, creating and acquiring knowledge.
2. **Personalised education:** Intelligent computer-based tutors can adapt instruction to students' knowledge and abilities, while learning analytics can help improve educational strategies.
3. **Collaborative learning:** Digital technologies can support communication, social relationships and collaborative activities, enriching learning when combined with meaningful human interaction.
4. **Evidence-based educational innovation:** Research involving neuroscientists, cognitive scientists, engineers and educators can improve understanding of learning and inform better teaching practices.
5. **Improved understanding of learning environments:** Learning depends on biological, cognitive, social and emotional development. Gender and racial stereotypes, as well as mathematics anxiety among parents and teachers, can affect children's academic performance.

Challenges

1. **Uncertain long-term effects:** Research links screen exposure with developmental outcomes, but the influence of sleep loss, reduced activity and limited social interaction complicates conclusions.
2. **Loss of productive struggle:** Excessive dependence on digital tools may remove the effort involved in writing, reasoning, solving problems and correcting mistakes.
3. **Gap between research and classrooms:** Applying scientific findings to everyday teaching remains difficult and requires stronger cooperation between researchers, teachers and policymakers.
4. **Insufficient teacher preparation:** Educators need continuous training, technical support and a deeper understanding of learning processes to integrate technology effectively.

5. **Need for research infrastructure:** Large-scale, interdisciplinary research requires government support, collaboration and shared resources. The United States' Science of Learning Centers illustrate how public funding can help build research networks.

Way Forward

1. **Responsible parenting:** Families should establish device-free periods, protect study time, maintain healthy sleep routines and provide opportunities for physical activity and unstructured play.
2. **Preserving independent learning:** Schools should emphasise oral examinations, supervised writing, applied problem-solving and activities that require students to think independently.
3. **Responsible AI integration:** AI should support explanation, analysis, revision and feedback without replacing students' independent reasoning and intellectual effort.
4. **Evidence-based screen guidelines:** Parents and schools need practical guidance that considers children's age, screen duration, content and adult involvement.
5. **International policy lessons:** France has restricted screens in daycare for children under three, while China has imposed limits on minors' gaming. Australia and Sweden have also issued age-based screen recommendations.
6. **Platform accountability:** Policymakers should require stronger evidence about the effects of digital products on children's cognitive and emotional development.
7. **Independent research:** Governments should support long-term studies to understand how digital experiences affect learning, behaviour and brain development.
8. **Teacher training and collaboration:** Researchers, educators and policymakers should work together to translate scientific findings into practical classroom methods, supported by appropriate training and technical assistance.
9. **Balanced regulation:** India should develop appropriate safeguards for children while preserving the educational and social benefits of digital technology.

Conclusion

India should embrace digital innovation while protecting the experiences through which children learn and grow. Parents and schools must guide screen use and preserve independent thinking, play and human interaction. Technology companies, researchers and policymakers should support responsible design, evidence-based guidance and effective teaching so digital tools strengthen learning rather than replace it.

Question for practice:

Discuss how excessive digital exposure affects the cognitive, emotional and social development of children in India, and suggest measures to promote the responsible use of technology.

Source: The Hindu

Rupee and the price of dodging a century

Source: The post **"Rupee and the price of dodging a century"** has been created based on **"Rupee and the price of dodging a century"** published in "**Business Line**" on 21st October 2026.

UPSC Syllabus: GS 3– Indian Economy

Context: The Indian rupee has faced significant depreciation due to global uncertainty, rising crude oil prices and foreign institutional investor (FII) outflows. The rupee touched ₹96.71 per US dollar in May 2026, raising concerns about its movement towards the psychological mark of ₹100 per dollar.

Major reasons for the depreciation of the rupee

1. Global uncertainty and rising crude oil prices have increased pressure on the Indian rupee.
2. India imports around 90 per cent of its fuel requirements, creating substantial demand for US dollars.
3. Net FII outflows reached $32.8 billion during the first ten months of 2026, compared with $16 billion in 2025.
4. Foreign investors are reallocating capital towards emerging sectors such as artificial intelligence, semiconductors and data centres, while higher US interest rates are making American investments more attractive.
5. Some foreign investors are withdrawing after realising significant gains from their Indian investments.

Measures taken by the RBI to stabilise the rupee

1. The RBI has sold dollars in the foreign exchange market, with net dollar sales of $53 billion in FY26 and $35 billion in FY25.
2. The RBI introduced measures through the FCNR(B) deposit scheme to attract dollar inflows and reduce banks' currency depreciation risks.
3. The RBI increased the repo rate by 0.25 percentage points to 5.50 per cent after nearly two years.
4. The RBI tightened controls on importers' payments and foreign exchange derivative contracts.
5. The RBI opened a special window for oil-importing companies to manage their dollar requirements.
6. The RBI Governor indicated that the rupee was undervalued, highlighting the importance of assessing its value in the broader economic context.

Limitations of the existing measures

1. RBI interventions can temporarily reduce volatility, but they cannot permanently address the structural causes of rupee depreciation.
2. High taxation, including capital gains tax and securities transaction tax, reduces the attractiveness of Indian investments for FIIs compared with competing markets.
3. The long-term average annual depreciation of around 4 per cent in the rupee's value adds to foreign investors' currency-related risks.
4. Continued capital outflows and high demand for dollars can sustain pressure on the rupee despite central bank intervention.

Measures to ensure long-term stability

1. The government should review the taxation of FIIs, including the possibility of revisiting long-term capital gains tax rates, to improve India's investment attractiveness.
2. The government should improve the ease of doing business by simplifying procedures and reducing unnecessary regulatory hurdles.
3. Faster government decision-making and a predictable policy environment can strengthen investor confidence.
4. India should focus on attracting and retaining sustainable foreign investment rather than relying excessively on RBI interventions.
5. A competitive tax regime and improved investment conditions can help the rupee find its appropriate market-determined level when investor sentiment improves.

Conclusion: The ₹100-per-dollar mark is largely a psychological threshold rather than an absolute indicator of economic weakness. India should prioritise stable currency conditions through structural reforms, investor-friendly taxation and improved ease of doing business, while allowing the rupee to reflect economic fundamentals and market conditions.

Question: The depreciation of the Indian rupee reflects both external pressures and domestic structural challenges. Discuss the measures taken by the RBI to stabilise the rupee and suggest steps to ensure its long-term stability.

Source: Business Line

The sunset test: Why India needs more coal-based power

Source: The post **"The sunset test: Why India needs more coal-based power"** has been created based on **"The sunset test: Why India needs more coal-based power"** published in "**Financial Express**" on 21st October 2026.

UPSC Syllabus: GS 3– Indian Economy

Context: India's electricity demand is rising due to industrial growth, increasing cooling requirements and agricultural needs. According to the Central Electricity Authority (CEA), India may require 105–150 GW of additional coal-based power capacity by 2035, exceeding the earlier target of 97 GW, primarily to meet dependable night-time **electricity demand.**

Reasons for increasing coal-based power requirements

1. India's electricity demand is expected to grow at an average annual rate of 6.4 per cent until 2030, according to the International Energy Agency (IEA).
2. Industrial activities, data centres, air conditioning and agricultural irrigation are increasing electricity consumption.
3. Peak power demand reached a record 260 GW on October 5, 2026, while demand during September and October remained above 250 GW on most days.
4. Solar power generation declines after sunset, creating a need for reliable electricity during night-time hours.
5. In May 2026, dispatchable generation reached 90 per cent of available capacity, leaving limited reserves to manage unexpected outages and demand spikes.

6. Coal-based power provides sustained electricity supply, and the CEA's March 2026 assessment found pithead coal more economical than solar power combined with batteries for baseload supply under its assumptions.

Limitations of alternative energy sources

1. Battery storage may be insufficient to meet prolonged night-time demand because of limited storage duration, supply-chain constraints and rising costs.
2. Wind power depends on weather conditions and generally produces less electricity during summer months when cooling demand is high.
3. Hydropower generation fell by 20 per cent year-on-year in September 2026, highlighting the variability of its contribution.
4. Gas-based power generation is constrained by limited domestic fuel availability and expensive imported liquefied natural gas (LNG).
5. Nuclear power can provide dependable electricity, but capacity expansion beyond existing plans will take longer to materialise.

Implications for India's energy transition

1. Additional coal capacity can strengthen energy security and reduce the risk of electricity shortages during non-solar hours.
2. Excessive dependence on coal can increase greenhouse gas emissions and create challenges for India's climate commitments.
3. Coal plants will increasingly need to reduce generation when renewable power is abundant and ramp up output when solar generation declines.
4. Greater operational flexibility in thermal power plants is therefore essential to integrate larger volumes of renewable energy.
5. The CEA envisages 509 GW of solar, 155 GW of wind, 174 GW of battery and pumped storage, and 315 GW of coal and lignite capacity by FY36, with non-fossil sources accounting for 70 per cent of installed capacity.

Measures to reduce dependence on additional coal capacity

1. India should accelerate battery storage deployment and develop longer-duration storage technologies to meet electricity demand throughout the night.
2. Stronger transmission and distribution grids should be developed to improve the integration and distribution of renewable electricity.
3. Energy-efficient air conditioners and stronger efficiency standards can reduce peak electricity demand, with research led by UC Berkeley estimating that improved standards could avoid over 60 GW of peak demand by 2035.
4. Agricultural electricity demand should be shifted from evening hours to solar-generation hours through feeder solarisation and better demand management.
5. Coal plants should improve operational flexibility by adopting minimum technical load and ramp-rate requirements to accommodate fluctuations in renewable generation.
6. State governments should undertake regular resource adequacy assessments, plan electricity procurement and execute capacity contracts according to their specific demand patterns.
7. Annual revisions of power adequacy plans should account for changing demand, storage costs and renewable energy deployment timelines.

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Conclusion: India needs to balance reliable electricity supply with its clean energy transition. While additional coal capacity may be necessary in the short term to meet night-time demand, faster storage deployment, stronger grids, energy efficiency and better demand management can reduce long-term dependence on coal. A flexible, affordable and diversified energy system is essential for India's sustainable economic growth.

Question: India's rising electricity demand and the limitations of renewable energy storage have renewed the need for coal-based power capacity. Discuss the reasons for this trend and suggest measures to ensure energy security alongside the clean energy transition.

Source: Financial Express

Moves by the North of England to Unlock India Trade

UPSC Syllabus: Gs Paper 2- International Relations

Introduction

The India–UK Comprehensive Economic and Trade Agreement (CETA) has created new opportunities for trade and investment. The Great North initiative brings Northern England's regional leaders, businesses and institutions together to turn these opportunities into practical outcomes. Its mission focuses on attracting Indian investment, expanding market access and building long-term partnerships.

The Great North Initiative

1. **Collective Regional Approach:** The Great North brings together mayors, businesses, universities and cultural organisations. They jointly promote Northern England to Indian investors and businesses.

2. **Regional Economic Strength:** Northern England has an economy worth over £340 billion. The mission presents its combined industrial, research and investment strengths to Indian partners.

3. **Joint Regional Representation:** Nearly 200 delegates participated in the mission, supported by the UK Government and HSBC. It was the first joint delegation from Northern England to visit India.

4. **Targeted Business Engagement:** The programme includes a trade and investment event in Delhi. Delegations will also engage with businesses and institutions in Bengaluru, Hyderabad and other Indian cities.

5. **Sectoral Focus:** The mission targets advanced manufacturing, clean energy, life sciences, technology and creative industries. These sectors offer opportunities for cooperation between India and Northern England.

6. **Academic and Research Cooperation:** Northern universities aim to develop research partnerships, student exchanges and innovation projects with Indian institutions. The British Council and Study UK support these efforts.

7. **Tourism, Culture and Sports:** VisitBritain and regional tourism businesses aim to attract more Indian visitors. Sporting and cultural organisations will use shared interests, including football and cricket, to strengthen ties.

8. **Institutional Support:** The UK India Business Council (UKIBC) helps British businesses understand India's economic opportunities. It promotes India as a partner in research, technology, talent and supply chains.

Significance of the Initiative

1. **Economic Growth:** The UK Government estimates that the agreement could add £450 million annually to Northern England's economy in the long run. This includes £210 million in the North West, £170 million in Yorkshire and the Humber, and £70 million in the North East.

2. **Investment and Employment:** Indian companies have invested over £1 billion in North West England, supporting more than 6,700 jobs. Such investment provides a foundation for further business expansion and employment.

3. **People-to-People Connections:** Nearly 540,000 people of Indian origin live across Northern England. These existing social ties support closer economic and cultural relations.

4. **Expanding Indian Business Presence:** The number of Indian-owned companies in the UK rose nearly 60% year-on-year. Their combined revenues exceeded £105 billion, according to Grant Thornton UK's India Meets Britain Tracker.

5. **Growth in Bilateral Trade:** India–UK bilateral trade reached £47.4 billion in 2025, an increase of 11.7% over the previous year. Growth was concentrated in advanced manufacturing, clean energy and technology.

6. **Regional Development:** The initiative promotes investment in Northern England beyond London. It connects Indian businesses with regional industries, universities and innovation centres.

7. **Strategic Partnership:** India can contribute to British research and development, technology, talent and supply chains. This creates opportunities beyond the conventional buying and selling of goods.

8. **Sustainable Innovation:** Cooperation can support low-carbon manufacturing and cleaner supply chains. Low Carbon Materials is exploring the use of biochar made from Indian crop waste in construction materials.

9. **Existing Travel Links:** More than 500,000 people travel between Northern England and India through Manchester Airport annually. These connections provide a base for expanding tourism and business travel.

Key Challenges

1. **Limited Business Awareness:** Small and medium enterprises may not know which concessions the agreement offers. This can prevent them from identifying suitable export opportunities.

2. **Rules of Origin:** Businesses must establish whether their products meet the agreement's origin requirements. Products that do not qualify cannot receive the relevant preferential tariffs.

3. **Documentation and Administrative Costs:** Businesses must secure the correct documents to claim tariff concessions. Administrative work and related costs can reduce the practical value of these benefits.

4. **Implementation Gap:** Signing an agreement does not automatically generate business. Official visits and meetings must lead to actual contracts, investment and commercial partnerships.

5. **Regional Differences:** Northern England's regions have different industrial strengths, while Indian states specialise in different sectors. Effective cooperation requires matching these strengths with suitable partners.

6. **Need for Sustained Coordination:** Long-term results require continued cooperation among governments, businesses, universities and financial institutions. One-time visits cannot ensure lasting economic benefits.

Way Forward

1. **Improve Business Awareness:** Businesses need clear guidance on tariff concessions and product eligibility. They must also understand origin rules and documentation requirements before exporting.

2. **Use Practical Guidance:** The UK–India CETA Business Utilisation Manual was developed by UKIBC and launched by Union Commerce and Industry Minister Piyush Goyal in London. It helps businesses identify opportunities and understand how to use the agreement.

3. **Promote Sector-Specific Partnerships:** Cooperation should match Indian states with suitable partners in Northern England. Examples include Maharashtra's aerospace sector, Gujarat's chemical industry, Karnataka's information technology ecosystem and Tamil Nadu's pharmaceutical sector.

4. **Convert Trade Missions into Business Outcomes:** Meetings should lead to contracts, investment and long-term partnerships. Continued engagement can turn initial discussions into practical results.

5. **Expand Research Collaboration:** Universities and businesses should develop joint research projects and student exchanges. These partnerships can strengthen innovation and technological cooperation.

6. **Support Sustainable Industry:** India and Northern England should develop partnerships in clean energy and low-carbon materials. Northern England's research expertise can complement India's industrial scale and supply-chain opportunities.

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7. **Monitor Practical Outcomes:** Progress should be measured through investment, export growth and business contracts. Employment and research partnerships should also be tracked.

Conclusion

The Great North initiative seeks to turn the India–UK trade agreement into practical economic gains. Its success depends on effective implementation and lasting partnerships. By connecting regional strengths with India's market, it can attract investment, support innovation, create jobs and strengthen bilateral economic ties.

Question for practice:

Examine how the Great North initiative seeks to strengthen India–UK trade, investment and economic cooperation.
Source: The Hindu

How Conversion Affects Reservation

UPSC Syllabus: Gs Paper 2- Constitution of India

Introduction

Religious conversion raises a constitutional question about whether a person retains reservation eligibility based on their caste or community. In October 2026, the Supreme Court upheld the Madras High Court's decision to strike down Tamil Nadu's 2024 order allowing converts to Islam to seek Backward Class Muslim status. The ruling distinguishes Scheduled Caste status from backward-class classification and recognises the need for evidence-based identification of communities that continue to face social disadvantage.

Religious Conversion and Reservation: The Tamil Nadu Case

1. **Government Order of 2024:** Tamil Nadu's March 9, 2024, order allowed converts to Islam from Backward Classes (BC), Most Backward Classes (MBC), Denotified Communities (DNC) and Scheduled Castes (SC) to seek Backward Class Muslim certificates.

2. **Reservation Benefit:** The order aimed to extend eligibility for the State's 3.5% reservation for Backward Class Muslimsto converts from the specified categories.

3. **Seven Notified Muslim Communities:** Tamil Nadu recognises seven backward Muslim communities: Ansar, Dekkani Muslims, Dubekula, Labbais (including Rowthar and Marakayar), Mapilla, Sheik and Syed.

4. **Madras High Court's Decision:** On June 25, 2026, the High Court struck down the order. It held that conversion alone does not establish membership of a notified backward Muslim community.

5. **Supreme Court Appeal:** The State challenged the High Court's decision. It argued that the order preserved existing reservation benefits rather than automatically creating membership of a Muslim community.

Supreme Court's Key Observations

1. **Supreme Court Upholds the High Court: In** October 2026, the Supreme Court upheld the decision striking down Tamil Nadu's Government Order. It confirmed that conversion alone does not establish eligibility for the notified Backward Class Muslim category.

2. **Reservation Is Not a Personal Entitlement:** Reservation under Article 16(4) is linked to a constitutionally recognised backward class. It is not a transferable benefit based on an individual's previous caste identity.

3. **Social Disadvantage and Legal Status Differ:** Poverty, educational deprivation and social exclusion may continue after conversion. However, these conditions alone do not establish membership of another notified backward class.

4. **Jamath Cannot Decide Statutory Eligibility:** A local Muslim religious body, or Jamath, may confirm conversion. However, it cannot replace the competent authority's legal determination of backward-class status.

5. **Expert Advice Cannot Override the Constitution:** A recommendation from a Backward Classes Commission cannot validate an unconstitutional government order. Such recommendations remain subject to judicial review.

6. **Muslims Can Qualify as Backward Classes:** Muslims are not categorically excluded from reservation. Their communities may qualify if they meet the relevant constitutional criteria.

7. **Religious Equality and Social Realities:** Islam emphasises equality regardless of birth, but Indian Muslim society has historically experienced social divisions, including Ashraf, Ajlaf and Arzal. Hereditary membership and marriage practices may reflect these divisions, which must be considered when assessing social backwardness.

Constitutional Provisions Governing Reservation

1. **Article 341:** The President specifies the Scheduled Castes for each State and Union Territory. Under Article 341(2), Parliament can include or exclude groups from the notified list by law.

2. **Articles 15(4) and 16(4):** Article 15(4) allows special provisions for the advancement of socially and educationally backward classes. Article 16(4) permits provisions for their inadequate representation in public employment.

3. **Article 342A:** The Constitution (One Hundred and Fifth Amendment) Act, 2021, recognises States' power to identify socially and educationally backward classes and maintain their own lists for State purposes.

4. **Constitution (Scheduled Castes) Order, 1950:** Paragraph 3 restricts Scheduled Caste status to persons professing Hinduism, Sikhism or Buddhism. Under the existing Order, conversion to Islam or Christianity does not preserve SC status.

Impact of Conversion on SC and BC Status

1. **Loss of SC Status:** Under the existing 1950 Order, conversion to Islam or Christianity does not preserve Scheduled Caste status. This restriction remains in force unless changed through the prescribed constitutional process.

2. **No Automatic Transfer of BC Status:** A person converting from Hinduism to Islam cannot automatically transfer their former BC, MBC or DNC classification to a notified Muslim community. Membership of that community must be established separately.

3. **Continuing Social Disadvantage:** Conversion may not remove inherited social exclusion, educational deprivation or limited opportunities. However, these disadvantages alone do not establish eligibility for another notified backward class.

4. **Reconversion Requires Verification:** Returning to Hinduism does not automatically restore reservation eligibility based on former caste identity. The competent authority must independently verify whether the original caste identity has genuinely revived.

Role of Committees and Commissions

1. **Mandal Commission (1979–1980):** The Second Backward Classes Commission was appointed under B. P. Mandal in 1979 and submitted its report in 1980. It used 11 indicators covering social, educational and economic conditions, with different weights and a maximum score of 22, to identify communities experiencing combined disadvantage..

2. **Sachar Committee:** Constituted in 2005 under Justice Rajindar Sachar, the committee examined Muslims' social, economic and educational conditions. Its 2006 report documented disadvantages in education, employment and access to credit.

3. **Ranganath Misra Commission:** The National Commission for Religious and Linguistic Minorities recommended in 2007 that SC status be delinked from religion. It proposed removing Paragraph 3 of the 1950 Order, but the recommendation did not change the existing law.

4. **K.G. Balakrishnan Commission:** Constituted in October 2022, the commission was tasked with examining whether SC status could be granted to people claiming historical SC origins who converted to religions outside those specified in Presidential Orders.

5. **Different Mandates Require Separate Consideration:** The Mandal, Sachar, Ranganath Misra and Balakrishnan exercises address different aspects of backwardness and religious conversion. Their findings cannot replace the specific legal requirements governing each issue.

Why Tamil Nadu's Government Order Was Struck Down

1. **Lack of Empirical Evidence:** Neither the State nor its Backward Classes Commission established the necessary link through adequate empirical inquiry. There was no demonstrated evidence that converts from different Hindu classifications shared relevant social characteristics with the seven notified Muslim communities.

2. **Different Groups Face Different Disadvantages:** BC, MBC, DNC and SC classifications do not necessarily represent identical experiences of exclusion. Grouping them together therefore required a defensible constitutional basis.

3. **Former Caste Identity Was Insufficient:** Previous membership of a Hindu caste did not prove membership of a specific Muslim community. The seven notified communities are social groups shaped by shared ancestry, occupation and history, not merely theological denominations within Islam.

4. **Constitutional Validity Takes Priority:** The High Court could examine the order's validity after the State was made a party and had an opportunity to defend it. This was permissible even though the original petition had not directly challenged the order.

Way Forward

1. **Conduct an Independent Study:** Tamil Nadu should examine whether converts experience continuing social exclusion, inherited disadvantage and educational deprivation. Its Backward Classes Commission could conduct a systematic study.

2. **Use Relevant Indicators:** The assessment should examine educational attainment, representation in public employment, social acceptance and occupation. It should also consider the experiences of converts from different communities.

3. **Identify Clearly Defined Groups:** Any proposed backward class should have identifiable characteristics. Evidence must establish a clear link between its social conditions and the constitutional criteria for inclusion.

4. **Avoid Religious Generalisations:** Neither conversion nor religious identity alone should determine backward-class eligibility. The State must assess evidence relating to the particular community.

5. **Follow the Appropriate Constitutional Route:** Changes concerning SC eligibility must address Article 341 and the 1950 Order. Backward-class identification must follow the applicable framework under Articles 15(4), 16(4) and 342A.

Conclusion

The ruling rejects automatic transfer of reservation status after religious conversion, but does not rule out identifying backward communities through lawful procedures. States should assess continuing disadvantage with reliable evidence, define each proposed class clearly, and follow the relevant constitutional framework. This approach can advance social justice while respecting the legal requirements for reservation.

Question for practice:

Discuss how religious conversion affects reservation eligibility in India in light of the Supreme Court's ruling on Tamil Nadu's Backward Class Muslim reservation policy.

Source: The Hindu; Indian Express

The struggle to preserve a fair international law

Source: The post **"The struggle to preserve a fair international law"** has been created based on **"The struggle to preserve a fair international law"** published in "**The Hindu**" on 22nd October 2026.

UPSC Syllabus: GS 2: International Relations

Context: The liberal international legal order emerged after the Second World War and is based on respect for international law, multilateralism, human rights, peaceful dispute resolution, and international cooperation. However, rising authoritarianism, armed conflicts, and the selective application of international norms have increasingly challenged this order.

About Liberal International Legal Order (LILO)

1. The Liberal International Legal Order refers to a system of international rules, laws, institutions, and norms designed to promote peace, cooperation, human rights, democracy, and the peaceful resolution of disputes among states.
2. It developed primarily after the Second World War to prevent another global conflict and establish a rules-based international system.

Major challenges to the liberal international legal order

1. **Erosion of international law:** Powerful states increasingly use force and pursue national interests at the expense of international legal principles, weakening the credibility of the rules-based order.
2. **Rise of authoritarianism:** Authoritarian leaders are reshaping international norms and institutions to protect their regimes and consolidate power rather than uphold democratic values.
3. **Declining respect for human rights:** Civil, political, and human rights are being undermined, while accountability for war crimes and crimes against humanity remains inadequate.
4. **Weakening of multilateralism:** States are showing declining commitment to universally accepted international norms and increasingly favouring unilateral actions over collective decision-making.
5. **Institutional weakening:** Some governments seek to influence international organisations while restricting their independence and ability to scrutinise state actions.
6. **Resistance to international adjudication:** Preference for negotiations and quasi-judicial mechanisms over independent third-party adjudication can weaken impartial dispute resolution and accountability.
7. **Selective application of international law:** Political considerations often influence responses to human rights violations, undermining the principles of equality and fairness.
8. **Misuse of sovereignty:** The principle of state sovereignty is sometimes invoked to reject international scrutiny, even in cases involving serious human rights violations.

Measures to strengthen the international legal order

1. **Strengthen international institutions:** International organisations and courts should enjoy greater independence and possess effective mechanisms to ensure compliance with international law.
2. **Ensure universal accountability:** States must be held accountable for violations of international law, irrespective of their political or economic power.
3. **Reinforce multilateralism:** Countries should prioritise international cooperation, peaceful negotiations, and established legal mechanisms for resolving disputes.

4. **Protect human rights:** International institutions should consistently defend civil liberties, human dignity, and fundamental rights without political bias.
5. **Promote collective resistance:** Courts, civil society, academia, and the United Nations should work together to challenge authoritarian practices and defend the rule of law.
6. **Ensure consistent application of norms:** International law must be applied fairly and uniformly to all states to prevent double standards and restore institutional credibility.

Conclusion: A fair international legal order requires independent institutions, universal accountability, and consistent respect for international norms. Collective efforts to strengthen multilateralism and resist authoritarianism are essential to preserving global peace, justice, and the credibility of international law.

Question: "The rise of authoritarianism is undermining international law and weakening the institutions established to uphold it." Discuss the challenges to the liberal international legal order and suggest measures to strengthen it.

Source: The Hindu

Six steps to strengthen the India-US relationship

Source: The post **"Six steps to strengthen the India-US relationship"** has been created based on **"Six steps to strengthen the India-US relationship"** published in "**Indian Express**" on 22nd October 2026.

UPSC Syllabus: GS 2: International Relations

Context: India and United States share common interests in defence, emerging technologies, trade, and maintaining a stable Indo-Pacific. However, differences over trade, Russia, and regional security continue to create friction. A pragmatic, interest-based approach can strengthen the partnership while respecting India's strategic autonomy.

Major challenges in India–US relations

1. **Strategic differences:** India maintains close defence and energy ties with Russia, while US has its own strategic partnerships, including with Pakistan.
2. **China-related expectations:** US expects India to play a greater role in countering China across the Indo-Pacific, whereas India seeks to preserve its strategic autonomy and avoid rigid military commitments.
3. **Trade tensions:** Tariff disputes and barriers to market access have created uncertainty and hindered the expansion of bilateral trade and economic cooperation.
4. **Defence cooperation gaps:** Delays in implementing agreements related to jet-engine co-production and armed drones have slowed progress in defence cooperation and technology transfer.
5. **Mutual trust deficit:** Concerns in India over a possible US–China strategic understanding and shifting American priorities in the Indo-Pacific have created uncertainty about the long-term reliability of US support.

Six steps to strengthen the partnership

1. Strengthen maritime deterrence: India should increase its presence in the Pacific, while US should enhance its naval engagement in the Indian Ocean. Joint patrols, logistics arrangements, and maritime surveillance can improve regional security.

2. Institutionalise military coordination: Both countries should implement secure communication and geospatial intelligence agreements, strengthen cyber protection of critical infrastructure, and explore cooperation in military satellites and space defence.

3. Expand defence co-production: Joint ventures in jet engines, long-range drones, precision munitions, and autonomous systems should be expanded under the Make in India initiative, strengthening domestic manufacturing and technology transfer.

4. Secure technology and critical-mineral supply chains: Cooperation in semiconductors, artificial intelligence, rare earths, and lithium can reduce strategic dependencies. Predictable export controls and improved market access would encourage investment.

5. Strengthen minilateral cooperation: The two countries should revitalise the Quad with Japan and Australia and expand operational cooperation with partners such as the Philippines to improve Indo-Pacific security.

6. Leverage diaspora and economic ties: Bilateral fellowships, educational exchanges, professional mobility, and stronger commercial partnerships can build public trust and sustain long-term cooperation.

Conclusion: India and US need not eliminate all disagreements to build a strong partnership. A pragmatic approach based on mutual interests, strategic autonomy, defence integration, and economic cooperation can strengthen bilateral ties and contribute to a stable Indo-Pacific.

Question: Discuss the major challenges in India–US relations and explain the measures needed to strengthen their strategic partnership.

Source: Indian express

Unlocking Agri-Potential of FRA Lands

UPSC Syllabus: Gs Paper 2- Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Introduction

The **Forest Rights Act (FRA), 2006**, has strengthened land and livelihood rights of **millions of tribal and forest-dwelling communities**. Yet, recognised rights do not ensure secure incomes or productive land use. Tribal areas face water stress, soil erosion, limited agricultural support and weak market linkages. **Unlocking FRA lands' potential requires locally suitable crops, sustainable resource management, stronger community institutions and better access to infrastructure, finance and markets.**

Significance of Agriculture in Unlocking FRA Land Potential

1. **Agriculture as a Livelihood Asset:** Agricultural development can transform FRA-recognised lands into **productive assets**, helping tribal households strengthen their livelihoods and **reduce economic vulnerability**.
2. **Role of Pulses and Oilseeds:** Promoting **pulses and oilseeds** can **improve farm incomes and productivity** while supporting cultivation on suitable FRA lands.
3. **Suitability for Rain-fed and Marginal Lands:** Their adaptability to **rain-fed and marginal lands** makes these crops suitable for regions with limited agricultural resources, subject to local conditions.
1. **Climate-Resilient Agricultural Development:** Crop selection based on **local agro-ecological conditions** can improve farming sustainability and **resilience** to climate variability.
2. **Contribution to National Food Security:** Expanding domestic pulse and oilseed production can **strengthen supplies**, improve food security and **reduce India's import dependence**.
3. **Livelihood Diversification:** Agricultural diversification can **complement forest-based livelihoods**, including income from minor forest produce, and create additional livelihood opportunities.

Agricultural Potential of FRA Lands

1. **Geographical and Ecological Diversity:** Tribal districts across **33 States and Union Territories** differ in ecology, socioeconomic conditions, resources and agricultural potential, requiring **region-specific planning**.
4. **Soil Suitability for Cultivation:** The UN Food and Agriculture Organization (FAO) soil map **suggests** that several tribal regions are suitable for **soybean, groundnut, sunflower, mustard, chickpea and other pulses**.
5. **Existing Cropping Patterns: Paddy and maize** dominate the Kharif season, while **wheat, gram, mustard, lentil and other pulses** are important Rabi crops across tribal regions.
6. **Scope for Crop Diversification: Millets, soybean, cotton, groundnut, sesame, spices and horticultural crops** reflect local agro-ecological conditions and offer opportunities for diversification.
7. **District-Wise Oilseed Potential:** Of **244 tribal districts analysed**, **60 have major oilseed production potential**, creating scope for targeted cultivation.
8. **District-Wise Pulse Potential: 31 tribal districts** have **strong pulse production potential**, offering opportunities to expand cultivation through locally suitable strategies.
9. **Combined Production Potential: 23 districts** have favourable conditions for **both pulses and oilseeds**, making them suitable for integrated production clusters.

Key Challenges in Unlocking the Agricultural Potential of FRA Lands

1. **Water Scarcity and Low Cropping Intensity:** In areas such as **Gadchiroli**, **post-monsoon water scarcity** restricts cultivation and leaves fields fallow, often limiting farmers to **one seasonal crop**.
2. **Soil Degradation: Runoff-induced soil erosion**, as observed in Gadchiroli, threatens agricultural productivity and highlights the need for **soil and water conservation**.
10. **Limited Agricultural Support:** Inadequate access to **quality seeds, improved varieties, scientific crop management and agricultural extension** can constrain productive land use.

11. **Post-Harvest Infrastructure Gaps:** Insufficient **drying, storage, grading and primary processing** facilities can increase losses and reduce the value realised by farmers.
12. **Market Access Constraints:** Weak aggregation, processing and marketing arrangements can limit farmers' **bargaining power** and access to **remunerative markets**.
13. **Implementation and Governance Gaps: Claim rejections**, limited recognition of **community forest rights** and weaknesses in **verification and mapping** can constrain communities' ability to secure and exercise their rights.
14. **Limited Institutional Capacity:** Inadequate **technical support** and weak institutional capacity can hamper effective **community participation** and sustainable land development.

Way Forward

A. Improving Agricultural Productivity and Sustainability

1. **Develop Region-Specific Production Clusters:** Establish **pulses and oilseed clusters** in high-potential tribal districts, selecting crops according to **local agro-ecological conditions**.
2. **Ensure Quality Seed Availability:** Provide timely access to **certified seeds and improved varieties** to strengthen production and support suitable crop choices.
1. **Improve Soil and Water Management:** Strengthen **watershed management, irrigation and soil moisture conservation** to protect agricultural land and improve productivity.
2. **Strengthen Agricultural Extension:** Expand **technical guidance and scientific crop management** practices to help farmers improve productivity and adopt sustainable methods.
3. **Adopt GIS-Based Crop Planning:** Use Geographic Information System (**GIS)-based planning** to **identify suitable crops** and guide interventions according to local resources and agricultural potential.

B. Strengthening Infrastructure, Institutions and Market Access

1. **Develop Post-Harvest Infrastructure:** Invest in **drying, storage, grading and primary processing** facilities to **reduce losses** and improve value realisation.
4. **Strengthen Farmer Organisations:** Empower Farmer Producer Organisations (**FPOs**), cooperatives and **Self-Help Groups (SHGs)** to facilitate **aggregation, value addition and market access**.
5. **Improve Financial and Marketing Support:** Strengthen **institutional credit, crop insurance and assured procurement** to improve access to finance, manage farming risks and support market participation.
6. **Promote Community-Led Governance:** Strengthen **Gram Sabhas and community institutions** in planning and managing land development, ensuring participation and **equitable benefit sharing**.
7. **Strengthen Institutional Coordination:** Coordinate **government departments, technical agencies and local institutions** to implement agricultural and livelihood programmes effectively.

C. Promoting Policy Convergence and Landscape Restoration

1. **Converge Agricultural Schemes:** Align FRA land development with **PM Krishi Sinchayee Yojana (PMKSY)**, **National Food Security and Nutrition Mission**, **National Mission on Edible Oils**, **PM-AASHA** and **Van Dhan Yojana** to broaden irrigation, production, procurement and livelihood support.
2. **Integrate Agricultural Development with Landscape Restoration:** Combine farming with **water conservation, soil protection** and suitable restoration measures. **Gadchiroli's assessment** identifies scope to bring rice fallows under cultivation and raise cropping intensity beyond its existing **115%**.
3. **Prioritise High-Potential Tribal Regions:** Focus public support on districts with **strong crop potential and development needs**, including tribal districts overlapping with **aspirational districts**.

Conclusion

Realising FRA lands' agricultural potential requires **secure rights alongside locally suitable crops, sustainable resource management, strong institutions and market access**. Diversified farming can strengthen tribal livelihoods and resilience while improving **domestic pulse and oilseed supplies**. Linking production support with community-led planning and post-harvest infrastructure can advance **inclusive development and national food security**.

Question for practice:

Discuss the agricultural potential of Forest Rights Act (FRA) lands and the measures needed to promote sustainable and remunerative livelihoods for tribal communities.

Source: The Hindu; Down To Earth

How to Break the Ration-Shop Monopoly in PDS

UPSC Syllabus: Gs Paper 3- Food Security

Introduction

India's Public Distribution System (PDS) provides subsidised foodgrains to millions through nearly **5 lakh Fair Price Shops (FPSs)**. However, geographically tied ration entitlements weakened beneficiaries' **bargaining power** and made them dependent on assigned dealers. Breaking this monopoly requires **expanding beneficiary choice, strengthening accountability and improving foodgrain delivery.**

Evolution of India's Public Distribution System

1. **Origin of PDS:** The PDS began as a wartime rationing measure during World War II and later expanded to address food shortages and ensure food security.
2. **Expansion during the 1960s:** The system expanded to address widespread food shortages, while the establishment of the Food Corporation of India (FCI) strengthened foodgrain procurement and storage.

3. **Revamped Public Distribution System (1992):** The RPDS was introduced to improve food distribution and extend coverage to remote and difficult areas.
4. **Targeted Public Distribution System (1997):** The TPDS classified households into Below Poverty Line (BPL) and Above Poverty Line (APL) categories to improve targeting of food subsidies.
5. **Antyodaya Anna Yojana (2000):** The scheme provided highly subsidised foodgrains to the poorest families, strengthening support for the most vulnerable households.
6. **National Food Security Act (2013):** The NFSA established a legal framework for subsidised foodgrain entitlements covering approximately **67% of India's population**, making food security a statutory entitlement.

Significance of India's Public Distribution System

1. **Food Security:** The PDS provides subsidised cereals to nearly **6 in 10 Indians** every month, making it a major instrument of household food security.
2. **Extensive Distribution Network:** Nearly **5 lakh fair-price shops** provide widespread access to subsidised foodgrains, supporting food distribution across the country.
3. **Support for Vulnerable Households:** Subsidised foodgrains help eligible households meet their basic food requirements and reduce their dependence on market-priced cereals.
4. **Protection during Economic Disruptions:** The **2020 lockdown** exposed the importance of accessible food entitlements, as geographically restricted ration access created difficulties for migrant workers away from home.

Major Concerns in India's PDS

1. **Dealer Monopoly:** Before portability reforms, beneficiaries depended on assigned FPS dealers, limiting their ability to switch shops when dissatisfied with prices, quantities, grain quality or services.
2. **Weak Beneficiary Bargaining Power:** Dealers enjoyed greater control over ration distribution because households lacked alternatives, leaving beneficiaries with limited power to challenge unfair treatment.
3. **Unequal Power Relations:** Female-headed and lower-caste households were particularly affected by weak bargaining power and dependence on assigned ration dealers.
4. **Exclusion and Identification Errors:** Inaccurate beneficiary identification can deny eligible households food entitlements while allowing ineligible households to receive benefits, weakening effective targeting.
5. **Leakages and Diversion:** Around **28% of subsidised foodgrains** were estimated to be diverted or lost, causing financial losses estimated at **₹69,108 crore annually**.
6. **Storage and Distribution Inefficiencies:** Inadequate storage facilities increase spoilage and wastage, while transportation delays can disrupt timely foodgrain delivery to beneficiaries.
7. **Limited Nutritional Diversity:** The emphasis on wheat and rice restricts dietary diversity, creating a need for suitable inclusion of pulses, millets and fortified foods.

Major Initiatives Taken to Strengthen India's PDS

1. **One Nation One Ration Card (ONORC):** Introduced in **2019**, ONORC enables beneficiaries to collect their entitled foodgrains from any Fair Price Shop (FPS) across India through Aadhaar authentication. It also allows divisibility of entitlements, enabling beneficiaries to split their quota across multiple withdrawals.
2. **SMART PDS:** Approved for **2023–2026**, the scheme aims to strengthen end-to-end computerisation of PDS operations. It integrates ration card management, allocation, procurement, storage, transportation and distribution through a unified digital system.
3. **Aadhaar and POS Integration:** Aadhaar seeding and Point-of-Sale (POS) machines support beneficiary authentication and electronic recording of foodgrain distribution, helping improve transparency and reduce fraudulent transactions.
4. **GPS Tracking and SMS Notifications:** These measures help monitor foodgrain movement and provide beneficiaries with information about their entitlements and distribution, improving access to information.
5. **Anna Chakra:** Developed in collaboration with the World Food Programme (WFP) and IIT-Delhi's FITT. This logistics optimisation tool uses demand, stock and route information to improve foodgrain transportation and reduce costs, transit time and emissions.
6. **SCAN Portal:** The Subsidy Claim Application for NFSA provides a single-window platform for states to submit food subsidy claims. Its automated, rule-based workflow supports faster scrutiny and settlement of claims.
7. **Depot Darpan:** This digital monitoring platform supports warehouse inspections and improves infrastructure management, hygiene standards and storage safety.
8. **AI-Enabled PDS Innovations:** AI applications across procurement, storage, transportation, distribution and subsidy settlement support real-time decision-making, efficiency and accountability.
9. **Citizen-Centric Digital Platforms: Anna Sahayata Holistic Solution (**ASHA) supports multilingual grievance redressal and citizen feedback, while Annapurti Grain ATMs enable automated foodgrain distribution through biometric authentication.

ONORC: Impact on Beneficiary Bargaining Power

1. **Pattern of Portability:** In Bihar, **55% of ration transactions** occurred at another FPS in the same block, while only **1%** occurred in another state, indicating the dominance of nearby portability.
2. **Bargaining Power:** ONORC allows beneficiaries to **switch dealers**, providing an exit option against unfair prices, quantities, grain quality or poor service.
3. **Growing Portability:** Portable transactions in Bihar increased by approximately **6% points annually** since April 2022, mainly through nearby shop switching.
4. **Limited Divisibility:** Splitting entitlements across multiple withdrawals remains uncommon, potentially due to limited awareness and dealer incentives.
5. **Welfare Impact:** ONORC can strengthen **beneficiary choice and dealer accountability**, making the dealer-beneficiary relationship more negotiable.

Way Forward

1. **Strengthen Portability:** Improve ONORC awareness and inter-state coordination so migrant workers can access entitlements without disruption when moving for employment.

2. **Improve Dealer Accountability:** Strengthen grievance redressal and monitoring mechanisms so beneficiaries can report unfair treatment and exercise their freedom to change ration shops.
3. **Ensure Inclusive Digitalisation:** Use AI-driven analytics and end-to-end digital tracking to identify inefficiencies and prevent pilferage while reducing authentication-related exclusion risks.
4. **Modernise Storage Infrastructure:** Expand better warehousing and IoT-based quality monitoring, with suitable public-private partnerships, to reduce spoilage, wastage and supply disruptions.
5. **Promote Nutritional Security:** Convert selected FPSs into nutrition hubs offering pulses, edible oils and fortified foods, while exploring targeted e-Rupee vouchers for nutritious purchases.
6. **Learn from State Practices:** Study the experiences of Tamil Nadu and Chhattisgarh in incorporating diverse food items into PDS to improve dietary diversity.

Conclusion

Breaking the ration-shop monopoly requires more than improving distribution efficiency. **ONORC has made ration access more flexible and dealer-beneficiary relations more negotiable, shifting bargaining power towards beneficiaries.** Stronger accountability, inclusive digitalisation, better infrastructure and nutritional diversity can strengthen these gains. The ultimate goal is a responsive, equitable and efficient PDS that protects food security while giving beneficiaries meaningful choice and greater control.

Question for practice:

Discuss the major challenges facing India's Public Distribution System (PDS) and examine how ONORC and other reforms can break the ration-shop monopoly and improve beneficiary welfare.

Source: Indian Express; PIB

How exposed is India to foreign tech?

Source: The post **"How exposed is India to foreign tech?"** has been created based on **"How exposed is India to foreign tech?"** published in "**The Hindu**" on 23rd October 2026.

UPSC Syllabus: GS 3- Science and Technology

Context: India has made significant progress in developing indigenous digital and strategic infrastructure, but it remains dependent on foreign-controlled technologies in several critical sectors. The risk is not limited to deliberate restrictions by foreign governments or companies; technical failures, software disruptions and dependence on foreign management systems can also affect national security and economic stability.

Major areas of India's exposure to foreign technology

1. Satellite communications

a. India has licensed Starlink, Eutelsat OneWeb's Indian subsidiary and Jio Satellite Communications to provide satellite communication services, but the article states that none had received the required security clearance for commercial satellite broadband as of October 16, 2026.
b. SpaceX controls Starlink, while Eutelsat OneWeb is effectively controlled by European interests and Jio's partnership with SES does not give Jio control over the satellite network.

c. However, India's dependence is limited because most ordinary telephone and internet traffic travels through terrestrial networks, while ISRO's communication satellites and dedicated military satellites support broadcasting and strategic communications.

2. Satellite navigation

a. India's NavIC system is particularly vulnerable because only three satellites were reported to be capable of providing positioning, navigation and timing (PNT) signals, whereas at least four are required for standalone positioning.
b. India therefore remains exposed to foreign navigation systems such as the US GPS, which retains the ability to deny military PNT services over specific areas.
c. ISRO's difficulties in improving its launch rate have also affected NavIC's operational reliability.

3. Cloud computing and information technology

a. Amazon Web Services (AWS), Microsoft Azure and Google Cloud provide infrastructure and managed services to thousands of Indian businesses and public institutions. Gartner projected Indian expenditure on cloud services to reach $17.5 billion in 2026.
b. Although the government operates its MeghRaj cloud through the National Informatics Centre (NIC), it also relies on private cloud providers, including foreign companies.
c. AWS Outposts technology under MeghRaj 2.0 may keep data physically within India, but continued dependence on AWS's regional control systems for monitoring and software updates creates foreign management vulnerabilities.
d. The CrowdStrike software update incident demonstrated how a technical failure in foreign software could disrupt Indian airlines, airports and securities firms.
e. Greater adoption of open-source software, including India's Linux-based Bharat Operating System Solutions (BOSS), can reduce dependence on proprietary technologies.

4. Digital payments

a. The National Payments Corporation of India (NPCI) operates UPI, giving India considerable independence from Visa and Mastercard in domestic digital payments.
b. However, the consumer-facing layer remains concentrated in foreign-controlled platforms such as Google Pay.
c. The closure of Google Pay would not disrupt UPI itself because users could shift to alternatives such as PhonePe, despite Walmart's majority stake in the latter.
d. Nevertheless, foreign banking networks and the SWIFT messaging system expose Indian financial institutions to possible international sanctions and disruptions in cross-border payments.

5. Military equipment

a. India's defence preparedness remains exposed to foreign suppliers because the country is the world's second-largest importer of major arms during 2021–2025, with Russia accounting for 40% of its imports.
b. India also imports defence equipment from France, Israel and the US, while the indigenous Tejas fighter programme depends on US-made GE Aerospace engines.
c. The 1998 US sanctions prevented the delivery of 30 T800 helicopter engines ordered by Hindustan Aeronautics Limited (HAL), forcing it to procure replacements from a French manufacturer.

d. Delays in the supply of GE engines have also constrained Tejas production and postponed delivery deadlines.

Measures to strengthen technological self-reliance

1. India should strengthen ISRO's launch capacity and restore NavIC's full operational capability to reduce dependence on foreign navigation systems.
2. The government should promote indigenous satellite communication networks and ensure that critical infrastructure remains operational even if foreign providers restrict services.
3. India should expand domestic cloud infrastructure, develop indigenous management systems and encourage open-source software adoption across government departments.
4. The country should diversify defence imports, strengthen domestic research and development, and accelerate indigenous production of critical components such as aircraft engines.
5. India should maintain alternative digital payment channels and strengthen domestic financial infrastructure to mitigate the impact of foreign sanctions or disruptions.
6. Critical systems should undergo regular resilience testing, with backup arrangements and contingency plans for foreign service failures.

Conclusion: India is not equally dependent on foreign technology across all sectors. Domestic systems such as UPI provide substantial autonomy, whereas satellite navigation, cloud management and defence equipment remain significant vulnerabilities. Technological self-reliance should therefore focus not merely on domestic ownership, but also on operational control, indigenous capabilities and the ability to function independently during external disruptions.

Question: How exposed is India to foreign technology in critical sectors? Discuss the major vulnerabilities and suggest measures to strengthen technological self-reliance.

Source: The Hindu

For migrant children, access to school is not enough

Source: The post **"For migrant children, access to school is not enough"** has been created based on **"For migrant children, access to school is not enough"** published in "**Indian Express**" on 23rd October 2026.

UPSC Syllabus: GS 2- Governance

Context: With the end of the Kharif harvest, seasonal migration increases across India. This year, drought is further intensifying the trend, turning many seasonal migrants into climate migrants as declining agricultural productivity and shrinking livelihood opportunities push families towards sugarcane fields, brick kilns and construction sites. Children are among the worst-affected, facing disrupted schooling, learning loss and prolonged educational exclusion. According to the last Census, India had 9.29 crore migrant children, yet there is no reliable estimate of how many are currently out of school.

Challenges faced by migrant children

1. **Interrupted schooling:** Seasonal migration can disrupt education for five to six months, resulting in irregular attendance, learning loss and an increased risk of dropout.

2. **Learning gaps:** Frequent movement between states and schools makes it difficult to maintain academic continuity and receive appropriate remedial teaching.
3. **Child labour:** Economic distress may compel children to assist their parents at sugarcane fields, brick kilns and construction sites, increasing the risk of educational exclusion and child labour.
4. **Psychosocial challenges:** Repeated displacement weakens children's social ties, sense of belonging and emotional well-being, making adjustment to new schools difficult.
5. **Administrative barriers:** Lack of portable school records, difficulties in transferring between states and inadequate tracking mechanisms disrupt admission and continuity.
6. **Inadequate teacher preparedness:** Conventional teacher-training programmes often assume stable schooling and may not equip teachers to address migrant children's diverse linguistic, social and educational needs.
7. **Climate vulnerability:** Drought, drying fields and shrinking livelihood opportunities can increase seasonal migration, further intensifying educational disruption.

Government initiatives

1. **Sarva Shiksha Abhiyan (2001):** Promoted alternative education models, including seasonal hostels, residential schools, basti shalas, sakhar shalas, tent schools and transit education centres.
2. **Right to Education Act, 2009:** Provides a legal framework for free and compulsory elementary education.
3. **National Education Policy (NEP), 2020:** Emphasises inclusive and equitable education for disadvantaged groups.
4. **NITI Aayog recommendations:** Include migration-responsive schooling, bridge learning centres, portable school records, inter-state transfer mechanisms and tracking systems.

Way Forward

1. **Ensure learning continuity:** Establish bridge courses, remedial teaching and flexible schooling arrangements at migration destinations to address learning gaps.
2. **Improve portability:** Introduce portable academic records and seamless inter-state admission and transfer mechanisms.
3. **Strengthen teacher training:** Integrate migration-responsive pedagogy, multilingual teaching and awareness of sociocultural inequalities into teacher-education programmes.
4. **Provide holistic support:** Ensure academic assistance, mental-health support, emotional care and safe learning environments.
5. **Prevent child labour:** Strengthen coordination between education and labour departments and monitor children at vulnerable worksites.
6. **Adopt context-specific models:** Expand seasonal hostels, worksite schools and transit education centres according to migration patterns and children's needs.
7. **Strengthen accountability:** Improve migrant-child tracking, inter-state coordination and community participation to identify children at risk of dropping out.

Conclusion: Educational inclusion must go beyond enrolment to ensure meaningful learning, emotional well-being and academic progression. A migration-responsive, child-centred and equitable education system is essential to ensure that migration does not become a barrier to children's right to education and future opportunities.

Question: Migrant children face multiple barriers to educational inclusion despite improvements in school access and enrolment. Discuss the challenges and suggest measures to ensure equitable and continuous education for them.

Source: Indian Express

Indian Agriculture's Polycrisis Moment

UPSC Syllabus: Gs Paper 3- Food Security

Introduction

Indian agriculture faces a polycrisis driven by geopolitical conflicts, weak monsoon, climate uncertainty, rising input costs and water scarcity. Its growing dependence on fossil fuels exposes farming to external energy shocks, while diversion of food crops towards biofuels creates food-fuel competition. At the same time, rainfall dependence threatens farm incomes and food affordability. These interconnected risks highlight the need to shift from short-term relief towards long-term agricultural resilience.

Major Causes of the Crisis

1. Fossilisation of Farming: India's tractor population has crossed 1.2 crore, while fertiliser consumption reached 33.5 million tonnes of N, P and K in 2025-26. Urea and DAP accounted for around **67.5%** of consumption, increasing dependence on chemical inputs.

2. Dependence on Imported Energy and Raw Materials: India imports oil, gas and fertiliser raw materials, including ammonia, rock phosphate, sulphur and muriate of potash. Many crop protection chemicals also depend on imported technical-grade ingredients and intermediates.

3. Geopolitical Conflicts and Input Price Shocks: Conflicts in West Asia and the Black Sea region have raised global input prices. LNG prices delivered to Northeast Asian markets rose from around $11 to $30 per million British thermal units, while sulphur's landed price in India reached $1,000–1,100 per tonne.

4. Fuelisation of Food: High crude oil prices encourage the diversion of sugarcane, rice, maize and vegetable oils towards biofuel production. This can intensify competition between food and fuel requirements.

5. Climate Uncertainty and Rainfall Dependence: Weak monsoon and a prospective very strong El Niño can intensify agricultural stress. Uneven rainfall, inadequate irrigation and low soil moisture further increase crop losses and disrupt agricultural planning.

6. Inefficient Use of Fertilisers: Only one-third of the nitrogen in urea is absorbed by crops, while three-fourths of phosphorus applied through DAP gets locked in soil and remains unavailable to plant roots during the growing season.

Impact of the Crisis

1. Agricultural Production and Cost Risks: Combined energy and climate shocks can increase cultivation costs and disrupt agricultural production. The impact is greater in regions dependent on rainfall and vulnerable supply chains.

2. Farmers' Income and Indebtedness: Farmers invest in seeds, fertilisers, pesticides, labour and irrigation before harvest. Crop failure can destroy these investments, while financial obligations and next-season expenses continue.

3. Agrarian Distress: Reports of four farmer suicides in Maharashtra within seven days underline the human cost of agrarian distress. However, the circumstances of individual deaths require independent verification.

4. Food Inflation and Household Insecurity: Prices of certain rice varieties in Tamil Nadu reportedly rose by up to 50%. Higher food costs reduce poorer households' spending capacity for healthcare, education, transport and other necessities.

5. Rural Livelihood and Economic Disruption: Reduced cultivation can weaken rural employment and local demand. Agricultural labourers, livestock owners and rural businesses may also face financial difficulties.

6. External Vulnerability and Historical Risks: India's dependence on imported agricultural inputs exposes it to external supply disruptions and price shocks. During 1979-80, the farm sector contracted by 12.8%, while its oil import bill doubled following Iran's Islamic Revolution.

Existing Government Measures and Policy Responses

1. Restriction on Ethanol Feedstocks: The Indian government has banned the use of sugarcane juice and B-heavy molasses for ethanol production. Further restrictions on grain-based feedstocks may become relevant during El Niño conditions.

2. Emergency Drought Relief: Governments provide water tankers, compensation and relief programmes in affected areas. These measures provide immediate assistance but cannot replace long-term water security.

3. Financial Protection for Farmers: Institutional credit and crop insurance can protect farmers against crop losses and financial distress. Transparent crop-loss assessment and timely claim settlement are essential for effective support.

4. Food Supply and Market Interventions: Public stock releases, alternative sourcing and distribution networks can help manage shortages. Calibrated export restrictions may also stabilise supplies, but unpredictable interventions can weaken farmers' price expectations.

Way Forward

1. Improve Fertiliser Efficiency: Gradually replace urea and DAP with ammonium sulphate and balanced complex fertilisers. This can reduce nitrogen losses and phosphorus lock-up while improving nutrient availability.

2. Promote Biostimulants and Plant Resilience: Biostimulants can expand root surface areas and improve nutrient absorption. Strengthening plants' internal defence and adaptation mechanisms can also help reduce chemical pesticide application.

3. Strengthen Water Conservation and Irrigation: Expand watershed development, rainwater harvesting, ground water recharge and restoration of village ponds and small reservoirs. Promote solar-powered pumps and drip irrigation to improve water management.

4. Encourage Climate-Resilient Farming: Promote drought-tolerant seeds, soil-moisture conservation and locally relevant weather forecasts. These measures should be affordable and accessible to small and marginal farmers.

5. Reform Crop Choices and Agricultural Markets: Align crop choices with local water availability and encourage diversification. Support farmers through assured markets, suitable seeds, technical assistance, procurement reforms and viable prices for alternative crops.

6. Strengthen Farmers' Financial Security: Ensure transparent crop-loss assessment, timely insurance settlements and suitable credit relief. Support the next cropping cycle to prevent temporary distress from becoming recurring indebtedness.

7. Improve Drought Preparedness and Food Management: Establish advance plans with clear relief triggers and responsibilities. Monitor production estimates, reservoir levels, mandi arrivals, prices and food stocks to identify shortages early.

Conclusion

Indian agriculture needs a shift from crisis management to long-term resilience. Reducing dependence on imported inputs, improving resource efficiency and strengthening water security are essential. Agricultural policy must protect farmers' livelihoods while keeping food affordable. Better preparedness, accountable governance and coordinated reforms can reduce future climatic and geopolitical risks.

Question for practice:
Discuss the major causes and impacts of the polycrisis facing Indian agriculture and suggest measures to strengthen its long-term resilience.

Source: Indian Express

Tied by Geography, Divided by Politics

UPSC Syllabus: Gs Paper 2-International Relations

Introduction

India-Bangladesh relations show a contrast: geographical, cultural and economic ties coexist with political mistrust. Their shared border of over **4,000 kilometres**, common rivers and regional interests make cooperation essential. However, historical grievances, concerns over Indian influence, domestic political divisions and unresolved disputes have weakened confidence. The BNP's (Bangladesh Nationalist Party) return to power in February 2026 offers an opening to reset ties, but lasting progress remains uncertain for both neighbours.

Historical Roots of Mutual Suspicion

1. India's Role in Bangladesh's Liberation: India delivered the decisive military blow against Pakistan in 1971, creating gratitude but also resentment among Bangladeshi elites who believed their nation should have secured liberation independently.

2. Concerns over National Identity: Bangladesh feared that India's influence, particularly through culturally connected West Bengal, could weaken its independent identity. Open borders after liberation also revived memories of Hindu bhadralok dominance in pre-Partition Bengal.

3. Geographical Dependence and Fear of Domination: Bangladesh shares over **4,000 kilometres of border** with India and depends on rivers originating or flowing through India. These geographical realities create concerns about its economic and strategic freedom.

4. Shift in Nationalism and Foreign Policy: After Sheikh Mujib, succeeding governments distanced Bangladesh from India. Ziaur Rahman promoted Islamic nationalism over the linguistic nationalism associated with the liberation movement.

Domestic Politics and the Changing Dynamics of Bilateral Relations

1. Political Divide over India: The Awami League generally favoured close relations with India through its secular Bengali-nationalist legacy. The BNP (Bangladesh Nationalist Party) and its allies remained more suspicious of New Delhi, making India an issue in Bangladesh's domestic political contest.

2. Strategic Autonomy through External Partnerships: Bangladesh strengthened ties with Pakistan, China and the United States to balance India's overwhelming power. Dhaka viewed these partnerships as an assertion of strategic autonomy rather than simply anti-India policy.

3. Perceived Indian Interference in Domestic Politics: Many Bangladeshis believe India helped bring Sheikh Hasina to power in 2007 and supported her authoritarian rule. Critics accused New Delhi of using international influence to shield her government from scrutiny over human rights violations.

4. Democratic Concerns and Political Backlash: India was widely perceived as prioritising security interests over Bangladesh's democratic development. Critics accused Hasina's government of imprisoning, torturing and executing opposition supporters, while accusing New Delhi of shielding her regime.

5. Hasina's Ouster and Bilateral Tensions: Hasina's ouster in August 2024 and flight to India on **5 August** reinforced suspicions about New Delhi's political role. India's continuing refusal to extradite her remains a major bilateral irritant.

6. Political Transition and Continuing Uncertainty: The BNP's return to power under Tarique Rahman in February 2026 has opened a new chapter in bilateral relations. Functional engagement has resumed, but substantial mutual suspicion continues to hinder progress.

Why Both Countries Need Each Other

1. Shared Civilisational and Cultural Connections: India and Bangladesh share languages, cultural traditions, literature, music, arts and historical connections. These commonalities provide a social foundation for cooperation despite political differences.

2. India's Rising Global Economic Importance: India's **1.4-billion population and US$3.5-trillion economy** offer Bangladesh opportunities through expanding markets, investment and regional prosperity. India's growing global economic influence can create wider opportunities for its neighbours.

3. Regional Prosperity through Economic Proximity: A prosperous India can support Bangladesh's economic growth, as regional experiences suggest that neighbouring countries can benefit from a thriving economy. A successful Bangladesh, in turn, is more likely to become a strong partner for India than a struggling neighbour.

4. Bangladesh's Economic and Climate Needs: Bangladesh needs Indian cooperation in electricity, critical infrastructure and climate adaptation. Rising sea levels threaten its coastal regions, making cooperation important for long-term development and resilience.

5. India's Northeast Connectivity and Security: India needs Bangladesh's transit routes to connect its **Seven Sisters states** and reduce transportation costs. These routes can help address regional isolation and support India's internal cohesion and regional stability.

6. Shared Regional Security Interests: Both countries face climate change, water-management challenges and terrorism. Their shared security and environmental concerns make cooperation essential for regional stability and sustainable development.

Major Challenges in India-Bangladesh Relations

1. Unresolved River-Water Sharing: Bangladesh shares **50 rivers** with India, including the Ganges and Brahmaputra, but water-sharing disagreements remain unresolved. Cooperation in water management is important for agriculture, flood control and climate resilience.

2. Border Killings and Human Rights Concerns: The Indian Border Security Force's alleged **'shoot-to-kill' policy** at the border remains a serious concern. Human Rights Watch has criticised this policy, making border practices an important human rights issue.

3. Trade Imbalance and Market Access: Trade imbalances, tariffs and barriers to Bangladeshi exports limit economic opportunities. Easier market access and reduced trade barriers could support Bangladesh's economic growth and improve bilateral economic relations.

4. Geopolitical Competition and Strategic Distrust: Bangladesh's engagement with China, Pakistan and the United States reflects its balancing strategy. India's concerns over China's growing regional influence further complicate mutual confidence and strategic cooperation.

5. India's Personality-Centric Diplomacy: India's close alignment with Hasina rather than Bangladesh's broader political institutions weakened its diplomatic resilience. Her removal exposed the risks of a regional strategy centred on one political leader.

6. Anti-India Sentiment and Political Narratives: Perceptions of Indian interference and hostile political narratives have strengthened public resentment in Bangladesh. This public distrust makes rebuilding confidence and sustaining bilateral cooperation more difficult.

The Way Forward

1. Move Beyond Historical Gratitude: India should not expect permanent gratitude for its role in 1971, as national interests and identity concerns shape Bangladesh's foreign policy more strongly than historical sentiments. Repeatedly invoking liberation can deepen existing resentment.

2. Practise Restraint and Political Sensitivity: India should exercise its regional power responsibly and respect Bangladesh's democratic evolution and national identity. It should engage with the country's people and institutions rather than relying heavily on one political leadership.

3. Respect Strategic Autonomy: Bangladesh should recognise that maintaining independent foreign relations does not require automatic opposition to India. Its geographical realities and shared developmental interests make a workable relationship with New Delhi indispensable.

4. Strengthen Water and Border Cooperation: Both countries should prioritise river-water sharing, joint river management and responsible border practices. These efforts can support agriculture, flood control, climate resilience and human rights.

5. Promote Trade and Regional Connectivity: India should ease tariffs and export barriers and expand infrastructure and electricity cooperation. Better transit connectivity can reduce transportation costs and create economic benefits for both countries.

6. Rebuild Institutional and Public Trust: Both governments should strengthen functional engagement and reduce hostile narratives. Broader institutional relations can make bilateral cooperation more resilient to political changes and leadership transitions.

Conclusion

India and Bangladesh need a relationship based on mutual respect and shared interests. India should move beyond personality-centred diplomacy, while Bangladesh should pursue strategic autonomy without reflexive opposition. Resolving water-sharing, border and trade disputes can strengthen regional stability, expand economic opportunities and support peaceful coexistence for both countries, despite their political differences.

Question for practice:
Examine the major challenges in India-Bangladesh relations and suggest measures to strengthen bilateral ties.

Source: The Hindu

What the eMudhra fiasco means to users, investors

Source: The post **"What the eMudhra fiasco means to users, investors"** has been created based on **"What the eMudhra fiasco means to users, investors"** published in "**Business Line**" on 24th October 2026.

UPSC Syllabus: GS 3– Science and technology

Context: eMudhra is a Bengaluru-based company providing Digital Signature Certificates (DSCs), website security certificates, electronic signatures (eSign) and digital identity management solutions. In October 2026, a serious security lapse involving its digital cryptographic keys raised concerns about the reliability of digital trust infrastructure.

About eMudhra

1. It is an Indian digital trust company for providing digital certificates and identity verification services to ensure secure online transactions.
2. It is India's largest certifying authority in the digital signature certificate market. It was founded in 2008.
3. It is listed by India's Controller of Certifying Authorities (CCA) under the Information Technology Act, 2000.
4. It is also associated with Aadhaar-linked electronic know-your-customer (e-KYC) services.
5. It issues digital signature certificates, provides electronic signing services and supplies technology for authenticating online identities and securing digital transactions.

Nature of the security breach

1. On April 30, 2025, an error in a computer script used to transfer security keys resulted in the creation and publication of weak private keys belonging to eight intermediate certificate authorities.
2. The weakness remained undetected for nearly 18 months until an independent security researcher discovered it in October 2026.
3. The compromised keys could potentially be used to issue fraudulent website certificates or make malicious software appear to originate from a trusted source.
4. Google and Mozilla responded by blocking the affected certificates, while Google announced plans to stop trusting a related root certificate authority from October 27, 2026.
5. As of October 22, 2026, no confirmed exploitation of the affected keys to steal information had been reported.

Implications for users and investors

1. **Cybersecurity risks:** Fraudulent certificates could enable website impersonation, interception of internet communications and theft of sensitive information.
2. **Limited confirmed damage:Investor confidence:** eMudhra shares fell around 36% over two trading sessions, reflecting concerns about reputational damage and future business prospects.
3. **Business impact:** The affected global SSL/TLS certificate business contributed approximately 1% of revenue. The company announced its decision to exit this business, while its Indian DSC and eSign operations remained unaffected.
4. **Uncertain outlook:** Investigations, regulatory developments and customer confidence will determine the long-term impact on earnings.

Measures to strengthen digital security

1. Organisations must follow rigorous procedures for generating, transferring, storing and auditing private keys.
2. Regular independent security audits and continuous monitoring should be undertaken to detect vulnerabilities at an early stage.
3. Businesses should replace affected certificates and update security-sensitive applications wherever necessary.
4. Users should keep browsers and devices updated, verify website addresses and never bypass browser security warnings.
5. Regulatory oversight and incident-response mechanisms should be strengthened to ensure accountability among trusted certificate authorities.

Conclusion: The eMudhra incident highlights that digital security depends on the reliability of trusted institutions as much as on individual precautions. Stronger cybersecurity standards, timely vulnerability detection and effective incident response are essential for maintaining trust in India's digital ecosystem.

Question: What does the eMudhra security breach reveal about the vulnerabilities of digital infrastructure? Discuss its implications for users and investors and suggest measures to strengthen digital security.

Source: Business Line

This isn't the UN we need

Source: The post **"This isn't the UN we need"** has been created based on **"This isn't the UN we need"** published in "**Times of India**" on 24th October 2026.

UPSC Syllabus: GS 2- International Relations

Context: The United Nations (UN) was established with the aims to maintain international peace and security, promote cooperation and protect human rights. However, its effectiveness and representativeness have increasingly been questioned due to geopolitical rivalries, unequal decision-making and the inability to address several global conflicts.

About the United Nations

1. The United Nations (UN) was established in 1945.
2. It is an international organisation **comprising 193 member states, established to prevent future wars and promote collective security.**
3. Its **six principal organs include the General Assembly, Security Council, Economic and Social Council, International Court of Justice, Secretariat and Trusteeship Council.**
4. The **Security Council has primary responsibility for maintaining international peace and security.** It consists of 15 members, including five permanent members—China, France, Russia, the United Kingdom and the United States—with veto power.
5. The UN also **contributes to humanitarian assistance, sustainable development, human rights protection and global health** through its specialised agencies and programmes.
6. Despite these contributions, its effectiveness is increasingly questioned due to geopolitical rivalries, unequal representation and difficulties in enforcing international decisions.

Major challenges faced by UN

1. **Declining Public Confidence:** Several countries, including India, have expressed dissatisfaction with the UN's performance, reflecting concerns about its effectiveness in addressing global challenges.
2. **Outdated Representation:** The composition of the UN Security Council reflects the post-Second World War power structure and does not adequately represent contemporary geopolitical realities, particularly the interests of developing countries.
3. **Veto Power:** Differences among the five permanent members of the Security Council often create political deadlocks and prevent timely action on international conflicts.
4. **Weak Enforcement Mechanisms:** The UN faces difficulties in implementing its decisions when powerful member states refuse to cooperate or comply with its resolutions.

5. **Selective Application of Principles:** Perceived differences in the treatment of powerful and weaker countries undermine the credibility of the UN and raise concerns about the equal application of international law.
6. **Limited Conflict-Resolution Capacity:** The persistence of international conflicts despite UN interventions highlights the gap between its objectives of maintaining peace and security and its ability to achieve these goals effectively.

Measures to make the UN more effective

1. **Security Council Reform:** The UN should expand both permanent and non-permanent membership of the Security Council to reflect contemporary geopolitical realities and ensure adequate representation of developing countries, including India and Africa.
2. **Veto Reform: T**he use of veto power by permanent members should be restricted, particularly in situations involving mass atrocities and serious violations of international law, to prevent political deadlocks.
3. **Greater Accountability:** The UN should ensure transparent decision-making and apply international law consistently to all member states, irrespective of their economic or military power.
4. **Stronger Implementation Mechanisms:** The UN should strengthen monitoring and compliance mechanisms to ensure that member states implement its resolutions effectively.
5. **Public Engagement:** The UN should communicate its achievements, limitations and failures transparently to rebuild public trust and strengthen its legitimacy among citizens worldwide.

Conclusion: The UN remains indispensable for global cooperation, but its legitimacy depends on meaningful institutional reform. A more representative, accountable and effective UN is essential for addressing contemporary challenges and maintaining international peace and security.

Question: "The United Nations needs reform to remain relevant in a changing world order." In the light of declining public confidence in the UN, critically examine its challenges and suggest measures to make it more effective.

Source: Times of India

Limits of satellite internet plan

UPSC Syllabus: Gs Paper 2-Science and Technology

Introduction

Satellite internet can extend broadband access to remote and underserved areas where terrestrial networks are difficult to deploy. Yet its role in India's connectivity strategy must be assessed against limited bandwidth, scarce spectrum and service costs. Although satellite networks can complement existing infrastructure, they cannot independently meet the country's mass household broadband needs. Fibre expansion therefore remains essential. It matters for realistic targets and public investment decisions.

What Is Satellite Internet?

1. **Meaning:** Satellite internet delivers internet connectivity through communication satellites, enabling access in places without direct last-mile fibre or mobile-network coverage.

2. **Working Mechanism:** A user terminal communicates with a satellite, which relays data through a ground station connected to the wider internet network.

3. **Types of Satellite Internet:** Communication satellites mainly operate in **LEO and GEO** for internet services.

- **LEO Satellites:** LEO satellites orbit roughly 300–1,200 km above Earth. Their shorter signal path generally enables **lower latency**, making them better suited to interactive applications such as video calls and remote work.
- **GEO Satellites:** GEO satellites orbit about 35,786 km above the equator.Their high orbit provides broad-area coverage, but the longer signal path creates **higher latency**, limiting responsiveness for some applications.

4. **Satellite Constellations:** LEO services require multiple satellites and frequent handovers to maintain coverage as satellites move across the sky.

5. **Technological Advancement:** Optical links using lasers can connect satellites and may improve inter-satellite data transmission, but they do not remove spectrum and capacity constraints.

Significance of Satellite Internet

1. **Bridging the Digital Divide:** Around **40% of the global population** lacks efficient internet access, while rural communities often face weak connectivity and limited broadband infrastructure.

2. **Connecting Remote Communities:** Satellite links can serve hill hamlets, forest check posts and border posts beyond economical fibre reach, including locations around **40 kilometres from fibre**.

3. **Supporting Maritime Connectivity:** Ships and trawlers can access internet services in areas where terrestrial networks cannot provide direct connectivity.

4. **Enabling Rural Enterprises:** Reliable broadband can help businesses process real-time data, respond to market or customer changes and strengthen cybersecurity monitoring.

5. **Supporting Remote Work:** Satellite connections can provide underserved workers access to cloud applications and corporate resources, making remote work more practical.

6. **Reaching Underserved Locations Quickly:** LEO networks can be deployed comparatively quickly in remote areas, providing interim connectivity while terrestrial infrastructure is expanded.

Limitations of Satellite Internet

1. **Limited National Capacity:** Starlink's Gen1 constellation has a reported potential throughput of approximately **600 Gbps over the entire Indian territory**, highlighting its limited capacity relative to mass broadband demand.

2. **Limited Simultaneous Connections:** At **10 Mbps per household**, this capacity could theoretically support around **60,000 simultaneous connections** across India, before accounting for network overhead and other demands.

3. **Subscriber Limitations:** Assuming a **20:1 sharing ratio**, the theoretical capacity could support around **12 lakh subscribers** at 10 Mbps per simultaneous connection, but peak-hour demand may affect service quality.

4. **Large Connectivity Gap:** India has **19.36 crore rural households**. Even this satellite capacity can serve only a small fraction of the country's potential household connectivity demand.

5. **Spectrum Scarcity:** Radio spectrum is finite and internationally coordinated, constraining satellite capacity even as operators add spacecraft.

6. **Limited Frequency Reuse:** Mobile networks reuse frequencies across small cells, whereas satellite networks face greater constraints because their beams cover larger areas.

7. **Shared Beam Capacity:** At around **550 km altitude**, a satellite beam may cover an area roughly **20 km across**, requiring many users to share its available bandwidth.

8. **Operator Coordination:** Constellations must coordinate spectrum use to reduce interference. More providers can improve competition and redundancy, but do not multiply available bandwidth.

9. **Cost Constraints:** Limited bandwidth and high service costs can restrict affordability, making satellite internet less suitable for mass household connectivity.

Satellite Internet vs Fibre Optic Networks

1. **Transmission Capacity:** A modern fibre route can carry **tens of terabits per second**, far exceeding the reported satellite capacity over India.

2. **Tanker vs Pipeline Analogy:** Satellite internet is like a **water tanker**, delivering limited supplies to specific locations, while fibre is like a **pipeline**, capable of carrying much larger volumes continuously.

3. **Scalability:** Fibre capacity can be expanded through network upgrades, while satellite systems face tighter constraints from spectrum, beam coverage and radio physics.

4.**Deployment:** Fibre rollout takes time and substantial investment, whereas satellite connectivity can reach remote locations more quickly.

5. Latency and Responsiveness: LEO services generally offer lower latency than GEO systems, but **fibre remains superior in capacity and latency** for broadband backbones.

6. **Ground Infrastructure:** Satellite services still rely on fibre-connected gateways, data centres and internet exchanges to connect users to the wider internet.

7. **Complementary Roles:** Fibre is better suited to mass connectivity; satellite is most valuable where terrestrial deployment is difficult or uneconomical.

Way Forward for India's Broadband Expansion

1. **Prioritise Fibre Targets:** Do not count satellite subscriptions as a substitute for household connectivity targets; retain fibre as the foundation of mass broadband expansion.

2. **Accelerate BharatNet:** Implement the cited **₹1.39 lakh crore BharatNet programme**, which targets fibre connectivity for **1.5 crore rural homes**.

3. **Support Shared Terminals:** Prioritise public terminals at village hotspots or towers, enabling **hundreds of people** to share connectivity instead of relying only on individual household dishes.

4. **Target Remote Locations:** Focus satellite support on border posts, hill hamlets, forest check posts and other areas where fibre cannot be deployed economically.

5. **Use Targeted Subsidies:** Direct public assistance towards shared access and underserved communities rather than broadly subsidising individual terminals that consume scarce capacity.

6. **Strengthen Ground Links:** Develop fibre-connected gateways and supporting data infrastructure, since satellite connectivity still depends on terrestrial links to reach the internet.

7. **Set Realistic Investment Expectations:** Model satellite businesses around a **limited, high-value subscriber base**, plausible margins and capacity ceilings rather than mass-market mobile-broadband assumptions.

8. **Recognise Enterprise Competition:** LEO services may pressure established VSAT providers through latency and pricing, while satellite backhaul can also help connect difficult tower locations.

Conclusion

Satellite internet can extend connectivity to remote areas, but limited bandwidth and spectrum prevent it from meeting India's mass household needs. Fibre should remain the backbone of broadband expansion, with satellites complementing it where terrestrial rollout is uneconomical. India should accelerate BharatNet and prioritise shared terminals and targeted support for underserved locations.

Question for practice:

Discuss the potential and limitations of satellite internet in expanding broadband connectivity in India, and explain why fibre optic networks remain essential.

Source: Businessline

Rethinking the defence PSU model

UPSC Syllabus: Gs Paper 3- changes in industrial policy and their effects on industrial growth.

Introduction

India's ordnance factories have long supported **defence preparedness** through specialised manufacturing and technical expertise. In **October 2021**, the government corporatised **41 factories** under the Ordnance Factory Board (OFB) into **seven Defence Public Sector Undertakings (DPSUs)** to improve efficiency, competitiveness and quality. Despite reported profits and export growth, concerns remain over accounting, strategic manufacturing, technological self-reliance and governance. The central question is whether **commercial efficiency serves defence sovereignty**.

Evolution of India's Ordnance Factories

1. **Strategic Importance:** Ordnance factories have supported India's defence preparedness by manufacturing weapons, ammunition, equipment and other essential military supplies.
2. **Specialised Expertise and Strategic Manufacturing:** Ordnance factories developed expertise in metallurgy, chemicals and ballistics, functioning as Original Equipment Manufacturers (OEMs) for critical defence products and earning the reputation of the 'Fourth Arm' of defence.
3. **Corporatisation of OFB:** In October 2021, the government corporatised 41 ordnance factories under the Ordnance Factory Board (OFB) into seven Defence Public Sector Undertakings (DPSUs) to improve efficiency, competitiveness and product quality.
4. **Seven New DPSUs:** The restructuring created:
    - Munitions India Limited (MIL)
    - Armoured Vehicles Nigam Limited (AVNL)
    - Advanced Weapons and Equipment India Limited (AWEIL)
    - Troop Comforts Limited (TCL)
    - India Optel Limited (IOL)
    - Gliders India Limited (GIL)
    - **Yantra India Limited (YIL)**

Performance of the New DPSU Model

1. **Reported Profitability:** Except Yantra India Limited (YIL), the newly formed DPSUs reportedly recorded profits and increased export orders, indicating some positive outcomes after corporatisation.
2. **Historical Supply Contribution:** Comptroller and Auditor General (CAG)-validated data recorded OFB supplies worth ₹20,876 crore in 2016–17, highlighting its earlier contribution to defence production.
3. **Possible Base Effect:** Revenue growth based on the pandemic-disturbed Financial Year (FY) 2019–20 baseline may exaggerate the apparent improvement in the DPSUs' financial performance.
4. **Accounting Changes and Reported Turnover:** Inter-factory transfers, earlier treated as internal transactions, are now recorded as commercial sales, potentially increasing aggregate turnover without a proportionate rise in physical output.

Key Issues and Concerns in Defence Corporatisation

1. **Commercial Metrics and Long-Term Investment:**
    - Greater emphasis on Earnings Before Interest, Taxes, Depreciation and Amortisation (EBITDA) may encourage short-term returns, potentially affecting modernisation, Research and Development (R&D) and investment in complex defence technologies.
    - The shift from user satisfaction and operational reliability towards EBITDA may prioritise short-term returns over modernisation and long-term research and development.
2. **Declining Public-Sector OEM Role:** Private firms may secure prime contracts using foreign designs and technology transfers, while public factories undertake subcontracted manufacturing, weakening their Original Equipment Manufacturer (OEM) capabilities.
3. **Uneven Distribution of Strategic Risks and Gains:** Private entities may retain commercial benefits from defence contracts, while public factories undertake hazardous and strategically important manufacturing activities.
4. **Intellectual Property and Sovereign Knowledge:** Technology transfers and collaboration may expose valuable public-sector expertise, requiring IP safeguards and fair public value retention.
5. **Limits of Export-Led Self-Reliance:** Exports concentrated in semi-finished components, castings and foundational chemicals may not translate into greater exports of complete defence platforms.
6. **Leadership Vacancies and Appointment Delays:** Defence Public Sector Undertakings (DPSUs), including Bharat Electronics Limited (BEL), Bharat Dynamics Limited (BDL), BEML Limited and Mazagon Dock Shipbuilders Limited (MDL), have faced leadership vacancies. Selection delays, changing criteria and administrative clearances can affect institutional continuity.
7. **Implications for Critical Defence Projects:** MDL's prolonged leadership vacancy raised concerns during preparations for the Project 75 India (P-75I) submarine project, highlighting the importance of timely appointments in strategic defence institutions.

Way Forward

1. **Adopt Strategic Performance Indicators:** Evaluate DPSUs through operational reliability, equipment quality, indigenous technology and user satisfaction, alongside financial indicators.
2. **Assess Actual Production:** Separate accounting changes and inter-factory transactions from genuine increases in physical production and value addition.
3. **Strengthen Modernisation and R&D:** Ensure sustained investment in research, advanced manufacturing capabilities and long-term technological development.
4. **Preserve Indigenous Manufacturing Capabilities:** Strengthen public-sector OEM capabilities and ensure that strategic production knowledge remains available within India.

5. **Protect Intellectual Property:** Establish clear safeguards for technology transfers, public-sector expertise and fair sharing of commercial benefits.
6. **Reform Leadership Appointments:** Ensure timely Public Enterprises Selection Board (PESB) selections, stable eligibility criteria and faster administrative clearances to strengthen institutional continuity.
7. **Rationalise ACC Approval Processes:** Consider appropriate delegation of appointment powers by the Appointments Committee of the Cabinet (ACC), while retaining necessary accountability and oversight.

Conclusion

Corporatisation should be judged not only by **profits, turnover and exports**, but also by **reliable equipment, indigenous technology and manufacturing depth**. Better accounting, protected expertise, sustained modernisation and timely leadership appointments can strengthen the DPSUs. **Commercial discipline must support India's long-term defence preparedness and sovereignty**, rather than displace these strategic goals.

Question for practice:

Examine the impact of corporatisation of India's ordnance factories on defence preparedness, indigenous manufacturing and strategic autonomy.

Source: Businessline ; The print

Cost of Fertiliser Imbalance in India

Source: The post **"Cost of Fertiliser Imbalance in India"** has been created based on **"Cost of Fertiliser Imbalance in India"** published in "Financial Express" on 26th October 2026.

UPSC Syllabus: GS 3: Indian Economy

Context: The Union Agriculture Minister, Shivraj Singh Chouhan, launched the Khet Bachao Abhiyan on October 22, 2026, in Karnal, Haryana, to promote balanced fertiliser use during the rabi season. However, the existing fertiliser pricing and subsidy policies continue to encourage excessive nitrogen use and inadequate application of phosphorus and potassium.

Present Status of Fertiliser Imbalance

1. Nitrogen use has increased from 7% below the recommended level in 2009–10 to 6% above it in 2024–25.
2. The phosphorus deficit has narrowed from 29% to 22%, while the potassium deficit has widened from 48% to 72%.
3. Farmers apply only 9 kg of potash per hectare against the recommended requirement of 32 kg.
4. The national NPK ratio stands at 10.5:4.1:1, compared with the recommended ratio of 2.8:1.5:1.
5. Eleven of the 20 major states overuse nitrogen, with Jharkhand and Punjab recording excessive use of 72% and 65%, respectively. Every state underuses potash.

Major Causes

- **Distorted pricing policy:** The Nutrient-Based Subsidy (NBS) scheme, introduced in 2010, allowed phosphatic and potassic fertiliser prices to fluctuate with global markets, while urea remained under price control.
- **Rising relative prices:** Between 2010–11 and 2024–25, DAP prices nearly trebled to ₹54/kg and MOP prices rose six-fold to ₹52/kg, whereas the price of nitrogen in urea increased by only 1%.

- **Visible benefits of urea:** Nitrogen makes crops appear greener, while the effects of potassium deficiency are less immediately visible.
- **Distorted cropping incentives:** Minimum Support Price (MSP)-based procurement and subsidised electricity encourage the rice-wheat cropping cycle, particularly in Punjab and Haryana.

Consequences of Imbalanced Fertiliser Use

1. **Soil degradation:** Of the 96 lakh soil samples tested under the Soil Health Card scheme in 2025–26, 72% were low in nitrogen, 52% in organic carbon, 42% in boron and 37% in zinc.
2. **Environmental pollution:** Crops absorb only 30–40% of applied nitrogen. Some of the remainder escapes as nitrous oxide, a greenhouse gas 273 times as potent as carbon dioxide, while some leaches into groundwater.
3. **Public health risks:** Nitrate contamination above safe limits has been found in parts of 502 districts, posing risks such as blue baby syndrome in infants and chronic illnesses in adults.
4. **Declining crop resilience:** Potassium deficiency reduces drought and disease resistance and grain quality, while phosphorus deficiency delays flowering.
5. **Hidden hunger:** Micronutrient-deficient soils produce nutrient-poor grains, contributing to micronutrient deficiencies among people.
6. **Fiscal burden and regional inequality:** Against a fertiliser subsidy budget of ₹1.71 lakh crore for 2026–27, the disruption in the Strait of Hormuz could raise the bill to ₹2.5 -- 3 lakh crore. Punjab receives approximately ₹25,700 per hectare in nitrogen subsidy, nearly ten times Kerala's allocation.

Way Forward

1. **Reform fertiliser subsidies:** Introduce a nutrient-neutral, per-hectare Direct Benefit Transfer (DBT) system. Alternatively, bring urea under NBS and reduce DAP and MOP prices in a calibrated manner, keeping the overall subsidy budget around ₹2 lakh crore.
2. **Strengthen PM-PRANAM:** Reform and implement the scheme to reward states for reducing fertiliser use and promoting balanced nutrient application.
3. **Promote efficient technologies:** Reinvest subsidy savings in drip irrigation, fertigation, customised and coated fertilisers, triple super phosphate as an alternative to DAP, biofertilisers, nano fertilisers and nitrogen-efficient gene-edited seeds.
4. **Adopt the 4Rs:** Encourage the right source, right rate, right time and right place of fertiliser application through plot-level recommendations based on soil tests.
5. **Diversify cropping patterns:** Rotate cereals with pulses to reduce the nitrogen requirement of the subsequent crop by 20–30%.
6. **Address structural distortions:** Reform electricity pricing and procurement policies in Punjab and Haryana and improve the identification of tenant farmers through AgriStack and digital land records.

Conclusion: India must shift its focus from the quantity of fertilisers consumed to the balance of nutrients applied. Rationalising subsidies, improving soil health and promoting sustainable farming practices are essential to protect agricultural productivity, public health, fiscal stability and long-term food security.

Question: Imbalanced fertiliser use in India has emerged as a serious challenge to soil health, environmental sustainability and agricultural productivity. Examine the causes and consequences of this imbalance and suggest suitable measures to address it.

Source: Financial Express

Old values, new avenues: On India-Poland ties

Source: The post **"Old values, new avenues: On India-Poland ties"** has been created based on **"Old values, new avenues: On India-Poland ties"** published in "The Hindu" on 26th October 2026.

UPSC Syllabus: GS 2: International Relations

Context: India and Poland share historical goodwill and growing economic interests. The recent visit of Polish Prime Minister Donald Tusk to Delhi and Bengaluru reflects a renewed commitment to strengthen bilateral relations amid changing geopolitical circumstances and progress in the India–European Union Free Trade Agreement (FTA).

Major Areas of Cooperation

1. **Trade and investment:** Bilateral trade currently stands at approximately $6 billion, with both countries aiming to double it by 2030.
2. **Economic partnership:** Poland, the EU's sixth-largest economy, has crossed the $1 trillion nominal GDP milestone and possesses a technology economy worth around $120 billion.
3. **Technology and manufacturing:** Cooperation in artificial intelligence, advanced technology, machinery and mining technology can strengthen industrial collaboration, including trilateral manufacturing partnerships involving Germany.
4. **Defence cooperation:** Both countries agreed to establish a Defence Industry Dialogue and explore greater cooperation in defence production and counter-terrorism.
5. **Energy and critical minerals:** Poland's expertise and India's large-scale industrial capacity create opportunities in renewable energy, nuclear energy and critical minerals.
6. **Geopolitical cooperation:** Both sides discussed the Ukraine war, grain exports and the safety of seafarers. Poland also supported India's four-pronged initiative for addressing related concerns, announced by External Affairs Minister S. Jaishankar during his September visit to Warsaw.

Major Challenges

1. **Divergent defence partnerships:** India maintains a longstanding strategic partnership with Russia, whereas Poland has defence ties with Pakistan, including a defence cooperation agreement signed in 2018.
2. **Trust deficit:** Differences over India's military engagement and exercises with Russia have created diplomatic friction.
3. **Geographical distance:** Physical distance and different regional priorities can increase the costs of business and strategic cooperation.
4. **Implementation gap:** Translating signed memoranda of understanding (MoUs) and diplomatic discussions into actual joint ventures remains a major challenge.
5. **Confidentiality concerns:** Negotiations on protecting classified information must be completed to enable deeper defence cooperation.

Way Forward

1. **Strengthen economic engagement:** Finalise and leverage the India–EU FTA to expand trade, investment and market access.
2. **Promote joint ventures:** Encourage business-to-business partnerships in technology, machinery, manufacturing and mining.

3. **Institutionalise defence cooperation:** Establish the proposed Defence Industry Dialogue and complete arrangements for the secure exchange of classified information.
4. **Respect strategic autonomy:** Both countries should acknowledge each other's independent foreign policy choices and avoid allowing third-country relationships to dominate bilateral engagement.
5. **Expand multilateral cooperation:** Work together on counter-terrorism, energy security, critical minerals and the humanitarian consequences of the Ukraine conflict.

Conclusion: India and Poland have no fundamental conflict of interest, but their respective relationships with Russia and Pakistan create strategic sensitivities. By building trust, implementing economic agreements and respecting each other's strategic autonomy, both countries can transform their historical goodwill into a durable and mutually beneficial partnership.

Question: India and Poland share significant opportunities for cooperation, but geopolitical differences continue to constrain their bilateral relationship. Discuss the potential areas of cooperation and the challenges in strengthening India–Poland ties.

Source: The Hindu

Questions Arising Out of PHP Breach

UPSC Syllabus: Gs Paper 3- Cyber security

Introduction

Cybersecurity has relied on measures such as firewalls, timely patching and employee training to prevent attacks. However, artificial intelligence (AI) is reducing the time, cost and expertise required to discover and exploit weaknesses. The PHP2Shell vulnerabilities exposed millions of internet-facing systems to potential remote attacks, highlighting risks to digital infrastructure. The incident raises questions about AI's dual-use potential, India's preparedness and the need to strengthen cyber resilience.

What Is PHP and Why Are Its Vulnerabilities a Global Concern?

1. **Meaning of PHP: PHP (Hypertext Preprocessor)** is a **free, open-source scripting language** that processes website functions such as logins, application submissions and online purchases.

2. Origin: PHP originated as Personal Home Page Tools and was created by Rasmus Lerdorf in 1994. Its source code was publicly released in 1995.

3. Management: The PHP Foundation supports development and maintenance, but does not control PHP language decisions. Those remain with the PHP Internals community through its RFC (Request for Comments) process.

4. **Global Dependence: Around 70%** of websites with identifiable server-side languages use PHP, making its vulnerabilities a widespread concern. WordPress, which powers **over 40%** of websites globally, also uses PHP.
5. **PHP2Shell: PHP2Shell** refers to **two critical vulnerabilities** in PHP that could allow attackers to execute malicious code on affected web servers remotely without logging in.
    - **Two vulnerabilities:**

- **Memory problem:** When an **error interrupts a process, PHP may treat incomplete information as valid,** creating a security weakness.
- **Leftover information:** PHP **may use information left from an earlier request while processing a new request**, causing incorrect handling**.**

6. **Severity and Exposure:** The vulnerabilities received a severity rating of **9.2/10**. **Over 22.6 million internet-exposed instances** worldwide could be vulnerable.
7. **Potential Risks:** Attackers could **install malware**, remove website content, **access sensitive information**, including passwords and login credentials, and **disrupt server operations**.
8. **Security Fixes:** The PHP Foundation released **security patches** and urged **immediate installation**. If affected systems cannot be secured promptly, cyber agencies advise **temporarily taking websites offline**.
9. **Difficulty of Fixing:** Small website owners, shared hosting users and older systems may **struggle to identify PHP installations and apply updates**. Compatibility, performance and third-party extensions can further **complicate upgrades**.

How Did AI Contribute to the Discovery of PHP Vulnerabilities?

1. **Faster Vulnerability Detection:** AI models can scan software code and identify weaknesses that human researchers might take **months or years** to discover.
2. **Role of AI Research:** The PHP Foundation worked with **Anthropic's frontier model** to scan its code. PHP was also included in **OpenAI's Patch the Planet programme**.
3. **Independent Discovery:** OpenAI's programme identified the vulnerabilities **around the same time as a researcher**, demonstrating AI's potential to support cybersecurity research.
4. **Responsible Disclosure:** Disclosure was initially embargoed **until 22 October** to **allow websites time to apply fixes**. It was advanced after vulnerability details began circulating.
5. **Exploitation Attempt:** Amazon Threat Intelligence identified an exploitation attempt dating **four days before public disclosure**. However, how the actor obtained the information **remained unclear**.
6. **Dual-Use Nature of AI:** AI can help **defenders** discover vulnerabilities and coordinate protections. However, **attackers** can also use it to identify and exploit weaknesses.

Why Are Indian Organisations Particularly Concerned?

1. **Legacy System Exposure: Banks, telecom companies, power utilities** and consumer applications using **older PHP 5 and 7 versions** face challenges where official fixes are unavailable.
2. **Delayed Modernisation:** Security patching across affected systems could continue **until 2027**, **increasing exposure** where upgrades and mitigation remain incomplete.
3. **Government Website Security:** Government agencies are applying patches and following **CERT-In advisories**. **No government website disruptions had been reported**.
4. **Ownership and Accountability:** Older government websites often depend on vendors, hosting providers or state data centres, creating **uncertainty over server ownership and responsibility**.
5. **Financial Sector Preparedness:** Banks are auditing applications, taking some non-critical services offline and preparing **backup channels** to maintain customer transactions during possible disruptions.

6. **Digital Infrastructure Exposure:** India's **interconnected digital ecosystem** requires careful risk assessment. However, major DPI platforms such as **Aadhaar, GSTN, UPI and MCA21** were reported to operate on other technology stacks.

What Are the Emerging Cybersecurity Risks and Why Is Traditional Defence Inadequate?

1. **Attackers' Advantage:** Attackers need only **one exploitable weakness**, while defenders must secure **thousands of interconnected systems**, applications and interfaces.
2. **Shrinking Response Windows:** Some vulnerabilities can be weaponised **within 24 hours**, whereas organisations take an average of **55 days** to fix them.
3. **Coordinated Financial Fraud:** AI agents could potentially **coordinate mule accounts**, transfer stolen funds across institutions and alter transaction patterns to **evade conventional fraud detection**.
4. **Smartphone Malware:** AI-assisted malware could **imitate legitimate user behaviour**, manipulate payment applications and **adapt to security checks**, challenging static security rules.
5. **Systemic Infrastructure Risks:** Attacks on shared technology providers, payment infrastructure or critical services could **disrupt multiple institutions** because of **interconnected dependencies**.
6. **Uncontrolled AI Permissions:** AI agents using **shared credentials** to access customer accounts raise concerns about distinguishing **customer-authorised actions** from independently initiated activities.
7. **Wider Economic Consequences:** Attacks on banking, telecommunications, energy, healthcare and public services could threaten **economic resilience and national security**.

Way Forward

1. Adopt an Assume-Breach Approach: Organisations must prepare for possible breaches by strengthening prevention, detection, containment and recovery.

2. Strengthen Network-Level Detection: Financial institutions should identify coordinated patterns across accounts, devices, merchants and institutions instead of examining individual transactions alone.

3. Enable Secure Intelligence Sharing: Banks should develop privacy-protecting intelligence-sharing mechanisms to detect threats across the financial network.

4. Redesign AI Permissions: AI agents should operate with clear permissions, accountability and controls, avoiding unlimited authority through legitimate customer credentials.

5. Improve Board-Level Oversight: Boards should assess detection, containment, operational continuity and recovery capabilities, beyond cybersecurity spending.

6. Strengthen Institutional Coordination: Governments, regulators, financial institutions and critical infrastructure operators must coordinate cybersecurity responses to protect essential services.

7. Identify Vulnerable Systems and Clarify Responsibility: Organisations must identify PHP installations, establish system ownership and define responsibilities among IT teams, vendors, hosting providers and data centres.

8. Prioritise Patching and Mitigation: Organisations should urgently apply available security patches and use vendor fixes, distribution backports or migration to supported versions. Systems that cannot be secured immediately may require temporary shutdown.

9. Strengthen Monitoring and Operational Continuity: Security teams should monitor unusual activity, command execution and unauthorised access. Banks should maintain alternative channels and backups to sustain essential transactions.

10. Use AI for Cyber Defence: Organisations should use AI-powered tools to identify vulnerabilities earlier, improve threat monitoring and accelerate security responses.

Conclusion

The PHP2Shell incident highlights how AI is reshaping cybersecurity by accelerating vulnerability discovery and widening risks. India must combine timely patching and clear accountability with stronger detection, containment and recovery. Coordinated action by governments, regulators and organisations, alongside controlled AI permissions and defensive AI tools, is essential to protect critical digital services.

Question for practice:

Discuss the emerging cybersecurity risks posed by AI, with special reference to the PHP2Shell vulnerabilities and measures to strengthen India's cyber resilience.
Source: Businessline

Soil Health in India Challenges and the Way Forward

UPSC Syllabus: Gs Paper 3- Agriculture

Introduction

Soil health is essential for agricultural productivity, food security, environmental sustainability and human nutrition. However, **imbalanced fertiliser use, unsustainable farming practices and declining soil biological health** are weakening India's agricultural foundation. Despite the Nutrient-Based Subsidy (NBS) reform introduced in 2010, nutrient imbalance has worsened, highlighting the need for better fertiliser policies and sustainable soil management.

Present Status of Soil Health in India

1. **Worsening Nutrient Imbalance:** India's nitrogen (N): phosphorus (P): potassium (K) ratio stands at **10.5:4.1:1**, against the derived normative ratio of **2.8:1.5:1**, reflecting highly imbalanced nutrient application.
2. **Excessive Nitrogen Application:** Nitrogen use has shifted from **7% below** recommended doses to **6% above** them, while **11 of 20 major states** overuse nitrogen, led by **Jharkhand (72%)** and **Punjab (65%)**.
3. **Widening Potassium Deficiency:** The potassium deficit has increased from **48% to 72%**, with farmers applying only **9 kg per hectare** against the recommended **32 kg**.
4. **Persistent Phosphorus Deficiency:** The phosphorus deficit has narrowed only from **29% to 22%**, showing that nutrient-based pricing has not ensured balanced fertiliser application.
5. **Widespread Soil Nutrient Deficiencies:** Among **96 lakh soil samples** tested under the Soil Health Card scheme in 2025-26, **72%** were low in nitrogen, **52%** in organic carbon, **42%** in boron and **37%** in zinc.

6. **Neglected Biological Health:** Soil monitoring mainly focuses on nutrients, while **microbial communities and biological functions** remain largely unmeasured, limiting a complete assessment of soil health.

Major Challenges Affecting Soil Health

A. Imbalanced Fertiliser Use and Pricing Policy

1. **Distorted Fertiliser Pricing:** NBS (Nutrient Based Subsidy) allowed phosphatic and potassic fertiliser prices to fluctuate with global markets but **kept urea prices fixed**, encouraging excessive nitrogen use.
2. **Rising Relative Fertiliser Costs:** Between 2010-11 and 2024-25, DAP (Diammonium Phosphate) prices nearly tripled to **₹54/kg** and MOP (Muriate of Potash) rose six-fold to **₹52/kg**, while nitrogen prices in urea increased by **only 1%**.

B. Unsustainable Agricultural Practices

4. **Degradation of Soil Ecosystems:** Indiscriminate pesticide and agrichemical use, crop-residue burning, monocropping and dependence on high-yielding varieties **disturb natural soil communities and plant microbiomes**.
5. **Loss of Soil Organic Matter: Poor organic matter recycling** and excessive tillage weaken soil conditions, while **soil compaction** caused by mechanisation further affects soil functioning.
6. **Low Nutrient Use Efficiency:** Crops absorb only **30-40% of applied nitrogen** and **15-20% of phosphorus**, while unhealthy soil biology further limits nutrient availability and uptake.

C. Weak Monitoring and Institutional Support

7. **Limited Biological Testing Capacity:** Existing soil laboratories mainly test nutrients and **lack the infrastructure and expertise** to measure biological functions, restricting comprehensive soil health monitoring.
8. **Weak Policy Implementation:** Existing policies promoting non-chemical farming have achieved limited progress, while centralised soil testing **has not sufficiently changed fertiliser use, cropping patterns or farmer decisions**.

Implications of Declining Soil Health

1. **Environmental Pollution:** Excess nitrogen escapes into the atmosphere as nitrous oxide, a greenhouse gas **273 times as potent as carbon dioxide**, while nitrate leaching contaminates groundwater.
2. **Human Health Risks:** Nitrate levels above safe limits have been found in parts of **502 districts**, increasing the risk of **blue baby syndrome** in infants and chronic illnesses in adults.
3. **Declining Crop Productivity and Quality:** Potassium deficiency **weakens drought and disease resistance** and **reduces grain quality**, while phosphorus shortage **delays flowering** and affects crop development.
4. **Nutritional Insecurity:** Zinc and other micronutrient deficiencies reduce grain nutritional quality, contributing to **hidden hunger**, micronutrient deficiencies, **stunting and wasting** among children.
5. **Rising Fiscal Burden:** The fertiliser subsidy budget is **₹1.71 lakh crore** for 2026-27, potentially rising to **₹2.5-3 lakh crore** due to Strait of Hormuz disruptions, with urea accounting for **two-thirds**.

6. **Unequal Subsidies and Resource Pressure:** Punjab receives approximately **₹25,700 nitrogen subsidy per hectare**, **ten times Kerala's benefit**, while MSP-based procurement and subsidised power reinforce rice-wheat cultivation and increase pressure on aquifers.
7. **Farmer Livelihood Concerns:** Poor nutrient uptake increases dependence on fertilisers, while healthier soil biology can **improve yields, reduce input requirements** and support better farmer livelihoods.

Way Forward: Towards Sustainable Soil Management

A. Reform Fertiliser Subsidies and Incentives

1. **Introduce Nutrient-Neutral Support:** Shift from input price subsidies to **per-hectare direct benefit transfers**, neutral across nutrients and crops, so farmers face market prices **without urea's artificial price advantage**.
2. **Ensure Practical Subsidy Transition:** If direct transfers seem too abrupt, **bring urea under NBS** while reducing DAP and MOP prices proportionately, keeping the overall subsidy budget around **₹2 lakh crore**.
3. **Strengthen Digital Fertiliser Delivery:** Link **AgriStack farmer IDs**, land records and crops sown with fertiliser sales through the Framework for Fertiliser Sale (FFS), while addressing **tenant identification challenges**.
4. **Reward Balanced Fertiliser Use:** Fix and expedite **PM-PRANAM**, which aims to reward states for balanced fertiliser consumption, as **no disbursements** have been made so far.
5. **Set Measurable Reduction Targets:** Establish state-level goals to reduce chemical fertiliser use by **25-30% over five years**, supported by monitoring and financial incentives for sustainable farming transitions.

B. Improve Soil Management and Nutrient Efficiency

6. **Follow the 4Rs Principle:** Apply the **right source, rate, time and place** of fertilisers through plot-level soil testing and crop-specific recommendations to improve nutrient management.
7. **Promote Crop Diversification:** Rotate cereals with pulses to reduce the next crop's nitrogen requirement by **20-30%**, while improving crop diversity and supporting healthier soil systems.
8. **Adopt Soil-Friendly Farming:** Reduce excessive tillage, stop puddling of rice, improve organic matter recycling and promote **cover crops, mulching and intercropping** to maintain **living roots** and microbial communities.
9. **Promote Efficient Irrigation:** Redirect fertiliser subsidy savings towards **drip irrigation and fertigation** to improve resource efficiency and support sustainable nutrient application.

C. Strengthen Monitoring and Innovation

10. **Integrate Biological Health Monitoring:** Include soil biological parameters in **routine national monitoring**, using affordable dehydrogenase and urease tests costing **₹100-200 per test**.
11. **Develop Farmer-Friendly Testing:** Promote **simple, visual, real-time point-of-care soil tests**, while improving validation, accuracy, awareness and farmer adoption.
12. **Support Region-Specific Biofertilisers:** Encourage decentralised biofertiliser production and develop **locally adapted microbial formulations** suited to regional soils, crops and growing conditions.
13. **Encourage Fertiliser Innovation:** Support customised and coated fertilisers, **triple super phosphate (TSP)** as an alternative to DAP, nano fertilisers and gene-edited seeds that **use nitrogen efficiently**.

D. Align Agricultural Policies

14. **Reform Procurement and Power Pricing:** Reform **MSP-based procurement and electricity pricing** in Punjab and Haryana to reduce the policy incentives that sustain rice-wheat cultivation and excessive resource use.
15. **Support Sustainable Farming Transitions:** Redirect financial support towards farmers adopting organic and natural farming, using an **area-based approach** supported by knowledge, training and financial assistance.

Conclusion

India must shift its focus from the quantity of fertilisers applied to **balanced nutrient supply and overall soil health.** Integrating biological monitoring, sustainable farming, subsidy reforms and farmer support can improve productivity and nutrition while reducing environmental damage. Timely reforms in fertiliser pricing, procurement and power policies are essential to protect soil resources and ensure long-term food security.

Question for practice:

Examine the major challenges of soil health in India and suggest suitable measures to address them.
Source: Indian Express; Downtoearth

India's power dilemma: Surplus during the day, deficits at night

Source: The post **"India's power dilemma: Surplus during the day, deficits at night"** has been created based on **"India's power dilemma: Surplus during the day, deficits at night"** published in "Indian Express" on 27th September 2026.

UPSC Syllabus: GS-3- Indian Economy

Context: India's power sector has transitioned from persistent electricity shortages to a situation of surplus generation during solar hours and deficits at night. This reflects the rapid expansion of installed capacity, particularly renewable energy, but also creates new challenges for grid management.

Reasons for the changing power scenario

1. Rapid growth in renewable energy: India's renewable energy capacity, including large hydropower, has reached nearly 292 GW, accounting for about 53% of total installed capacity, while solar capacity stands at around 162 GW.

2. Declining power deficits: Increased generation capacity has reduced peak demand and energy deficits from historically high levels to around 1–2%.

3. Concentration of solar generation: Solar power generation peaks during the day, resulting in surplus electricity that cannot always be utilised.

4. Nighttime supply constraints: Unplanned coal plant outages, high airconditioning demand and poor reservoir levels reduce the availability of electricity at night.

5. Inadequate flexibility: Frequent ramping up and down of coal plants and backing down solar generation lead to energy wastage and increased wear and tear of equipment.

Measures to address the challenges

1. Develop energy storage: Battery storage and pumped storage hydropower can store surplus daytime electricity for use during peak nighttime demand.

2. **Strengthen transmission infrastructure:** An improved transmission network can facilitate the efficient transfer of electricity across regions.

3. **Improve demandside management**: Consumers should be encouraged to shift flexible electricity consumption towards solarrich daytime hours.

4. **Create suitable market mechanisms**: Electricity markets should adequately reward flexibility and incentivise storage and other balancing resources.

5. **Ensure financial viability:** Competitive bidding and appropriate remuneration mechanisms should make storage projects financially viable and encourage investment.

Conclusion: India must move beyond expanding installed capacity towards ensuring the availability of reliable, flexible and affordable electricity when it is needed. Integrating storage, strengthening transmission and improving market incentives are essential for reducing renewable energy wastage and ensuring power security.

Question: India's power sector has transitioned from an era of electricity shortages to a situation of daytime surplus and nighttime deficits. Discuss the reasons for this shift and suggest measures to address the emerging challenges.

Source: Indian Express

What are the powers and functions of a Special Executive?

Source: The post **"What are the powers and functions of Special Executive?"** has been created based on **"What are the powers and functions of Special Executive?"** published in "The Hindu" on 27th September 2026.

UPSC Syllabus: GS-2-Governance

News: The detention and subsequent release on bail of Cockroach Janta Party (CJP) activists Saurav Das and Ashutosh Ranka, along with a notice issued to AISA president Neha Bora, have renewed debate over the powers of Special Executive Magistrates (SEMs).

Appointment of Special Executive Magistrates

1. **Legal provision:** Section 15 of the Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023, provides for the appointment of Special Executive Magistrates.
2. **Appointing authority:** The State Government may appoint SEMs for particular areas or for the performance of specified functions.
3. **Purpose of appointment:** SEMs are appointed to maintain public order, prevent breaches of peace and deal with situations requiring preventive administrative action.
4. **Nature of office:** SEMs exercise executive and preventive powers conferred upon them by law and the State Government. They do not possess the full judicial powers exercised by Judicial Magistrates.

Powers and Functions of SEMs

1. **Preventive Action:** SEMs may intervene when there is a likelihood of disturbance of public peace and tranquillity, without necessarily waiting for a criminal offence to occur.
    a. Their primary objective is to prevent anticipated disturbances rather than punish offences that have already been committed.
    b. They may initiate or conduct proceedings within their statutory jurisdiction to prevent a breach of peace.
2. **Requiring Security for Maintaining Peace:** Under Section 126 of the BNSS, an Executive Magistrate may require a person likely to breach the peace or disturb public tranquillity to show cause why they should not execute a bond for maintaining peace.
    a. The objective is to prevent future disturbances rather than punish an individual for a past offence.
    b. The person concerned must be dealt with in accordance with the prescribed legal procedure.
3. **Preventive and Administrative Orders:** SEMs may exercise the powers specifically conferred upon them to prevent disturbances, public nuisance or threats to public tranquillity.
    a. Under Section 163 of the BNSS, a competent Executive Magistrate may issue urgent orders in cases of nuisance or apprehended danger to human life, health, safety or public tranquillity.
    b. Such powers must be exercised on legally relevant grounds and within the limits prescribed by law.
4. **Preventive Arrest:** Section 170 of the BNSS authorises the police to make preventive arrests in specified circumstances when necessary to prevent the commission of a cognisable offence that cannot otherwise be prevented.
    a. This is a police power and is not exclusive to SEMs. Preventive arrest must satisfy statutory conditions and cannot be used as an unrestricted means of detaining individuals expressing dissent.
5. **Acceptance of Bonds and Release:** There is a role of SEMs in accepting sureties and bonds in preventive proceedings.
    a. A person may be released subject to the applicable legal requirements and conditions. However, the authority to accept a bond or order release depends on the particular legal provision and the powers conferred upon the magistrate.
    b. This authority should not be confused with an unrestricted power to grant bail in ordinary criminal cases.

About Peace Bond

1. **Meaning:** A peace bond is a legal undertaking intended to ensure that a person maintains peace and does not engage in conduct likely to disturb public tranquillity. It is preventive in nature and is not equivalent to a criminal conviction or sentence.

2. **Objective:** Peace bonds aim to prevent anticipated breaches of peace and protect public tranquillity without resorting to criminal punishment where preventive action is legally appropriate.
3. **Section 126 of the BNSS:** An Executive Magistrate may require a person likely to breach the peace or disturb public tranquillity to show cause why they should not execute a bond for keeping the peace for a period of up to one year.
4. **Section 135 of the BNSS:** The Magistrate conducts an inquiry into the information received to determine whether the allegations justify requiring the person to furnish security.
5. **Security during inquiry**: In specified circumstances, the Magistrate may require security while the inquiry is pending, provided the statutory conditions are satisfied and reasons are recorded in writing.
6. **Consequences of breach:** Under Section 141(1)(b) of the BNSS, the Magistrate may order detention for the remaining period of the bond in the circumstances specified by law.

Difference Between SEMs and Judicial Magistrates

1. **Legal provision:** Section 15 of the BNSS provides for the appointment of SEMs, whereas Section 9 provides for Courts of Judicial Magistrates of the first and second classes.
2. **Appointment:** SEMs are appointed by the State Government for specified areas or purposes, whereas Judicial Magistrates are appointed within the statutory framework involving the High Court.
3. **Primary role:** SEMs primarily perform preventive and administrative functions to maintain public peace, whereas Judicial Magistrates exercise judicial functions in criminal proceedings.
4. **Preventive proceedings:** SEMs exercise preventive powers conferred upon them by law, whereas Judicial Magistrates exercise judicial powers within their statutory jurisdiction.
5. **Criminal trials:** SEMs cannot conduct criminal trials or convict individuals through SEM proceedings, whereas Judicial Magistrates can conduct criminal trials within their legally prescribed jurisdiction.
6. **Bail and release:** SEMs may order release in proceedings falling within their legal authority, including certain proceedings involving peace bonds. Judicial Magistrates consider bail applications and other matters relating to judicial custody within their jurisdiction.
7. **Custody:** SEMs may order detention in specified preventive proceedings, subject to statutory requirements, whereas Judicial Magistrates exercise judicial remand powers in criminal cases as provided by law.
8. **Institutional framework:** SEMs function within the executive framework, whereas Judicial Magistrates form part of the judicial system and exercise judicial functions independently.

Can SEMs' Orders Be Challenged

1. **Judicial review:** The orders of SEMs may be examined by competent courts to determine whether the magistrate has acted within the authority conferred by law.
2. **Protection of individual rights:** Judicial review helps ensure that preventive powers do not result in arbitrary detention or unlawful restrictions on personal liberty.
3. **Challenge to orders**: An affected person may approach the appropriate court or authority, depending on the nature of the order and the remedy available under law.
4. **Procedural safeguards**: SEMs must comply with the statutory requirements governing inquiries, bonds, detention and the recording of reasons. Failure to follow applicable legal procedures may render an order vulnerable to challenge.
5. **Administrative oversight:** SEMs are also subject to the applicable administrative framework, which helps ensure accountability in the exercise of executive powers.

Constitutional and Governance Dimensions

1. **Rule of law:** Preventive powers must be exercised according to law rather than administrative discretion alone. Every action must have a valid legal basis and comply with prescribed procedures.
2. **Fundamental rights:** Arbitrary detention or disproportionate restrictions may raise concerns under Article 21 of the Constitution, which protects life and personal liberty.
3. **Freedom of assembly:** Restrictions on protests must comply with Article 19(1)(b), which guarantees the right to assemble peacefully and without arms, subject to reasonable restrictions under Article 19(3).
4. **Separation of powers:** The distinction between executive and judicial functions is essential to ensure accountability, prevent the concentration of power and preserve independent adjudication.
5. **Administrative accountability:** Judicial review acts as a safeguard against the misuse of executive authority and ensures that preventive measures remain within legal limits.
6. **Public order versus civil liberties:** The State must maintain public peace while protecting lawful dissent and individual liberty. Preventive measures should be necessary, proportionate and consistent with constitutional safeguards.
7. **Due process:** The exercise of preventive powers must follow the applicable legal procedures and provide the safeguards required by law to protect individuals against arbitrary action.

Key Legal Provisions

1. **Section 9 of the BNSS:** It deals with Courts of Judicial Magistrates of the first and second classes.
2. **Section 15 of the BNSS:** It provides for the appointment of Special Executive Magistrates.
3. **Section 126 of the BNSS:** It deals with security for keeping the peace in cases where a person is likely to breach the peace or disturb public tranquillity.
4. **Section 135 of the BNSS:** It deals with the inquiry into the truth of information received in proceedings concerning security for keeping the peace or good behaviour.
5. **Section 141(1)(b) of the BNSS:** It addresses detention for the remaining period of a bond in the circumstances specified by law.
6. **Section 163 of the BNSS:** It provides for the power to issue orders in urgent cases of nuisance or apprehended danger.
7. **Section 170 of the BNSS:** It deals with arrest to prevent the commission of cognisable offences.

Conclusion: Special Executive Magistrates are important instruments of preventive administration and public order management. However, their powers are not unlimited and must be exercised within the framework of the BNSS, with appropriate procedural safeguards, judicial oversight and respect for constitutional freedoms. The central governance challenge is to maintain public peace without undermining the rule of law, individual liberty and the right to peaceful dissent.

Question: Who are Special Executive Magistrates? Discuss their powers, functions and limitations vis- à- vis Judicial Magistrates.

Source: The Hindu

Beyond Kudankulam's fence, a cybersecurity challenge

UPSC Syllabus: Gs Paper 3- Infrastructure and Cyber security

Introduction

India's critical infrastructure increasingly depends on contractors, suppliers and data centres, extending cybersecurity risks beyond facility boundaries. In July 2026, ransomware group **World Leaks** claimed to have leaked **nearly 19,000 files totalling 14.3 GB linked to Kudankulam.** Reliance Infrastructure confirmed a breach involving data **hosted by Yotta. NPCIL said** the material concerned non-nuclear infrastructure, and **no compromise of reactor controls or nuclear safety systems was publicly established.**

Changing Nature of Critical Infrastructure Security

1. **Expanding Security Perimeter:** Critical infrastructure increasingly depends on interconnected contractors, suppliers, cloud platforms and service providers that hold sensitive project information, extending cybersecurity risks beyond operators' direct safeguards.
2. **Growing Private Sector Dependence:** Infrastructure development increasingly involves **private engineering firms, technology partners and commercial data centres**, making their cybersecurity practices **essential** for national infrastructure protection.
3. **Shift in Attack Strategies:** Attackers may target **less-protected vendors** instead of heavily secured facilities, exploiting **legitimate access, shared credentials and interconnected systems** to compromise information.
4. **Information as Strategic Intelligence:** Documents unrelated to reactor controls **may collectively reveal** infrastructure layouts, equipment configurations, maintenance dependencies, suppliers and **potential access points**.
5. **Earlier Warning at Kudankulam: In 2019**, Dtrack malware was detected on a computer connected to the plant's Internet-facing administrative network, while NPCIL stated that **critical internal networks remained unaffected**.

Challenges in Critical Infrastructure Cybersecurity

1. **Third-Party and Digital Vulnerabilities: Weak vendor security**, compromised credentials, phishing, insecure remote access, inadequate identity management and vulnerable cloud infrastructure **can expose sensitive project information**.
2. **Ransomware and Double Extortion:** Attackers may **steal valuable information** and **threaten public disclosure** while demanding ransom, making **data confidentiality** as important as preventing operational disruption.
3. **Information Aggregation Risk:** Individually routine documents can **collectively reveal** infrastructure layouts, suppliers, personnel and technical dependencies, enabling **targeted reconnaissance, phishing and potential future attacks**.
4. **Limited Visibility Across Supply Chains:** Infrastructure operators may **lack sufficient visibility** into contractors, subcontractors and hosting providers, making it **difficult to assess risks** throughout interconnected digital ecosystems.
5. **Fragmented Accountability:** Operators, contractors and hosting providers may **shift responsibility** after a breach, leaving **sensitive information exposed** despite individual organisations claiming compliance.
6. **Uncertainty in Incident Assessment: Exaggerated ransomware claims and limited visibility** into compromised systems can complicate the verification of stolen data, affected systems and potential security implications.

Strategic and National Security Implications

1. **Espionage Risks:** Leaked engineering drawings, procurement records and supplier information can help hostile actors understand infrastructure arrangements and **identify valuable targets** for intelligence gathering.
2. **Potential Sabotage:** Information about equipment configurations, maintenance dependencies and access arrangements **may assist future sabotage attempts**, although document leakage alone **does not establish operational access**.
3. **Targeted Social Engineering:** Supplier records, organisational charts and personnel details can help attackers design **convincing phishing campaigns** against contractors and infrastructure employees.
4. **Economic Security:** Cyberattacks against interconnected infrastructure can **threaten economic stability** by disrupting essential services, business operations and public service delivery.
5. **Cascading Infrastructure Risks:** Compromise of interconnected digital systems **may affect multiple sectors**, including electricity, telecommunications, banking and transportation, **amplifying the consequences** of cyber incidents.
6. **Public and Institutional Trust:** Weak cybersecurity governance can **undermine public confidence, corporate credibility and investor confidence** in institutions responsible for protecting critical infrastructure.
7. **Strategic Sovereignty:** Dependence on commercial digital infrastructure and global technology supply chains makes cybersecurity essential for **national security, economic resilience and strategic autonomy**.

India's Cybersecurity Governance and Legal Framework

1. **CERT-In's Role:** The Indian Computer Emergency Response Team handles cybersecurity incident response, while its 2022 directions require specified cyber incidents to be reported **within six hours** of noticing them or being brought to notice.
2. **NCIIPC's Responsibility:** The National Critical Information Infrastructure Protection Centre, established under **Section 70A** of the IT Act, is responsible for **protecting critical information infrastructure**.
3. **Data Protection Framework:** The Digital Personal Data Protection Act, 2023 primarily concerns **digital personal data**; technical documents without personal data **generally fall outside its scope**.
4. **Applicable Legal Provisions: Depending on the facts**, Sections 43 and 66 of the IT Act may apply to unauthorised access and computer-related offences, while Section 66F **requires specific elements of cyber terrorism**; other laws may apply where their conditions are met.
5. **Corporate Governance Obligations:** Listed entities must disclose details of cybersecurity incidents or breaches, or loss of data or documents, with their quarterly corporate governance reports, as specified under **Regulation 27(2)(ba)** of SEBI's LODR (Listing Obligations and Disclosure Requirements) Regulations.

Way Forward

1. **Uniform Security Standards:** Extend defined **cybersecurity standards, oversight and accountability** to contractors, subcontractors and data centres handling critical infrastructure information.

2. **Clear Legal Accountability:** Establish **clear responsibilities** for protecting sensitive information across the supply chain, including when data is stored or processed outside the operator's systems.
3. **Strengthen Contractual Safeguards:** Include cybersecurity standards, **audit rights, liability clauses, breach notification requirements, encryption and incident-response protocols** in vendor contracts.
4. **Adopt Risk-Based Assessments:** Replace annual certifications with **regular third-party risk assessments, supply-chain audits and red-team exercises** to identify vulnerabilities.
5. **Implement Zero Trust Security: Verify every access request**, enforce **multi-factor authentication**, strengthen privileged access management and **monitor vendor access continuously**.
6. **Strengthen Technical Defences:** Improve **network segmentation, endpoint detection, security monitoring** and secure remote access to limit unauthorised access and lateral movement.
7. **Ensure Need-Based Data Sharing:** Classify sensitive project information and share **only essential data** for a **limited duration**, reducing exposure and potential misuse.
8. **Improve Institutional Coordination:** Establish a **unified national supply-chain cybersecurity framework** involving CERT-In, NCIIPC, sectoral regulators and infrastructure operators, with **clearly assigned responsibilities** for incident response.

Conclusion

The Kudankulam incident underscores that **critical infrastructure security extends beyond facility boundaries**. India needs **enforceable supply-chain standards, clear accountability, risk-based vendor assessments and coordinated incident response**. Protecting sensitive information across contractors and service providers is essential to strengthen cyber resilience, preserve public trust and safeguard national security as infrastructure becomes increasingly interconnected.

Question for practice:

Discuss the cybersecurity challenges associated with protecting India's critical infrastructure and suggest measures to strengthen supply-chain cyber resilience.

Source: The Hindu; Times of India

A Ready Solution to Tackle Anaemia

UPSC Syllabus: Gs Paper 2- Issues relating to development and management of Social Sector/Services relating to Health And GS Paper 3: Food security

Introduction

Anaemia remains a major public health challenge in India, affecting women, children and adolescents despite sustained health interventions. Iron deficiency is a key contributor, but other micronutrient deficiencies and non-nutritional conditions also play a role. Its consequences include maternal risks, impaired cognition, reduced productivity and intergenerational malnutrition. Effective control requires an integrated approach combining food fortification, supplementation, screening, treatment, dietary diversification and stronger nationwide public health delivery.

Anaemia Burden and Its Underlying Causes

1. **High Prevalence:** NFHS-5 reports anaemia among **67.1% of children and 59.1% of adolescent girls**, reflecting the scale of the challenge.
2. **Historical Burden:** NFHS-2 (1998) found anaemia among **56% of adolescent girls aged 15–19 years** and **69% in tribal communities**.
3. **Intergenerational Consequences:** Anaemia during adolescent pregnancy increases the risks of **maternal death, premature delivery and low-birth-weight (LBW) babies**.
4. **Health and Economic Consequences:** Anaemia contributes to maternal mortality, impaired cognition and reduced productivity. Iron deficiency anaemia's economic burden has been estimated at **4% of GDP**.
5. **Multiple Nutritional Causes:** Besides iron deficiency, deficiencies of **vitamin B12, vitamin A, folate and zinc** contribute to nutritional problems.
6. **Micronutrient Deficiencies: Comprehensive National Nutrition Survey (**CNNS) found vitamin B12 deficiency in **one-sixth of preschool children and one-third of adolescents**, alongside widespread folate deficiency.

7. Poor Hygiene and Sanitation: Inadequate sanitation and poor hygiene can increase exposure to parasitic infections, such as hookworm, which may cause blood loss and contribute to anaemia.

8. **Poor Dietary Diversity:** Low consumption of **fruits, vegetables, milk, pulses, meat and poultry** restricts essential nutrient intake.
9. **Inadequate Dietary Intake:** Only **6% of children aged 6–23 months** received a minimum acceptable diet, while **9% consumed iron-rich foods**.
10. **Affordability of Nutritious Diets:** Nearly **two-thirds of rural poor** cannot afford nutritious diets meeting national guidelines, limiting access to balanced food.

Food Fortification as a Preventive Solution

1. **Double-Fortified Salt (DFS):** DFS contains **iron and iodine** and delivers essential micronutrients through routinely consumed salt.
2. **Existing Infrastructure:** Around **95% of households** use iodised salt, providing an established platform for expanding iron fortification.
3. **Existing Reach:** DFS has reached an estimated **76 million people across four States** through government safety-net programmes.
4. **Evidence of Effectiveness:** A global review found that DFS could reduce anaemia by **up to 21%**, while Indian trials demonstrated improvements in iron status.
5. **Consumer Acceptability:** Trials in **Bengaluru, Darjeeling and Punjab**, alongside implementation in **Uttar Pradesh**, showed improved iron status and acceptability with validated specifications.
6. **Affordability and Returns:** DFS costs approximately **₹14–₹20 per person annually**, with an estimated **4.2:1 benefit-cost ratio**.
7. **Rice Fortification:** Fortified rice containing **iron, folic acid and vitamin B12** provides another preventive delivery channel through a widely consumed staple.

8. **Potential Population Coverage:** Rice is consumed by **65% of the population**, averaging **6.8 kg per person monthly**, making it suitable for micronutrient delivery.
9. **Economic Benefits:** A cited assessment estimated that an annual outlay of **₹2,800 crore** could avert **16.6 million disability-adjusted life years (DALYs) annually**. Another estimate projected **94.1 million fewer anaemia cases** and **₹8,098 crore in savings over five years**.

India's Anaemia Control Strategy

1. **Anaemia Mukt Bharat (AMB):** Launched in **2018**, its revised **7X7X7 framework** covers seven beneficiary groups, seven interventions and seven institutional mechanisms.
2. **Beneficiary Coverage:** Children aged **6 months–19 years**, pregnant and lactating women, women of reproductive age (**20–49 years**) and **Low Birth Weight (LBW)** babies aged **0–6 months**.
3. **Key Interventions:** Prophylactic iron-folic acid (**IFA**) supplementation, **screening, treatment, deworming**, delayed cord clamping, behaviour change communication, dietary diversification and management of non-nutritional causes.
4. **Adolescent Programme:** India's universal adolescent anaemia programme targets **116 million adolescents**. In Q2 FY 2024–25, **15.4 crore children and adolescents** received IFA supplements.
5. **Nutrition-Based Interventions: Fortified rice and double-fortified salt** complement supplementation and dietary diversification through public welfare delivery systems.
6. **Dietary Diversification:** India has adopted measures to promote dietary diversity, **including millets under nutrition programmes, nutrient-rich crop varieties, POSHAN Vatikas (nutrition gardens) and locally available iron-rich foods** to improve nutritional intake and prevent anaemia.
7. **Monitoring and Follow-up:** India has adopted the **T4 approach (Test, Treat, Talk and Track)** under the revised **Anaemia Mukt Bharat Abhiyaan** to strengthen anaemia screening, treatment, counselling and digital monitoring for beneficiary follow-up.

Institutional Framework and Supporting Services

1. **Institutional Mechanisms:** The revised **Anaemia Mukt Bharat (**AMB) framework includes intra-ministerial coordination, the **National Centre of Excellence and Advanced Research on Anaemia**, **National AMB Unit**, strengthened supply chains, inter-ministerial convergence, AMB portal and digital monitoring.
2. **Maternal Healthcare: Surakshit Matritva Aashwasan (SUMAN)** ensures respectful maternal care; **Janani Shishu Suraksha Karyakram (JSSK)** provides free delivery services; **Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)** offers specialist antenatal care on the **9th of every month**, including anaemia screening. Extended PMSMA supports high-risk pregnancies.
3. **Community Outreach:** Monthly **Village Health, Sanitation and Nutrition Days (VHSNDs)**, **Accredited Social Health Activist (ASHA)**-supported postnatal referrals, tribal outreach camps and Mother and Child Protection Cards strengthen access and awareness.
4. **Healthcare Infrastructure:** Functional **First Referral Units (FRUs)**, blood storage facilities, Obstetrics High Dependency Units and **Intensive Care Units (ICUs)** improve maternal emergency care.
5. **Awareness and Research: Solid Body, Smart Mind**, **Information, Education and Communication (IEC)** campaigns and Safe Motherhood Booklets promote preventive practices. The **Indian**

Council of Medical Research (ICMR)'s National Health Priority Programme supports solution-oriented research and scalable interventions.

6. **Quality Assurance: Food Safety and Standards Authority of India (FSSAI)** standards, accredited laboratories and manufacturing standardisation support the quality of fortified foods.

Challenges in Scaling Up Fortification and Anaemia Prevention

1. **Uneven PDS Integration:** DFS integration into the **Public Distribution System (PDS)** remains uneven, requiring stronger state-level implementation and last-mile delivery.
2. **Institutional and Financial Barriers:** Wider adoption requires sustained **policy commitment, dedicated financing**, commercial availability, consumer awareness and dependable distribution.
3. **Quality Assurance:** Consistent fortification quality requires **validated manufacturing specifications, laboratory testing** and regulatory monitoring.
4. **Multiple Causes of Anaemia:** Fortification alone cannot address non-nutritional causes such as **malaria, haemoglobinopathies and fluorosis**, requiring appropriate screening and treatment.
5. **Public Health Safeguards:** DFS implementation must complement AMB, align with **sodium reduction goals** and include screening for **thalassaemia and sickle-cell disease**.

Way Forward

1. **Expand DFS Distribution:** Strengthen **financing, policy support and PDS integration** to improve access through public distribution and safety-net programmes.
2. **Strengthen Quality Monitoring:** Improve **manufacturing standards, laboratory testing, regulatory oversight** and supply chains to maintain fortified food quality.
3. **Integrate Prevention and Treatment:** Combine **fortification with IFA supplementation, screening, treatment**, deworming and digital tracking under AMB.
4. **Promote Dietary Diversification:** Encourage **millets, nutrient-rich crop varieties**, locally available iron-rich foods and POSHAN Vatikas.
5. **Improve Diet Affordability:** Expand **access to nutritious diets** and encourage healthier food choices through sustained behaviour change.
6. **Strengthen Community Participation:** Use **Jan Bhagidari** and awareness campaigns to improve screening uptake, supplement adherence and public participation.
7. **Ensure Institutional Convergence:** Coordinate **health, education, nutrition and food distribution departments** for effective implementation and beneficiary follow-up.
8. **Build a Scalable Model:** Build on India's experience with **universal salt iodisation** to demonstrate an affordable fortification model for other low- and middle-income countries.

Conclusion

Anaemia reduction requires coordinated fortification, supplementation, screening, treatment and dietary diversification. Double-fortified salt and fortified rice can improve micronutrient delivery, but cannot replace comprehensive care. Sustainable progress depends on quality assurance, affordable nutritious diets, institutional coordination, public awareness and reliable last-mile access to prevention and treatment services, especially for vulnerable populations and communities.

Question for practice:

Examine the major causes of anaemia in India and discuss the role of food fortification and government interventions in addressing this public health challenge.

Source: The Hindu; PIB

Clean air needs targets, timelines and accountability

Source: The post **"Clean air needs targets, timelines and accountability"** has been created based on **"Clean air needs targets, timelines and accountability"** published in **"Indian Express"** on 28th September 2026.

UPSC Syllabus: GS 3- Environment

Context: Air pollution threatens public health and economic productivity in India. Despite initiatives like NCAP and GRAP, air quality remains poor in several cities. Swachh Vayu Sarvekshan focuses mainly on administrative activities, while actual pollution reduction accounts for only 2.5% of a city's score. In this context, it is important that India must move beyond fragmented measures and focus on clear targets, fixed timelines, interdepartmental coordination and accountability.

Key Issues in India's Clean-Air Policy

1. Focus on administrative activities: The Swachh Vayu Sarvekshan rankings assess activities such as road sweeping, waste management, sidewalk paving and action-plan preparation. Actual reductions in particulate matter account for only 2.5 per cent of a city's total score.

2. Limited improvement in air quality: Lucknow's annual average PM10 level has declined from 253 micrograms per cubic metre in 2017–18 to around 135, but it remains more than twice the national standard of 60 micrograms per cubic metre.

3. Ineffective pollution-control measures: Delhi has shown no appreciable improvement in winter air quality over the last four years, despite pollution-control measures and activities under the Graded Response Action Plan.

4. High economic and health costs: According to an assessment by UNEP and the Climate and Clean Air Coalition, South Asia loses the equivalent of 10 per cent of its regional GDP annually due to reduced productivity and healthcare costs associated with air pollution.

5. Fragmented institutional responsibilities: Transport, electricity generation, industry, waste management, agriculture and household cooking contribute to air pollution. Their management by different ministries and agencies creates coordination problems and weakens accountability.

6. Economic losses due to delays: If Delhi and the NCR meet national air quality standards on schedule from 2026, their cumulative PM2.5 exposure burden could decline by 20 per cent by 2040. An eight-year delay would halve this reduction.

Measures to Improve Clean-Air Policy

1. Set clear targets and timelines: The National Clean Air Programme (NCAP) should establish measurable pollution-reduction targets and fixed deadlines for every responsible agency.

2. Measure actual outcomes: The government should assess clean-air programmes based on reductions in pollution exposure and the speed at which people receive relief, rather than administrative activities alone.

3. Fix institutional accountability: The government should clearly define the responsibilities of ministries, departments and urban agencies and take action when deadlines are missed.

4. Link funding with performance: Central grants and Finance Commission transfers should reward cities that achieve sustained reductions in pollution exposure.

5. Strengthen interdepartmental coordination: Clean-air planning should integrate transport, energy, industry, agriculture and waste management policies rather than treating air pollution solely as an environmental issue.

6. Improve economic efficiency: Investment in climate and clean-air measures should be prioritised because the assessment estimates that every rupee invested in a package of 25 such measures could generate ₹21 in economic and health benefits.

7. Reform NCAP 2.0: The government should focus on timely implementation, measurable outcomes and consequences for agencies that fail to meet their targets.

Conclusion: India needs to move from administrative compliance to measurable improvements in air quality. Clear targets, time-bound implementation, coordinated governance and performance-linked funding can reduce pollution, protect public health and prevent avoidable economic losses.

Question: India's clean-air policy needs clear targets, fixed timelines and accountability rather than merely administrative measures." Discuss the challenges in achieving clean air and suggest measures to improve the effectiveness of India's clean-air policy.

Source: Indian Express

China's Grey-Zone Warfare along the LAC: Challenges for India and the Way Forward

Source: The post "China's Grey-Zone Warfare along the LAC: Challenges for India and the Way Forward" has been created based on "To counter China along LAC, why its grey-zone warfare tactics must be understood" published in "Indian Express" on 28th September 2026.

UPSC Syllabus: GS 3: Internal Security

Context: China is increasingly using Grey-Zone Warfare (GZW) along the Line of Actual Control (LAC) to alter the ground situation in its favour without triggering a full-scale war. India needs an integrated national strategy combining military preparedness, border surveillance, infrastructure, diplomacy and credible deterrence to prevent China from changing the status quo.

About Grey-Zone Warfare (GZW)

1. Grey-Zone Warfare (GZW) refers to actions taken by a state between peace and conventional war to achieve strategic objectives without triggering a full-scale military conflict.
2. These tactics include military infrastructure development, incremental territorial advances through "nibble and negotiate", border villages, psychological and legal warfare, and diplomatic pressure.
3. China uses these tactics along the LAC to gradually change the ground situation in its favour.

China's Grey-Zone Warfare Tactics

1. Military infrastructure development: China has strengthened its military presence along the Himalayan frontier by constructing strategic highways, railway lines, airfields and heliports near the LAC.

2. "Nibble and negotiate" strategy: The People's Liberation Army (PLA) attempts to alter the status quo through small, incremental advances and changes in patrolling patterns, thereby avoiding the risks of a full-scale conflict.

3. Border villages: China has established 628 Xiaokang villages along its borders, around 90 per cent of which are concentrated near Arunachal Pradesh. These villages can serve as forward defence posts and military support centres.

4. Psychological and legal warfare: China uses public opinion campaigns, psychological pressure, legal claims and the renaming of places in Arunachal Pradesh to strengthen its territorial claims.

5. Economic and geopolitical influence: China expands its influence through economic partnerships, connectivity projects and security arrangements across Asia, Africa and the Indian Ocean Region. Its partnership with Pakistan also creates pressure on India along two fronts.

6. Diplomatic ambiguity: China sometimes uses diplomatic engagements to reduce tensions while continuing activities that may alter the ground situation.

7. Cyber and non-state actors: Cyber operations and the involvement of non-state actors form part of the broader Grey-Zone Warfare approach.

Challenges Faced by India

1. Unresolved border disputes: Despite disengagement at selected friction points, differences over the alignment of the LAC remain unresolved.

2. Surveillance and intelligence gaps: India needs stronger surveillance, intelligence gathering, rapid reinforcement and logistical support in difficult border areas.

3. Fragmented command structure: The Indo-Tibetan Border Police (ITBP) functions under the Ministry of Home Affairs, while the Army operates under the Ministry of Defence. This can complicate coordination during border confrontations.

4. Lack of an integrated strategy: India needs a coherent national strategy that connects military preparedness, border management, infrastructure development, diplomacy and economic policy.

5. Risk of diplomatic complacency: Improved high-level relations do not necessarily guarantee peace along the border, as China may continue its strategic activities during periods of diplomatic engagement.

Measures India Should Adopt

1. Develop an integrated national strategy: India should coordinate military, diplomatic, economic, technological and border-management policies to counter Grey-Zone Warfare.

2. Strengthen border infrastructure: India should improve roads, surveillance systems, communications, logistics and rapid-reinforcement capabilities along the LAC.

3. Improve command and control: Better coordination between the Army and ITBP is essential for a swift and effective response. It is also suggested considering a dedicated border-guarding force under the Army's operational control.

4. Build credible deterrence: India should strengthen its defence capabilities to make unilateral attempts to change the status quo costly for China.

5. Counter information and legal warfare: India should respond to misleading narratives and territorial claims through accurate information, diplomatic engagement and consistent assertion of its position.

6. Maintain firm diplomacy: India should continue dialogue with China but ensure that diplomatic normalisation is linked to respect for border agreements and established arrangements.

7. Adopt a whole-of-government approach: The government should integrate the efforts of the armed forces, intelligence agencies, border forces and relevant ministries.

Conclusion: China's Grey-Zone Warfare seeks to secure strategic gains through gradual and ambiguous actions rather than open conflict. India must move beyond reactive responses and adopt a coordinated strategy based on strong deterrence, effective border management, integrated command and firm diplomacy to protect the status quo along the LAC.

Question: What is Grey-Zone Warfare? Examine how China uses it along the Line of Actual Control (LAC) and suggest measures India should adopt to counter it.

Source: Indian Express

Is India to Be World's Oil Refiner?

UPSC Syllabus: Gs Paper 3- Infrastructure

Introduction

India's refining capacity and advanced infrastructure have strengthened its position in global energy markets. The country is emerging as a major supplier of petroleum products amid changing global oil trade. However, geopolitical tensions, crude supply risks and climate commitments create new challenges. The key question is whether India can achieve global refining leadership while protecting energy security, economic interests and long-term sustainability.

India's Emergence as a Global Refining Power

1. **Global Position:** India is the world's **fourth-largest refining nation and second-largest in Asia**, with a capacity of **267.11 million metric tonnes per annum (MMTPA)**, equivalent to approximately **5.6–5.97 million barrels per day**.
2. **Comparison with Major Refiners:** China leads global refining capacity with around **18.5 million barrels per day** (mb/d), followed by the United States (US) at **18.4 mb/d** and Russia at **6.8 mb/d**.
3. **Petroleum Production:** India produced **284.9 million tonnes** of petroleum products in FY 2025–26, including **281.5 million tonnes** from crude oil and other inputs processed in refineries.
4. **Export Performance:** India exported **61.5 million tonnes** of petroleum products in FY 2025–26, supplying international markets and strengthening its position in global fuel trade.
5. **Domestic Demand:** Refinery expansion is primarily driven by **rising domestic demand** for transportation fuels, aviation turbine fuel (ATF) and petrochemicals, while exports remain important.
6. **Capacity Expansion:** The government plans to increase refining capacity to **309.5 MMTPA by 2030**, while the broader **450 MMTPA ambition** raises questions about long-term investment planning.

Foundations of India's Refining Competitiveness

1. **Complex Refining Infrastructure:** India's advanced facilities can **process different crude grades** and extract valuable petroleum products, giving domestic refiners greater procurement flexibility.
2. **Crude Oil Characteristics:** Light crude is relatively easier to process, whereas **heavy, high-sulphur crude** requires complex facilities to produce valuable fuels meeting quality standards.
3. **High Refinery Utilisation: High utilisation rates** improve operational efficiency and help Indian refiners strengthen their competitiveness in international petroleum product markets.
4. **Product Diversification:** Refineries convert crude oil into **petrol, diesel, ATF, liquefied petroleum gas (LPG), naphtha** and industrial feedstock, supporting transportation and industrial requirements.
5. **Competitive Economics:** Refining margins depend **not only on crude discounts** but also on freight, crude quality, processing complexity and product yields.

Jamnagar Refinery: A Strategic Asset in Global Energy Politics

1. **Global Refining Scale:** Reliance Industries Limited's (RIL) Jamnagar complex has a combined capacity of **1.4 million barrels per day**, making it the **world's largest single-site refining complex**.
2. **Crude Processing Capability:** Jamnagar has processed **more than 216 different crude grades**, including heavy and high-sulphur varieties, strengthening its ability to adapt to changing supply conditions.
3. **Venezuelan Crude Processing:** Jamnagar can process **Venezuelan heavy crude**, including **Merey-16**, making it a potential destination for additional supplies when commercial and regulatory conditions permit.
4. **Export Significance:** Jamnagar exports **millions of tonnes of diesel** to the US and Europe, making its operations important for international fuel availability and prices.
5. **Indian Capital Abroad:** Reliance's investment commitment for a **proposed Texas refinery** reflects India's potential to contribute capital and refining capabilities to American energy infrastructure.

US Energy Needs and India's Geopolitical Leverage

1. **American Fuel Requirements: Tight US diesel inventories** and **rising pump prices** before midterm elections have increased the importance of reliable petroleum product supplies from major exporters.
2. **US Interest in Jamnagar:** Washington is exploring opportunities to process **more Venezuelan crude** in Indian refineries and increase American energy purchases by India.
3. **Changing American Approach:** US engagement reflects **domestic energy needs** alongside geopolitical interests, showing how commercial requirements can reshape diplomatic priorities.
4. **Russian Oil Pressure:** Washington has threatened **punitive sanctions** over India's Russian oil purchases, while recognising India's progress in **diversifying its crude supply sources**.

5. **Shifting Crude Economics: Higher freight costs** have eroded Russian crude's earlier pricing advantage, while **Venezuelan crude remains among the cheapest** available feedstocks for Indian refiners.
6. **Strategic Leverage:** India's refining capabilities strengthen its importance in global energy trade, but refining leadership **does not automatically make India a global oil price setter**.

Challenges to India's Refining Ambitions

1. **Russian Crude Dependence:** Russian barrels remain a **significant part of India's crude import basket**, making sudden supply disruptions a concern for refinery operations.
2. **Procurement Planning:** Crude procurement deals are typically concluded **8–12 weeks before delivery**, limiting refiners' ability to respond immediately to unexpected supply disruptions.
3. **Venezuelan Supply Uncertainty: Political changes in Venezuela** and **tighter sanctions** could disrupt crude supplies, creating uncertainty for refiners dependent on commercially viable sourcing.
4. **Import Cost Pressures:** Venezuelan crude's heavy composition and long shipping distance **increase processing and transportation costs**, requiring sufficient discounts to justify its delivered cost.
5. **Public Sector Vulnerability:** Sudden losses of discounted Russian crude could test **public sector refiners**' ability to adapt procurement strategies and maintain operational efficiency.
6. **Global Refining Competition:** Europe may shut **500,000–700,000 barrels per day** of refining capacity **by 2030**, while **US capacity also declined in 2025**, creating opportunities and competition for Indian refiners.
7. **Corporate Investment Risks:** Reliance's proposed Texas refinery could face **commercial risks** if energy market conditions change, raising concerns about the viability of long-term overseas investments.

Refining Expansion vs. Climate Commitments

1. **Carbon Emission Burden:** Expanding fossil fuel infrastructure could increase India's **long-term carbon burden** while the country pursues its **net-zero commitment**.
2. **Unequal Global Transition:** The concern is that India may bear the **environmental costs** of refining volatile crude while Western economies pursue cleaner energy transitions.
3. **Carbon-Related Trade Risks:** The European Union's **Carbon Border Adjustment Mechanism (CBAM)** raises concerns about future trade costs, but refined petroleum products are **not currently covered**.
4. **Changing Fuel Demand: Electric vehicles**, improved fuel efficiency and cleaner energy transitions may gradually **weaken demand** for conventional transportation fuels in some export markets.
5. **Stranded Asset Risks:** Large investments in long-lived refineries could become **financially risky** if future petroleum demand declines or environmental regulations tighten.

Way Forward

1. **Diversified Crude Procurement:** India should maintain a **diverse supplier base**, including Middle Eastern and other commercially viable sources, to reduce exposure to geopolitical supply disruptions.
2. **Strengthening Public Sector Refiners:** Public sector refiners need **flexible procurement strategies** and efficient processing capabilities to manage sudden changes in crude availability and delivered costs.
3. **Prudent Capacity Planning:** Refinery investments should reflect **domestic demand, export prospects, operating costs** and changing global fuel consumption to limit future financial risks.
4. **Cleaner Refining Operations:** Greater **energy efficiency and lower-emission technologies** can reduce the environmental burden of refining while maintaining industrial competitiveness.
5. **Balanced Energy Strategy:** Refining expansion should **align with India's clean energy transition**, ensuring that petroleum infrastructure investments do not weaken long-term climate commitments.

6. **Strategic Energy Cooperation:** India should pursue commercially beneficial energy partnerships without allowing external political pressure to compromise its **supply security and procurement flexibility**.

Conclusion

India can strengthen its position as a global refining hub. However, capacity alone cannot ensure energy sovereignty or price-setting power. Diversified supplies, resilient refiners, prudent investment and cleaner operations are essential. Aligning expansion with demand and climate goals will determine whether refining becomes a lasting economic advantage rather than a future liability.

Question for practice:

Examine India's emergence as a global oil refining hub and discuss the key challenges to its refining ambitions.

Source: Businessline; New Indian Express

India's Next Investment Cycle Will Shape Its Carbon Future

UPSC Syllabus: Gs Paper 3- Environment

Introduction

India must expand housing, industry, power networks and urban infrastructure. The United Nations Environment Programme (UNEP) warns that the world could cross the 1.5°C warming threshold within the next few years. Much of India's future infrastructure remains unbuilt. Investment choices can embed efficiency, support energy security and growth, advance the net-zero target by 2070, reduce costly future retrofits, and improve public health and infrastructure resilience nationwide.

Present Status and Opportunities

1. Infrastructure Expansion: India's next investment cycle will shape emissions for decades. NITI Aayog estimates that **86% of India's building stock** expected in 2070 is yet to be built, while floor space may rise from **18 billion sq m in 2020 to 42 billion sq m by 2070**.

2. Industrial Growth: Crude steel capacity was about **200 million tonnes in 2024–25** and is targeted to reach **300 million tonnes by 2030–31**. Cement production rose to **427 million tonnes in 2024** and is projected to reach **660 million tonnes by 2030**, making industrial choices consequential.

3. Renewable Energy: India is rapidly expanding clean power. Renewable capacity, including large hydropower, reached **295.6 gigawatts** in August 2026, while record solar additions show the opportunity to support energy security and reduce carbon intensity.

4. Green Finance: The Reserve Bank of India estimates green finance needs of at least **2.5% of GDP annually** through 2030. A draft climate-finance taxonomy estimates about US$2.5 trillion, at 2014–15 prices, is required for climate commitments by 2030.

5. Innovation and Productivity: Green finance and predictable standards can stimulate innovation in solar modules, batteries, electrolyzers, electric vehicles and efficient machinery. Such directed technological change can improve productivity, competitiveness and emissions performance.

6. Employment Potential: The International Renewable Energy Agency estimated **1.3 million renewable-energy jobs** in India in 2024, including **503,000 in hydropower**, **385,000 in solar photovoltaic** and **165,000 in biofuels**.

Key Challenges in Aligning Investment with Decarbonisation Goals

1. Long-Lived Carbon Lock-in: Steel, cement, buildings and transport assets operate for decades. High-emission design choices today can lock in emissions and create expensive retrofits later.

2. Uneven Building-Code Implementation: The Energy Conservation Building Code (ECBC) 2017 has been notified by **27 States** but legally incorporated in only 21. Weak integration into approvals limits compliance and the gains from efficient construction.

3. Grid and Transmission Bottlenecks: The International Energy Agency (IEA) estimates transmission constraints held back around **60 gigawatts** of renewable capacity. Generation additions without timely transmission and storage can leave clean power underused.

4. Technology and Cost Uncertainty: Green hydrogen-based steel is not yet viable in India, while large-scale carbon capture in cement remains further along the transition pathway. Mandating immature options risks higher costs and inefficient technological lock-in.

5. High Cost of Capital: The IEA estimates India's grid-scale renewable cost of capital is about **80% higher** than in advanced economies. Front-loaded investment needs and payment or offtaker risks constrain projects.

6. Limited Public Finance: Climate investment requirements exceed the capacity of public budgets. Guarantees or concessional support can help, but poorly designed public finance may transfer excessive technology and commercial risks to the **public balance sheet**.

7. Greenwashing and Job-Quality Risks: Weak verification can undermine green-finance credibility. Renewable projects can also be capital-intensive with few permanent jobs, while headline employment estimates may conceal differences in skills, gender, geography and job duration.

Government Initiatives and Policy Instruments

1. Building-Efficiency Standards: The Bureau of Energy Efficiency (BEE) issued the Energy Conservation and Sustainable Building Code (ECSBC) 2024 for commercial and office buildings, and Eco-Niwas Samhita (ENS) 2024 for residences, building on ECBC 2017.

2. Green Bond Issuance: The Government raised **₹16,000 crore** through sovereign green bonds in FY2022–23 and **₹20,000 crore** in FY2023–24. These issuances establish a benchmark and can help develop corporate and municipal green-debt markets.

3. Clean-Technology Support: Production-linked incentive (PLI) support can encourage domestic supply chains. One tranche was expected to attract **₹93,041 crore** in investment and generate **101,487 direct and indirect jobs**; these projections require credible tracking.

4. Green-Steel Procurement Proposal: The Steel Ministry proposed aggregated procurement through competitive bidding. Public agencies, Railways and the National Highways Authority of India (NHAI) can create demand for lower-emission materials.

5. Carbon-Market Framework: The Carbon Credit Trading Scheme (CCTS) provides a policy reference for aligning progressively tighter industrial performance expectations with emissions targets.

Way Forward

1. Enforce Building Codes: Integrate building-efficiency requirements into permits, occupancy certificates and grid connections, with clear compliance checks and consequences. Apply mature efficiency solutions at the design stage to avoid future retrofit costs.

2. Plan Power Systems Together: Coordinate renewable generation with transmission and storage, and develop networks ahead of or alongside new demand. The Power Ministry's plan envisages about **590 gigawatts** of generation additions during 2023–2032, reinforcing the need for system-wide planning.

3. Use Performance-Based Procurement: Set **emission-intensity thresholds** rather than prescribing production methods for steel and cement. Competitive bidding can reveal the green premium; tighten thresholds over time as technology scales and align them with CCTS targets.

4. Share Financial Risks Carefully: Use payment-security mechanisms, partial credit guarantees and concessional debt to address identifiable financing barriers. Public support should mobilise private capital without indiscriminately socialising unproven technology risks.

5. Develop Green-Finance Integrity: Use clear taxonomies, independent verification, allocation reporting and impact metrics. Green bonds should complement carbon pricing, regulation and public investment, addressing environmental and health costs that markets may not price.

6. Link Investment with Local Jobs: Build domestic supply chains and support rooftop solar, decentralised energy, retrofits, public transport and ecosystem restoration. Track employment by gender, location, skills and duration rather than relying only on projected totals.

7. Secure a Just Transition: Reskill workers, protect incomes, diversify micro, small and medium enterprises (MSMEs), and invest in affected districts. Educational institutions should build skills in renewable engineering, climate-risk evaluation, carbon accounting, sustainable finance and environmental data analysis.

Conclusion

India must align investment with growth, energy security and its net-zero target by 2070. Mature technologies should be adopted now. Emerging options require flexibility as costs and performance evolve. Affordable finance, credible standards, productive jobs and a just transition can deliver resilient, low-carbon assets.

Question for practice:

Discuss how India can align its next investment cycle with its decarbonisation goals while ensuring sustainable and inclusive economic growth.

Source: The Hindu

9 PM Articles - October 29th

India Must Build a Holistic Care System

UPSC Syllabus: Gs Paper 2- Issues relating to development and management of Social Sector/Services relating to Health.

Introduction

India's development strategy has prioritised highways, metro lines, electrification and digital platforms, but **care remains an under-recognised foundation of growth.** Without affordable services, families, especially women, bear unpaid work and lose economic opportunities. With an ageing population and rising demand for caregivers, India must connect childcare, eldercare, disability support and healthcare through an accessible, quality, adequately funded care system to advance inclusive development and Viksit Bharat 2047.

Understanding the Holistic Care System

1. **Holistic Care System:** It is a **broader framework** that connects childcare, eldercare, disability support and healthcare to meet people's care needs throughout life.
2. **Holistic Healthcare:** It is an approach that addresses a person's **physical, mental and social well-being** through preventive, promotive, curative, rehabilitative and palliative care.
3. **Relationship Between the Two: Holistic healthcare is one component of a holistic care system**, which also includes wider caregiving services and support for families and caregivers.
4. **Person-Centred Approach:** Care should respond to individual needs and support people's **dignity, well-being and participation** through accessible and quality services.
5. **Shared Responsibility:** Care requires coordinated efforts by governments, communities, workplaces, families and trained caregivers rather than placing the burden mainly on women.

Significance of the Care Economy for India's Development

1. **Women's Employment Opportunities:** Affordable childcare can reduce caregiving barriers and allow more women to pursue employment, leisure and participation in public life.
2. **Unpaid Care Burden:** The **Time Use Survey 2024** found that **41% of women aged 15–59** provided unpaid care, averaging **140 minutes daily**.
3. **Women's Labour Force Participation:** The **Periodic Labour Force Survey 2025** found that **44.4% of women outside the labour force** cited childcare and homemaking as their main reason for staying out.
4. **Economic Growth:** Recognising care as **productive economic activity** can strengthen women's participation and connect care provision with India's broader development strategy.
5. **Employment Generation:** Rising global demand for caregivers offers **skill-based employment opportunities for lakhs of Indian youth**, requiring suitable training models.
6. **Ageing Population:** India's growing elderly population will increase demand for accessible care services, making long-term care planning increasingly important.
7. **Social Inclusion:** Affordable care services can improve access to support for children, senior citizens and persons with disabilities, strengthening their participation and well-being.
8. **Healthier Population:** Preventive and community-based healthcare can help address chronic conditions and support healthier, longer and more balanced lives.

India's Existing Care Infrastructure and Policy Framework

1. **Early Childhood Care and Nutrition:** The **Anganwadi network**, strengthened through **Saksham Anganwadi and POSHAN 2.0**, provides an important foundation for early childhood care and nutrition.
2. **Childcare and Child Protection: Palna under Mission Shakti** supports crèche services, while **Mission Vatsalya** addresses child protection needs.
3. **Eldercare and Disability Support:** Social security provisions and support measures for senior citizens and persons with disabilities address care needs beyond early childhood.
4. **Healthcare Infrastructure and Access:** Hundreds of new medical colleges have strengthened health infrastructure, while **Ayushman Bharat wellness centres** have extended access to health services in villages.
5. **Emergency Healthcare Infrastructure:** The **Union Budget 2026–27** proposed establishing emergency and trauma care centres in district hospitals to **increase emergency and trauma care capacity by 50%**.
6. **Digital Healthcare:** The **Ayushman Bharat Digital Mission (ABDM)** and **Ayushman Bharat Health Account (ABHA)** support interoperable digital health records and a more integrated healthcare ecosystem.
7. **Telemedicine Services:** Telemedicine has improved healthcare access in remote areas, but simpler user experiences and greater public awareness remain necessary.

Key Challenges in Building a Holistic Care System

1. **Fragmented Governance:** Care programmes operate across ministries without a common framework, creating service gaps between childcare, eldercare and other support services.
2. **Inadequate Childcare Coverage:** The **United Nations Development Programme (UNDP)** estimates that **9–10 million women in low-income urban households** need childcare, indicating substantial unmet demand.
3. **Eldercare Service Gaps: 24% of older persons face limitations in daily activities**, while national data on care service availability and coverage remain limited.

4. **Inadequate Care Infrastructure:** Some crèches close before factory shifts end, while existing schemes may not adequately address eldercare needs.
5. **Undervalued Care Workforce:** Anganwadi workers, home-based caregivers and domestic workers often face inadequate remuneration or honorary employment arrangements.
6. **Weak Professional Recognition:** Limited standards, certification, social protection and career pathways prevent care work from receiving adequate recognition as skilled and paid employment.
7. **Inadequate Financing:** Care is often budgeted as welfare expenditure rather than investment in economic and social development, limiting its recognition in growth planning.
8. **Gendered Caregiving Norms:** Workplace policies often assume that caregiving is women's responsibility, restricting their employment opportunities and reinforcing unequal care responsibilities.

Way Forward

1. **National-Level Coordination: NITI Aayog's** *Reimagining Care: Strategies for Empowering Caregivers in Viksit Bharat@2047* proposes a **National Caregiving Council** to strengthen coordination.
2. **National Care Economy Mission:** The **Ministry of Social Justice and Empowerment's** May 2026 national workshop discussed a proposed mission with inter-ministerial governance, aligned financing and shared data.
3. **State-Level Care Roadmaps:** States should map demographic trends, care needs and existing services, identify gaps and prepare **costed plans with clear responsibilities**.
4. **Sustainable Financing:** Governments should align financing across programmes and recognise care services as **essential development investments**, not merely welfare expenditure.
5. **Professional Care Workforce:** Introduce **clear standards, certification, decent working conditions, social protection and career pathways** to recognise caregiving as skilled and paid work.
6. **Gender-Sensitive Workplace Policies:** Consider **statutory paid paternity leave in the private sector**, as recommended by the **Economic Advisory Council to the Prime Minister (EAC-PM)**.
7. **Outcome-Based Emergency Care:** Strengthen coordination among hospitals, ambulance networks and government programmes through **digital technologies, real-time monitoring, implementation research and continuous skilling** of emergency care personnel.
8. **Preventive and Holistic Healthcare:** Promote **community-based prevention, health awareness and lifestyle interventions**, while integrating appropriate medical care to address chronic conditions and improve well-being.
9. **Technology-Enabled Healthcare:** Use **artificial intelligence (AI), machine learning (ML) and digital health infrastructure** to improve healthcare efficiency, quality, interoperability and continuity of health records.
10. **Mental Health Awareness:** Promote supportive environments in workplaces and educational institutions to address **stress, burnout and students' mental health needs**.
11. **Global Policy Learning: Colombia's 2025 National Care Policy** coordinates 34 government entities; Brazil's national policy and plan use inter-ministerial committees, while Nepal's care mapping informed funding for care pilots.
12. **Women-Led Care Enterprises:** Support women-led childcare enterprises through government partnerships, including initiatives involving the **Ministry of Housing and Urban Affairs** and the **Women Entrepreneurship Platform**.

13. **International Collaboration: UNDP and UN Women's Transform Care initiative**, operating in more than 50 countries, support care mapping, workforce skilling and childcare enterprise development.

Conclusion

India must treat care as **essential social and economic infrastructure** for Viksit Bharat 2047. Connecting existing programmes, closing coverage gaps, financing services and improving care workers' conditions can make support more accessible and reliable. A coordinated care system can widen women's opportunities, create skilled jobs and improve well-being across people's lives.

Question for practice:

Discuss the significance of a holistic care system for India's inclusive development and the key challenges in building an integrated and sustainable care economy.

Source: The Hindu

How Neoliberalism Turned the World Against Its Young

UPSC Syllabus: Gs Paper 3- Mobilisation of resources, growth, development and employment.

Introduction

Young people across France, Albania, Spain, India, Bangladesh and Sri Lanka have taken to the streets, although their demands differ. Their anger reflects deeper economic problems, including unemployment, low growth, rising living costs and falling real wages. The neoliberal economic model, with its emphasis on reduced public expenditure and welfare spending, provides a broader explanation of this discontent, particularly in developed economies and Group of Seven (G7) countries.

Global Youth Unemployment and Economic Discontent

1. **Youth Protests:** Young people in several countries are protesting against **economic hardship, unemployment and declining living standards**. Although their immediate demands vary, their protests reflect growing dissatisfaction with existing economic conditions.
2. **France's Economic Discontent:** France faces **high unemployment, low economic growth, rising living costs and falling real wages**. Public expenditure cuts have added to dissatisfaction. Protests were triggered by a lack of resources and staff at Lycée Antoine-de-Saint-Exupéry in Créteil.
3. **Rising Youth Unemployment:** Youth unemployment in G7 countries is **nearly twice the overall unemployment rate or higher**, highlighting the difficulties faced by young job seekers.
4. **Demographic Contradiction:** Developed societies are ageing, and the youth population forms a shrinking share of their population. Yet, youth unemployment continues to rise, suggesting that the problem may lie in **inadequate labour demand rather than an excessive supply of young workers**.
5. **Generation Z:** Generation Z generally refers to those born between **1997 and 2012**. Young people entering the labour market face growing **economic insecurity and uncertainty** about their future.

Economic and Political Roots of Youth Unemployment

1. **Labour Market and Full Employment:** Capitalists create labour demand, while workers supply labour. In a simplified labour market model, their intersection represents **full employment at the prevailing wage rate**, assuming the model's conditions hold.
2. **Involuntary Unemployment:** When labour demand is lower than labour supply at the prevailing wage rate, some workers willing to work remain unemployed. This represents involuntary unemployment, where available jobs are insufficient for all job seekers.
3. **Orthodox Explanation:** Orthodox economists often attribute unemployment to **rigid labour markets, high wages, restrictive labour laws, powerful trade unions and skill shortages**. They argue that greater labour market flexibility can improve employment opportunities.
4. **Heterodox Explanation:** Heterodox economists emphasise **capitalists' hiring and investment decisions**. They argue that unemployment cannot be explained merely through workers' wages, skills or labour market restrictions.
5. **Investment Deficiency:** In the heterodox framework, investment drives economic activity and employment. Higher investment generates demand, production and jobs, while **low investment reduces labour demand**, leading to unemployment and slower growth.
6. **Consumption and Investment Relationship:** Under the simplified assumption that **workers consume their entire wages while capitalists save profits**, consumption depends on employment and the wage bill. Investment becomes crucial because insufficient investment weakens demand and employment.
7. **Keynesian Fiscal Expansion:** John Maynard Keynes emphasised the role of government expenditure in addressing deficient demand. **Higher public investment and fiscal expansion** can increase employment, production and profits by filling the investment gap.

8 **Kalecki's Disciplinary Argument:** Michal Kalecki argued that **permanent full employment could weaken employers' control over workers**. When jobs are readily available, workers become less dependent on employers, challenging the existing balance of power.

9 **Golden Age of Capitalism:** The period **1945–1973** witnessed **high economic growth** in the global North and an increasing working-class share. Greater government intervention and public welfare supported economic expansion and improved workers' position.

10. **Monetarist Counterrevolution:** During **1973–1980**, inflation increased amid **oil price shocks**. Monetarists, led by Milton Friedman's ideas, blamed excessive government intervention and advocated controlling inflation through monetary discipline rather than expansionary policies.
11. **Rise of Neoliberalism:** Ronald Reagan in the United States and Margaret Thatcher in the United Kingdom implemented neoliberal policies. These emphasised **reduced welfare expenditure, privatisation, flexible labour markets and restrictions on trade unions**, shifting economic power towards capitalists.
12. **Declining Working-Class Share:** Neoliberal policies weakened workers' bargaining power and reduced their share of national income. **Falling wage shares** weakened consumption demand, contributing to **underconsumption and slower investment**.

Consequences of Neoliberalism for Young People and the Economy

1. **Underconsumption: Falling wages reduce workers' purchasing power**. Since workers constitute a major source of consumption demand, declining incomes can weaken demand for goods and services.

2. **Declining Investment and Growth:** Weak consumption demand reduces business sales and profits. Idle production capacity discourages further investment, creating a cycle of **low demand, low investment and slow economic growth**.
3. **Persistent Unemployment:** Insufficient investment **limits job creation**. Weak economic growth and the replacement of workers by machinery further intensify employment challenges.
4. **Growing Youth Insecurity:** Young people face unemployment, low wages, rising living costs and uncertain career prospects. These conditions make **economic independence and financial security** increasingly difficult.
5. **Artificial Intelligence and Employment:** Artificial intelligence (AI) and technological advancement **may intensify employment insecurity** if machines replace workers without sufficient creation of new jobs.
6. **Commercialisation of Education:** Young people are encouraged to acquire skills and higher qualifications to improve employability. However, neoliberalism has turned education into a **profit-oriented industry**, increasing the **financial burden on students**.
7. **Uncertain Returns on Education:** Rising education costs **do not guarantee remunerative employment**. Young people may invest heavily in degrees but still face unemployment, underemployment or inadequate earnings.
8. **Growing Resistance:** Economic insecurity and the perception of an unfair economic system are encouraging young people to challenge existing institutions and policies through **protests and collective resistance**.

Way Forward

1. **Strengthen Public Investment:** Greater government investment can **support aggregate demand, production and employment**, particularly when private investment remains inadequate.
2. **Reinforce Public Welfare:** Adequate public expenditure and welfare support can **reduce economic insecurity** and help protect vulnerable sections of society.
3. **Improve Workers' Bargaining Power:** Protecting **workers' bargaining power and fair wages** can strengthen household consumption and improve the distribution of economic gains.
4. **Make Education Affordable: Reducing the financial burden of education** can prevent young people from facing excessive costs without assured employment opportunities.
5. **Promote Employment-Generating Growth:** Economic growth should be accompanied by **productive investment and sufficient job creation** to ensure that young people benefit from economic progress.

Conclusion

Youth anger reflects weaknesses in the neoliberal economic order, including weak labour demand, declining wage shares and rising education costs. Addressing these problems requires greater attention to employment, public welfare and workers' bargaining power. Sustainable prosperity must support productive investment and workers' economic security, rather than leave young people facing uncertain futures.

Question for practice:

Examine how neoliberal economic policies have contributed to rising youth unemployment and economic insecurity, and suggest measures to address these challenges.

Source: The Hindu

Operationalise life cover for delivery workers

Source: The post **"Operationalise life cover for delivery workers"** has been created based on **"Operationalise life cover for delivery workers"** published in **"Business Line"** on 30th September 2026.

UPSC Syllabus: GS 2- Governance

Context: A 33-year-old delivery rider in Hyderabad recently died of a heart attack after a long shift. His family later discovered that the platform's insurance covered only accidental deaths, leaving them without financial support. Such cases highlight the lack of comprehensive life insurance for gig workers. Also, India has approximately 1.2 crore gig workers, and their number is projected to reach 2.3 crore by 2030 (NITI Aayog), making effective social security measures increasingly important.

Background and Existing Provisions

1. **Code on Social Security, 2020:** Sections 113 and 114 of the Code on Social Security, 2020 require the Central and State Governments to frame social security schemes for gig and platform workers, including life and disability cover, accident insurance, health and maternity benefits.
    a. **Implementation gap:** The Code came into force on 21 November 2025, but life insurance coverage for gig workers has not been fully operationalised.
    b. **Motor Vehicle Aggregator Guidelines:** The 2020 guidelines prescribed ₹10 lakh term life insurance for registered drivers of aggregators, and the revised guidelines of July 2025 reiterated this requirement.
2. **Karnataka's initiative:** The Platform Based Gig Workers (Social Security and Welfare) Act, 2025, provides ₹2 lakh life cover payable on natural death.

Major Challenges Faced by Gig Workers

1. **Inadequate insurance coverage:** Most platforms provide personal accident insurance, which generally does not cover natural deaths, such as deaths caused by heart attacks.
2. **Financial insecurity:** The death of a gig worker can leave the family without financial support, particularly when the worker is the primary earner.
3. **Occupational risks:** Night-time deliveries, traffic accidents, pressure for quick deliveries, frequent mobile use while driving and irregular meals increase the health and safety risks faced by delivery workers.
4. **Poor implementation:** Despite existing legal provisions and guidelines, adequate life insurance coverage has not been effectively implemented.
5. **Limited state-level protection**: Karnataka is the only state whose legislation provides life cover payable on natural death.

Suggested Measures

1. **Make PMJJBY and PMSBY basic insurance covers:** The government should use these existing schemes to provide immediate and affordable insurance protection to gig workers.
2. **Expand insurance coverage:** PMJJBY provides ₹2 lakh cover for death due to any cause at an annual premium of ₹436, while PMSBY provides ₹2 lakh cover for accidental death at an annual premium of ₹20.

3. **Share the premium burden:** Platforms should bear the insurance premiums or deduct them from workers' initial earnings at the time of onboarding.
4. **Enforce aggregator guidelines:** The Ministry of Road Transport and Highways should ensure compliance with the prescribed ₹10 lakh term life cover for registered drivers and link licence renewal to compliance.
5. **Operationalise the Social Security Code:** The Ministry of Labour should implement a clear scheme that provides life insurance as a defined benefit for delivery workers.
6. **Develop suitable insurance products:** IRDAI should issue specific guidelines for platform workers by defining the policyholder, enrolment conditions and insurance amounts.
7. **Use platform data for risk assessment:** Insurers should use information on working hours, night shifts, accident history, traffic zones and telematics to assess risks and develop suitable insurance products.

Conclusion: Ensuring life insurance for gig workers is essential for inclusive social security and the financial protection of vulnerable families. Making PMJJBY and PMSBY basic insurance covers, enforcing existing guidelines and operationalising the Social Security Code can bridge the gap between legal provisions and actual protection.

Question: Gig and platform workers face significant social security gaps, particularly in life insurance coverage. Discuss the challenges and suggest measures to ensure adequate life cover for them.

Source: Business Line

For federalism to be truly cooperative, revive the Inter-State Council

Source: The post **"For federalism to be truly cooperative, revive the Inter-State Council"** has been created based on **"For federalism to be truly cooperative, revive the Inter-State Council"** published in **"Indian Express"** on 30th September 2026.

UPSC Syllabus: GS 2- Governance

Context: India is a country with great diversity. Different states have different languages, cultures, economic conditions and political interests. Therefore, the Central Government cannot make every important decision without consulting the state, especially with regard to issues like delimitation. In this context, India needs to revive the Inter-State Council to strengthen cooperative federalism and improve relations between the Centre and the states,

About Inter-State Council

1. **Constitutional basis:** Article 263 of the Indian Constitution empowers the President to establish an Inter-State Council when it is considered to serve the public interest.
2. **Establishment:** The Inter-State Council was formally established in 1990 on the recommendation of the Sarkaria Commission, which examined Centre-State relations.
3. **Main objective:** The Council aims to promote coordination between the Centre and the States by providing a common platform to discuss matters of shared interest.
4. **Dispute resolution:** The Council can inquire into and advise on disputes between States, discuss subjects of common interest and make recommendations for better coordination of policies and action.

5. **Role in federalism:** The Council provides an institutional mechanism through which State governments can communicate their concerns to the Centre and participate in discussions on national policy issues.

Why is the Revival of the Inter-State Council Necessary?

1. **Strengthening Centre-State trust:** Regular meetings can reduce misunderstandings between the Centre and the States and help build relationships based on mutual respect and cooperation.
2. **Promoting cooperative federalism:** The Council can ensure that the Centre and the States jointly discuss and address issues that require coordinated action rather than relying on unilateral decisions.
3. **Addressing centralised decision-making:** The revival of the Council can provide States with an opportunity to express their views before major national policies affecting their interests are finalised.
4. **Resolving political differences:** The Council can provide a formal platform for dialogue between governments belonging to different political parties and reduce unnecessary political confrontation.
5. **Addressing complex governance challenges:** Issues such as taxation, public health, environmental protection, internal security and resource sharing require coordination between the Centre and the States.
6. **Building consensus on delimitation:** Delimitation can affect the distribution of parliamentary representation among States. The Council can facilitate consultation with State governments before decisions are taken on such a significant constitutional issue.
7. **Improving implementation of national schemes:** State governments are responsible for implementing many national policies. Their participation in policy discussions can help ensure that schemes reflect regional needs and administrative realities.

Reason behind Inter-State Council Remaining Ineffective

1. **Irregular meetings:** The Council has experienced prolonged gaps between meetings, which have weakened its ability to function as a continuous forum for consultation.
2. **Limited institutional autonomy:** The Council has functioned under the administrative control of the Union Home Ministry, limiting its independent role in setting the national agenda.
3. **Weak influence on policy decisions:** The Council has not acquired sufficient institutional authority and prominence to effectively influence major legislative and policy decisions affecting State interests.
4. **Preference for unilateral decisions:** Successive governments have often relied on centralised policymaking or informal negotiations instead of regular institutional consultation with States.
5. **Declining trust between governments**: Inadequate consultation has contributed to tensions between the Centre and States, particularly where different political parties govern them.
6. **Lack of continuous deliberation:** The absence of a systematic process of consultation prevents governments from discussing emerging issues and resolving disagreements before they become major political or constitutional disputes.

Measures Suggested for Strengthening the Council

1. **Institutionalise regular meetings:** The Council should meet at fixed and predictable intervals, with the Prime Minister, relevant Union Ministers and Chief Ministers participating in discussions on important national issues.
2. **Ensure greater institutional autonomy:** The Council's Secretariat should be strengthened as an independent statutory authority with adequate administrative capacity and technical expertise.

3. **Promote consultation before major decisions:** The Centre should consult State governments on significant policy reforms and constitutional changes that may affect their powers, finances or political representation.
4. **Strengthen dispute resolution:** The Council should be used more effectively to facilitate negotiations on inter-State disputes involving natural resources, infrastructure and revenue sharing.
5. **Improve policy coordination:** The Council should provide a platform for evaluating the impact of national schemes on States and identifying practical solutions to implementation problems.
6. **Ensure equal participation:** All States should have a meaningful opportunity to present their concerns, irrespective of the political party governing them, so that the Council remains an inclusive federal institution.
7. **Promote evidence-based discussions:** Technical experts and relevant officials should assist the Council in examining complex issues and developing practical recommendations based on facts and regional requirements.

Conclusion: The Inter-State Council can play an important role in transforming cooperative federalism from a stated objective into an effective governance practice. Its revival through regular meetings, greater autonomy and meaningful consultation can strengthen Centre-State relations, improve policy coordination and protect the interests of India's diverse States.

Question: "Cooperative federalism in India requires institutionalised consultation between the Centre and the States rather than centralised decision-making." In this context, examine the role of the Inter-State Council under Article 263 of the Constitution and suggest measures to make it more effective.

Source: Indian Express

Greenland Deal but Not the End of the Arctic Contest

UPSC Syllabus: Gs Paper 2- International Relations

Introduction

The United States, Denmark and Greenland signed a security agreement on September 22, 2026, amid tensions over President Donald Trump's interest in gaining control of Greenland. The agreement expands U.S. military access while reaffirming Danish sovereignty and Greenlanders' right to self-determination. Yet its investment restrictions and lasting security commitments raise wider questions about Arctic competition, NATO cohesion, Greenland's political future and India's economic interests and regional cooperation.

Greenland's Strategic Importance in Changing Arctic Geopolitics

1. **Strategic Location**: Greenland occupies a strategically important position in the Arctic, connecting North America and Europe and influencing regional security and military calculations.
2. **Military Significance**: Its geographical position supports military surveillance, defence operations and monitoring of strategic movements across the Arctic region.
3. **Critical Mineral Resources**: Greenland's mineral resources have attracted strategic interest, as access to resources can influence industrial competitiveness and supply-chain security.
4. **Emerging Shipping Routes**: Changing Arctic conditions and growing shipping opportunities are increasing the region's economic and geopolitical importance for major powers.

5. **Infrastructure and Strategic Competition**: Investment in infrastructure, resource development and connectivity has become an important dimension of competition among Arctic and non-Arctic powers.
6. **Space and Defence Interests**: Arctic infrastructure and military facilities also support broader strategic interests, including defence capabilities and space-related activities.
7. **Major Power Rivalry**: Russia's Arctic presence and China's growing regional interests have contributed to strategic competition, although the immediate military threat should not be exaggerated.

Key Provisions of Greenland Agreement: Expanded U.S. Access Without Territorial Transfer

1. **Reaffirmation of Sovereignty**: The agreement reaffirms Danish sovereignty over Greenland and Greenlanders' right to self-determination, without transferring Greenland's territorial ownership to the United States.
2. **Expanded Military Access**: The agreement expands U.S. military access to Greenland, strengthening American defence capabilities and operational flexibility in the Arctic.
3. **Military Facilities**: The arrangement involves military facilities and expanded access, including strategic locations such as Pituffik, Narsarsuaq and Mestersvig.
4. **Wider Operational Access**: The United States receives wider access for military aircraft and ships, supporting its ability to operate across Greenland and the surrounding Arctic region.
5. **Golden Dome Cooperation**: The agreement provides for cooperation linked to the Golden Dome initiative, connecting Greenland's strategic position with broader U.S. defence objectives.
6. **Investment Screening Restrictions**: Article 10 of the 2026 U.S.-Denmark-Greenland Agreement, which amends and supplements the 1951 Defence of Greenland Agreement, restricts certain investments and influence in sensitive sectors by non-eligible states and investors, subject to agreed exceptions.
7. **Military Presence Restrictions**: The agreement seeks to prevent non-NATO states, particularly Russia and China, from establishing military bases or maintaining a military presence in Greenland, subject to agreed exceptions.
8. **Approval and Duration**: The agreement remains subject to required parliamentary procedures in Denmark and Greenland. It has no expiry date, and some provisions would continue if Greenland becomes independent.

Broader Implications of Greenland Agreement

1. **Denmark's Diplomatic Position**: Denmark seeks to balance its sovereignty and Greenland's political rights with American security interests, while maintaining its wider transatlantic relationships.
2. **Greenland's Political Concerns**: Expanded military commitments and investment restrictions may raise concerns about Greenland's autonomy, economic choices and ability to determine its political future.
3. **Limits on Investment Choices**: Restrictions on certain investors could reduce Greenland's economic flexibility and influence its ability to attract capital, technology and infrastructure investment.
4. **Western Security Consolidation**: The agreement strengthens U.S. strategic access and reinforces Western defence arrangements, making Greenland more closely integrated into Arctic security planning.
5. **NATO's Internal Vulnerabilities**: Although the agreement may strengthen regional defence, tensions over sovereignty and unequal influence could expose disagreements within the North Atlantic Treaty Organization (NATO).

6. **Transatlantic Distrust**: Earlier American interest in acquiring Greenland has created diplomatic tensions, highlighting the importance of trust, consultation and respect for sovereignty among allies.
7. **Economic and Strategic Competition**: Arctic resources, infrastructure, military facilities and shipping opportunities are likely to remain important sources of competition among major powers.
8. **Risk of Strategic Fragmentation**: Exclusionary investment and security arrangements may deepen geopolitical divisions, encourage competing partnerships and complicate broader international cooperation in the Arctic.

Implications for India

1. **Restricted Economic Access**: India is neither a NATO member nor a NATO partner. Its position may limit access to opportunities affected by the agreement's investment restrictions, depending on the applicable eligibility conditions.
2. **Investment and Mining Opportunities**: India has potential interests in Greenland's mining, infrastructure and resource sectors, particularly for diversifying critical mineral supply chains.
3. **Diplomatic Engagement**: On September 22, India's diplomat Manish Prabhat held meetings in Nuuk, reflecting India's interest in investment, mining, skilled labour, tourism and cultural cooperation.
4. **Scope for Joint Ventures**: Indian businesses may explore joint ventures with eligible NATO- or European Union-linked partners where the relevant parties permit such participation.
5. **Supply-Chain Resilience**: Access to Arctic resources could support India's efforts to diversify sourcing, strengthen industrial resilience and reduce dependence on concentrated supply chains.
6. **India-Nordic-EU Cooperation**: Greater cooperation with Nordic countries and the European Union could provide India with opportunities in mining, investment, technology and wider economic partnerships.
7. **Arctic and Indo-Pacific Linkages**: India can connect its Arctic interests with its Indo-Pacific engagement through economic cooperation, strategic partnerships and broader international collaboration.
8. **Potential Russian Advantage**: Restrictions on India's economic participation could encourage greater Indian engagement with Russia's Arctic region. This may create additional economic opportunities for Russia, depending on India's choices.

Way Forward

1. **Respect Sovereignty and Self-Determination**: Arctic security arrangements should respect Greenland's political rights, Danish sovereignty and the legitimate interests of Greenland's population.
2. **Ensure Inclusive Decision-Making**: Greenland should have meaningful participation in decisions concerning military facilities, investment restrictions, resource development and long-term economic priorities.
3. **Balance Security and Economic Development**: Security commitments should be balanced with investment opportunities, infrastructure development and economic choices that support Greenland's sustainable prosperity.
4. **Strengthen Diplomatic Consultation**: The United States, Denmark and Greenland should maintain dialogue to address disagreements, improve trust and prevent tensions from undermining wider NATO cohesion.

5. **Diversify India's Arctic Partnerships**: India should deepen cooperation with Nordic countries, European partners and other relevant stakeholders while evaluating investment opportunities within applicable legal restrictions.
6. **Promote Broader International Cooperation**: Cooperation on resources, connectivity and economic development can help manage Arctic competition and strengthen links between Arctic and Indo-Pacific interests.

Conclusion

The agreement eases an immediate diplomatic crisis but does not settle the Arctic contest. Its success depends on balancing security, sovereignty and economic cooperation. **An inclusive approach could connect Arctic and Indo-Pacific interests,** while excessive restrictions may deepen fragmentation and encourage India to expand engagement with Russia's Arctic region.

Question for practice:

Examine how the Greenland security agreement reflects the changing geopolitics of the Arctic and discuss its implications for India.

Source: The Hindu; Financial express ; The Arctic Institute

CONCERNS OVER THE COLLEGIUM SYSTEM

UPSC Syllabus: Gs Paper 2- Constitution of India

Introduction

Judicial appointments in India raise a key constitutional question: how can **judicial independence** be protected while ensuring **transparency and accountability**? The collegium system gives primacy to judges in selecting higher judiciary members, but concerns persist over closed-door decisions, unclear selection criteria, alleged favouritism and unequal representation. Debate has also emerged over **possible government pre-approval** of names before collegium deliberations, renewing questions about executive influence and institutional autonomy.

Constitutional Provisions Governing the Appointment of Judges

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3. **Executive's original role:** The original constitutional framework provided for executive appointments after consultation with the judiciary, retaining government responsibility while incorporating judicial expertise.
4. **Safeguarding judicial independence:** Judicial consultation aimed to protect independence and reduce political favouritism by involving judges able to assess candidates' professional and technical merits.
5. **Constitutional basis of the collegium:** The Constitution does not expressly establish the collegium; it emerged through Supreme Court interpretations of constitutional provisions.

Evolution of the Collegium System: From Executive Primacy to Judicial Primacy

1. **First Judges Case (1981):** In S.P. Gupta v. Union of India, a seven-judge bench upheld executive primacy in judicial appointments.
    - **Meaning of consultation:** The Court treated judicial opinions as consultative rather than binding, allowing the government to reject recommendations, including unanimous ones.
    - **Need for a better mechanism:** The judgment also suggested a broad-based advisory body comprising people familiar with candidates' suitability and judicial requirements.
2. **Second Judges Case (1993):** A nine-judge bench overruled the First Judges Case and established judicial primacy, creating the collegium framework to safeguard judicial independence.
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5. **Continuity:** The NJAC's invalidation preserved the collegium as the existing appointment mechanism.

Composition and Procedure of Judicial Appointments

1. **Supreme Court collegium:** Comprises the CJI and the four senior-most Supreme Court judges.
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4. **Memorandum of Procedure (MoP):** Prepared by the Union Law Ministry in 1998 on the basis of the Second and Third Judges Cases; it guides the appointment process.
5. **Government reconsideration:** The Centre may return recommendations with objections or reservations for reconsideration.
6. **Reiteration:** If the collegium reiterates a recommendation, the appointment should be made under the established procedure, limiting the scope for government rejection.
7. **NJAC composition:** The proposed National Judicial Appointments Commission included the CJI, two senior Supreme Court judges, the Union Law Minister and two eminent persons selected by a committee comprising the Prime Minister, CJI and Leader of Opposition.
8. **Revision of MoP:** Following the **striking down of the NJAC in 2015, the Supreme Court directed the government to revise the Memorandum of Procedure (MoP)** to improve transparency, objectivity and institutional accountability, including a structured secretariat. However, differences between the government and judiciary delayed its finalisation for 11 years.

Major Concerns over the Collegium System

1. **Lack of transparency:** Closed-door deliberations and limited public information about selection decisions weaken public understanding; the process has also been criticised for lacking official minutes.

2. **Weak institutional accountability:** The absence of an established secretariat raises concerns about systematic records, institutional oversight and responsibility for decisions.
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6. **Unequal representation:** Women remain significantly underrepresented in the higher judiciary, highlighting the need for wider and more inclusive consideration of candidates.

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1. **United States:** The President nominates Federal Supreme Court judges, and the Senate confirms the nominees.
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5. **Relevance for India:** These models illustrate options for broader participation, but differences in constitutional structures mean no model establishes automatic superiority.

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1. **Finalise the revised Memorandum of Procedure (MoP):** Resolve outstanding differences and establish a clear, predictable appointment procedure.
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4. **Broaden participation:** Consider structured inputs from the legislature, Bar Council and academia without compromising judicial independence.
5. **Explore institutional reform:** Consider a reformed appointments commission informed by international practices, including lessons from the UK and South Africa.
6. **Preserve judicial independence:** Any redesigned mechanism should include credible safeguards against executive dominance; a judicial veto over final recommendations is one option for consideration.

Conclusion

The collegium system has helped protect **judicial independence**, but limited transparency, accountability and representation require reform. Finalising the revised **Memorandum of Procedure** can improve clarity and consultation. Any broader appointment mechanism should widen participation while preserving safeguards against executive control, ensuring selections remain fair, merit-based and credible.

Question for Practice:

Discuss the major concerns associated with the collegium system of judicial appointments in India and suggest measures to make it more transparent and accountable while safeguarding judicial independence.

Source: The Hindu

Operationalise life cover for delivery workers

Source: The post **"Operationalise life cover for delivery workers"** has been created based on **"Operationalise life cover for delivery workers"** published in **"Business Line"** on 30th September 2026.

UPSC Syllabus: GS 2- Governance

Context: A 33-year-old delivery rider in Hyderabad recently died of a heart attack after a long shift. His family later discovered that the platform's insurance covered only accidental deaths, leaving them without financial support. Such cases highlight the lack of comprehensive life insurance for gig workers. Also, India has approximately 1.2 crore gig workers, and their number is projected to reach 2.3 crore by 2030 (NITI Aayog), making effective social security measures increasingly important.

Background and Existing Provisions

3. **Code on Social Security, 2020:** Sections 113 and 114 of the Code on Social Security, 2020 require the Central and State Governments to frame social security schemes for gig and platform workers, including life and disability cover, accident insurance, health and maternity benefits.
    a. **Implementation gap:** The Code came into force on 21 November 2025, but life insurance coverage for gig workers has not been fully operationalised.
    b. **Motor Vehicle Aggregator Guidelines:** The 2020 guidelines prescribed ₹10 lakh term life insurance for registered drivers of aggregators, and the revised guidelines of July 2025 reiterated this requirement.
4. **Karnataka's initiative:** The Platform Based Gig Workers (Social Security and Welfare) Act, 2025, provides ₹2 lakh life cover payable on natural death.

Major Challenges Faced by Gig Workers

6. **Inadequate insurance coverage:** Most platforms provide personal accident insurance, which generally does not cover natural deaths, such as deaths caused by heart attacks.
7. **Financial insecurity:** The death of a gig worker can leave the family without financial support, particularly when the worker is the primary earner.
8. **Occupational risks:** Night-time deliveries, traffic accidents, pressure for quick deliveries, frequent mobile use while driving and irregular meals increase the health and safety risks faced by delivery workers.
9. **Poor implementation:** Despite existing legal provisions and guidelines, adequate life insurance coverage has not been effectively implemented.
10. **Limited state-level protection**: Karnataka is the only state whose legislation provides life cover payable on natural death.

Suggested Measures

8. **Make PMJJBY and PMSBY basic insurance covers:** The government should use these existing schemes to provide immediate and affordable insurance protection to gig workers.
9. **Expand insurance coverage:** PMJJBY provides ₹2 lakh cover for death due to any cause at an annual premium of ₹436, while PMSBY provides ₹2 lakh cover for accidental death at an annual premium of ₹20.
10. **Share the premium burden:** Platforms should bear the insurance premiums or deduct them from workers' initial earnings at the time of onboarding.
11. **Enforce aggregator guidelines:** The Ministry of Road Transport and Highways should ensure compliance with the prescribed ₹10 lakh term life cover for registered drivers and link licence renewal to compliance.
12. **Operationalise the Social Security Code:** The Ministry of Labour should implement a clear scheme that provides life insurance as a defined benefit for delivery workers.
13. **Develop suitable insurance products:** IRDAI should issue specific guidelines for platform workers by defining the policyholder, enrolment conditions and insurance amounts.
14. **Use platform data for risk assessment:** Insurers should use information on working hours, night shifts, accident history, traffic zones and telematics to assess risks and develop suitable insurance products.

Conclusion: Ensuring life insurance for gig workers is essential for inclusive social security and the financial protection of vulnerable families. Making PMJJBY and PMSBY basic insurance covers, enforcing existing guidelines and operationalising the Social Security Code can bridge the gap between legal provisions and actual protection.

Question: Gig and platform workers face significant social security gaps, particularly in life insurance coverage. Discuss the challenges and suggest measures to ensure adequate life cover for them.

Source: Business Line

For federalism to be truly cooperative, revive the Inter-State Council

Source: The post **"For federalism to be truly cooperative, revive the Inter-State Council"** has been created based on **"For federalism to be truly cooperative, revive the Inter-State Council"** published in **"Indian Express"** on 30th September 2026.

UPSC Syllabus: GS 2- Governance

Context: India is a country with great diversity. Different states have different languages, cultures, economic conditions and political interests. Therefore, the Central Government cannot make every important decision without consulting the state, especially with regard to issues like delimitation. In this context, India needs to revive the Inter-State Council to strengthen cooperative federalism and improve relations between the Centre and the states,

About Inter-State Council

6. **Constitutional basis:** Article 263 of the Indian Constitution empowers the President to establish an Inter-State Council when it is considered to serve the public interest.
7. **Establishment:** The Inter-State Council was formally established in 1990 on the recommendation of the Sarkaria Commission, which examined Centre-State relations.

8. **Main objective:** The Council aims to promote coordination between the Centre and the States by providing a common platform to discuss matters of shared interest.
9. **Dispute resolution:** The Council can inquire into and advise on disputes between States, discuss subjects of common interest and make recommendations for better coordination of policies and action.
10. **Role in federalism:** The Council provides an institutional mechanism through which State governments can communicate their concerns to the Centre and participate in discussions on national policy issues.

Why is the Revival of the Inter-State Council Necessary?

8. **Strengthening Centre-State trust:** Regular meetings can reduce misunderstandings between the Centre and the States and help build relationships based on mutual respect and cooperation.
9. **Promoting cooperative federalism:** The Council can ensure that the Centre and the States jointly discuss and address issues that require coordinated action rather than relying on unilateral decisions.
10. **Addressing centralised decision-making:** The revival of the Council can provide States with an opportunity to express their views before major national policies affecting their interests are finalised.
11. **Resolving political differences:** The Council can provide a formal platform for dialogue between governments belonging to different political parties and reduce unnecessary political confrontation.
12. **Addressing complex governance challenges:** Issues such as taxation, public health, environmental protection, internal security and resource sharing require coordination between the Centre and the States.
13. **Building consensus on delimitation:** Delimitation can affect the distribution of parliamentary representation among States. The Council can facilitate consultation with State governments before decisions are taken on such a significant constitutional issue.
14. **Improving implementation of national schemes:** State governments are responsible for implementing many national policies. Their participation in policy discussions can help ensure that schemes reflect regional needs and administrative realities.

Reason behind Inter-State Council Remaining Ineffective

7. **Irregular meetings:** The Council has experienced prolonged gaps between meetings, which have weakened its ability to function as a continuous forum for consultation.
8. **Limited institutional autonomy:** The Council has functioned under the administrative control of the Union Home Ministry, limiting its independent role in setting the national agenda.
9. **Weak influence on policy decisions:** The Council has not acquired sufficient institutional authority and prominence to effectively influence major legislative and policy decisions affecting State interests.
10. **Preference for unilateral decisions:** Successive governments have often relied on centralised policymaking or informal negotiations instead of regular institutional consultation with States.
11. **Declining trust between governments**: Inadequate consultation has contributed to tensions between the Centre and States, particularly where different political parties govern them.
12. **Lack of continuous deliberation:** The absence of a systematic process of consultation prevents governments from discussing emerging issues and resolving disagreements before they become major political or constitutional disputes.

Measures Suggested for Strengthening the Council

8. **Institutionalise regular meetings:** The Council should meet at fixed and predictable intervals, with the Prime Minister, relevant Union Ministers and Chief Ministers participating in discussions on important national issues.
9. **Ensure greater institutional autonomy:** The Council's Secretariat should be strengthened as an independent statutory authority with adequate administrative capacity and technical expertise.
10. **Promote consultation before major decisions:** The Centre should consult State governments on significant policy reforms and constitutional changes that may affect their powers, finances or political representation.
11. **Strengthen dispute resolution:** The Council should be used more effectively to facilitate negotiations on inter-State disputes involving natural resources, infrastructure and revenue sharing.
12. **Improve policy coordination:** The Council should provide a platform for evaluating the impact of national schemes on States and identifying practical solutions to implementation problems.
13. **Ensure equal participation:** All States should have a meaningful opportunity to present their concerns, irrespective of the political party governing them, so that the Council remains an inclusive federal institution.
14. **Promote evidence-based discussions:** Technical experts and relevant officials should assist the Council in examining complex issues and developing practical recommendations based on facts and regional requirements.

Conclusion: The Inter-State Council can play an important role in transforming cooperative federalism from a stated objective into an effective governance practice. Its revival through regular meetings, greater autonomy and meaningful consultation can strengthen Centre-State relations, improve policy coordination and protect the interests of India's diverse States.

Question: "Cooperative federalism in India requires institutionalised consultation between the Centre and the States rather than centralised decision-making." In this context, examine the role of the Inter-State Council under Article 263 of the Constitution and suggest measures to make it more effective.

Source: Indian Express

Greenland Deal but Not the End of the Arctic Contest

UPSC Syllabus: Gs Paper 2- International Relations

Introduction

The United States, Denmark and Greenland signed a security agreement on September 22, 2026, amid tensions over President Donald Trump's interest in gaining control of Greenland. The agreement expands U.S. military access while reaffirming Danish sovereignty and Greenlanders' right to self-determination. Yet its investment restrictions and lasting security commitments raise wider questions about Arctic competition, NATO cohesion, Greenland's political future and India's economic interests and regional cooperation.

Greenland's Strategic Importance in Changing Arctic Geopolitics

1. **Strategic Location**: Greenland occupies a strategically important position in the Arctic, connecting North America and Europe and influencing regional security and military calculations.

2. **Military Significance**: Its geographical position supports military surveillance, defence operations and monitoring of strategic movements across the Arctic region.
3. **Critical Mineral Resources**: Greenland's mineral resources have attracted strategic interest, as access to resources can influence industrial competitiveness and supply-chain security.
4. **Emerging Shipping Routes**: Changing Arctic conditions and growing shipping opportunities are increasing the region's economic and geopolitical importance for major powers.
5. **Infrastructure and Strategic Competition**: Investment in infrastructure, resource development and connectivity has become an important dimension of competition among Arctic and non-Arctic powers.
6. **Space and Defence Interests**: Arctic infrastructure and military facilities also support broader strategic interests, including defence capabilities and space-related activities.
7. **Major Power Rivalry**: Russia's Arctic presence and China's growing regional interests have contributed to strategic competition, although the immediate military threat should not be exaggerated.

Key Provisions of Greenland Agreement: Expanded U.S. Access Without Territorial Transfer

1. **Reaffirmation of Sovereignty**: The agreement reaffirms Danish sovereignty over Greenland and Greenlanders' right to self-determination, without transferring Greenland's territorial ownership to the United States.
2. **Expanded Military Access**: The agreement expands U.S. military access to Greenland, strengthening American defence capabilities and operational flexibility in the Arctic.
3. **Military Facilities**: The arrangement involves military facilities and expanded access, including strategic locations such as Pituffik, Narsarsuaq and Mestersvig.
4. **Wider Operational Access**: The United States receives wider access for military aircraft and ships, supporting its ability to operate across Greenland and the surrounding Arctic region.
5. **Golden Dome Cooperation**: The agreement provides for cooperation linked to the Golden Dome initiative, connecting Greenland's strategic position with broader U.S. defence objectives.
6. **Investment Screening Restrictions**: Article 10 of the 2026 U.S.-Denmark-Greenland Agreement, which amends and supplements the 1951 Defence of Greenland Agreement, restricts certain investments and influence in sensitive sectors by non-eligible states and investors, subject to agreed exceptions.
7. **Military Presence Restrictions**: The agreement seeks to prevent non-NATO states, particularly Russia and China, from establishing military bases or maintaining a military presence in Greenland, subject to agreed exceptions.
8. **Approval and Duration**: The agreement remains subject to required parliamentary procedures in Denmark and Greenland. It has no expiry date, and some provisions would continue if Greenland becomes independent.

Broader Implications of Greenland Agreement

1. **Denmark's Diplomatic Position**: Denmark seeks to balance its sovereignty and Greenland's political rights with American security interests, while maintaining its wider transatlantic relationships.
2. **Greenland's Political Concerns**: Expanded military commitments and investment restrictions may raise concerns about Greenland's autonomy, economic choices and ability to determine its political future.
3. **Limits on Investment Choices**: Restrictions on certain investors could reduce Greenland's economic flexibility and influence its ability to attract capital, technology and infrastructure investment.

4. **Western Security Consolidation**: The agreement strengthens U.S. strategic access and reinforces Western defence arrangements, making Greenland more closely integrated into Arctic security planning.
5. **NATO's Internal Vulnerabilities**: Although the agreement may strengthen regional defence, tensions over sovereignty and unequal influence could expose disagreements within the North Atlantic Treaty Organization (NATO).
6. **Transatlantic Distrust**: Earlier American interest in acquiring Greenland has created diplomatic tensions, highlighting the importance of trust, consultation and respect for sovereignty among allies.
7. **Economic and Strategic Competition**: Arctic resources, infrastructure, military facilities and shipping opportunities are likely to remain important sources of competition among major powers.
8. **Risk of Strategic Fragmentation**: Exclusionary investment and security arrangements may deepen geopolitical divisions, encourage competing partnerships and complicate broader international cooperation in the Arctic.

Implications for India

1. **Restricted Economic Access**: India is neither a NATO member nor a NATO partner. Its position may limit access to opportunities affected by the agreement's investment restrictions, depending on the applicable eligibility conditions.
2. **Investment and Mining Opportunities**: India has potential interests in Greenland's mining, infrastructure and resource sectors, particularly for diversifying critical mineral supply chains.
3. **Diplomatic Engagement**: On September 22, India's diplomat Manish Prabhat held meetings in Nuuk, reflecting India's interest in investment, mining, skilled labour, tourism and cultural cooperation.
4. **Scope for Joint Ventures**: Indian businesses may explore joint ventures with eligible NATO- or European Union-linked partners where the relevant parties permit such participation.
5. **Supply-Chain Resilience**: Access to Arctic resources could support India's efforts to diversify sourcing, strengthen industrial resilience and reduce dependence on concentrated supply chains.
6. **India-Nordic-EU Cooperation**: Greater cooperation with Nordic countries and the European Union could provide India with opportunities in mining, investment, technology and wider economic partnerships.
7. **Arctic and Indo-Pacific Linkages**: India can connect its Arctic interests with its Indo-Pacific engagement through economic cooperation, strategic partnerships and broader international collaboration.
8. **Potential Russian Advantage**: Restrictions on India's economic participation could encourage greater Indian engagement with Russia's Arctic region. This may create additional economic opportunities for Russia, depending on India's choices.

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Question for Practice:

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Source: The Hindu

Why the WHO must declare climate change a public health emergency

Source: The post **"Why the WHO must declare climate change a public health emergency" has** been created based on **"Why the WHO must declare climate change a public health emergency"** published in **"Down To Earth"** on 31st September 2026.

UPSC Syllabus: GS 3- Environment

Context: Climate change has emerged as one of the greatest health threats of the 21st century. Rising temperatures and extreme weather events are causing heat-related deaths, malnutrition, disease outbreaks and disruptions in healthcare services. Considering this, it is argued that the World Health Organization (WHO) should declare climate change a Public Health Emergency of International Concern (PHEIC) to mobilise international cooperation and protect vulnerable populations.

Major health impacts of climate change

1. Heat-related mortality: Rising temperatures and prolonged heatwaves are increasing heat-related deaths, particularly among the elderly, pregnant women, children and people with chronic illnesses.

2. Maternal and child health: Extreme heat can adversely affect maternal health, pregnancy outcomes and the long-term health of unborn children.

3. Malnutrition and food insecurity: Climate-induced crop failures reduce food availability and worsen malnutrition, particularly among children in vulnerable communities.

4. Spread of infectious diseases: Changing climatic conditions can intensify disease risks, including malaria, threatening the lives of vulnerable populations.

5. Disruption of healthcare services: Floods, cyclones and other extreme weather events can damage healthcare infrastructure, isolate communities from clinics and interrupt access to essential medicines.

6. Displacement and livelihood loss: Climate-related disasters force communities to leave their homes, destroy livelihoods and increase their exposure to health risks.

7. Impact on healthcare workers: Climate change also affects healthcare workers, reducing their ability to provide essential services to communities in need.

About Public Health Emergency of International Concern (PHEIC)

1. A PHEIC is defined in the IHR (2005) as, "an extraordinary event which is determined to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response".
2. This definition implies a situation that is:
    a. **serious, sudden, unusual or unexpected;**
    b. **carries implications for public health beyond the affected State's national border; and**
    c. **may require immediate international action.**

Reasons why should WHO declare climate change a PHEIC

1. To recognise the urgency of the crisis: A formal declaration would acknowledge that climate change is an immediate public health threat rather than a distant environmental risk.

2. To mobilise international financing: The declaration could help catalyse financial resources for prevention, preparedness and healthcare interventions.

3. To strengthen international cooperation: It would facilitate coordinated action among countries and international institutions to address the cross-border consequences of climate change.

4. To provide evidence-based recommendations: WHO could support countries with scientific guidance and public health strategies to reduce climate-related health risks.

5. To protect vulnerable populations: It would promote an equitable response prioritising those most affected, especially people in developing countries who have limited resources to adapt.

6. To improve surveillance and prevention: Greater coordination could strengthen monitoring of climate-related health impacts and enable early identification of emerging risks.

7. To overcome slow global action: Despite successive international commitments, progress on climate change has been inadequate, while efforts under the consensus-based UN climate framework have faced delays and setbacks.

Need of the immediate action

1. Intensifying extreme weather: Heatwaves, floods, wildfires and droughts are affecting communities across the world, causing displacement and loss of life.

2. The El Niño factor: It is highlighted the risks associated with an intensifying El Niño, which can aggravate heat and extreme weather conditions.

3. Growing evidence of health impacts: Scientific research increasingly demonstrates the contribution of climate change to adverse health outcomes, strengthening the case for urgent public health action.

4. Unequal burden of climate change: Countries in the Global South often face greater climate-related risks despite having contributed relatively little to the problem.

5. Limited adaptive capacity: Many affected communities understand the risks but lack adequate financial resources and infrastructure to protect themselves.

How can a PHEIC declaration help

1. Application of International Health Regulations: The WHO can initiate the prescribed assessment process under the International Health Regulations (IHR) to examine whether the situation warrants a PHEIC declaration.

2. Expert assessment of risks: An expert committee can evaluate the seriousness and unusual nature of the threat, its potential international spread and the risks of international travel or trade restrictions.

3. Coordinated global response: A declaration could strengthen international coordination, public health preparedness and the sharing of scientific knowledge.

4. Equitable and preventive action: Countries could prioritise healthcare for affected populations, large-scale prevention and systematic surveillance of climate-related health impacts.

Conclusion: Climate change is an immediate and unequal public health threat that demands a coordinated international response. The WHO should assess the crisis through the International Health Regulations framework and consider a PHEIC declaration to strengthen financing, prevention, surveillance and international cooperation. Timely action is essential to protect vulnerable populations and prevent avoidable loss of life.

Question: Climate change is no longer merely an environmental concern but an escalating public health emergency. Discuss the need for the World Health Organization (WHO) to declare climate change a Public Health Emergency of International Concern (PHEIC).

Source: Down to Earth

Beyond gullibility: On digital arrest scams

Source: The post **"Beyond gullibility: On digital arrest scams" has** been created based on **"Beyond gullibility: On digital arrest scams"** published in **"The Hindu"** on 31st September 2026.

UPSC Syllabus: GS 2- Governance

Context: Around ₹800 crore was lost to digital arrest scams in 2026, even after recoveries, prompting serious concern over the growing threat of cyber fraud. During the Supreme Court's hearing on October 29, 2026, the Chief Justice of India expressed concern that such scams continued despite repeated public warnings and court orders. In response, the Supreme Court urged the Reserve Bank of India (RBI) to finalise its KYC Amendment Directions, 2026, to identify suspected mule accounts and temporarily restrict suspicious transactions. It has been observed that, he issue extends beyond public gullibility, highlighting deeper concerns relating to banking

safeguards, public trust in law enforcement, protection of victims' rights and international cooperation against organised cybercrime.

About Digital Arrest Scam

1. Fraudsters impersonate police officers, CBI officials or other law enforcement authorities, often through video calls.
2. They threaten victims with arrest by falsely accusing them of involvement in criminal activities.
3. Using fear and intimidation, they force victims to transfer money to accounts controlled by the fraudsters.
4. The money is then routed through mule accounts to conceal its origin and facilitate laundering.

Reasons behind the rise of digital arrest scams

1. Fear of law enforcement: Fraudsters exploit citizens' fear of police and investigative agencies, particularly among older people, by threatening them with arrest.

2. Misuse of institutional credibility: Scammers impersonate legitimate agencies such as the CBI and police to make their threats appear credible.

3. Use of mule accounts: Fraudsters transfer and launder stolen money through bank accounts used to receive illicit funds, known as mule accounts.

4. Possible bank staff complicity: Investigations have revealed instances where bank employees allegedly assisted in opening mule accounts.

5. Cross-border criminal networks: Some scams operate through compounds in Myanmar, Cambodia and Laos, where trafficked Indians are exploited and criminal operations reportedly benefit from some degree of official patronage.

Measures to prevent digital arrest scams

1. Strengthening banking safeguards: The RBI's proposed KYC Amendment Directions, 2026, seek to help banks identify suspected mule accounts and impose temporary debit holds to prevent further transfers.

2. AI-based transaction monitoring: Banks should use artificial intelligence and complete transaction histories to identify suspicious and anomalous transactions quickly.

3. Accountability of banks: Banks must exercise due diligence while opening and monitoring accounts. Victims should receive appropriate compensation where bank failures or negligence are established.

4. Effective legal remedies: The existing RBI zero-liability provisions, which cover unauthorised transactions, do not adequately address cases where victims are coerced into making transfers themselves. This gap needs to be addressed.

5. Public awareness: Citizens, particularly older people, should be educated about impersonation scams and encouraged to verify suspicious calls independently before transferring money.

6. International cooperation: India should use its diplomatic influence to pressure the concerned countries to dismantle scam centres, investigate criminal networks and rescue trafficked Indians.

Challenges in implementing preventive measures

1. Risk of wrongful account freezing: Excessively broad screening may affect genuine account holders whose transactions appear unusual but are legitimate.

2. Disproportionate hardship: Small traders and Jan Dhan account holders who unknowingly receive money from mule accounts may lose access to essential banking services if their accounts are frozen for two months or longer.

3. Privacy concerns: Automatic police reporting and physical verification of every unusual transaction may result in excessive surveillance and intrusion into citizens' privacy.

4. Difficulty in victim compensation: Making banks liable for every loss without carefully establishing their failure to exercise due diligence may encourage excessive flagging of legitimate transactions.

Way forward

1. Adopt a risk-based approach: Banks should assess transactions using multiple indicators rather than treating every unusual transaction as suspicious.

2. Ensure proportionality and due process: Account freezes should be justified, time-bound and subject to timely review, with safeguards for genuine account holders.

3. Strengthen grievance redressal: Victims and innocent account holders should have access to quick complaint resolution, restoration of legitimate banking access and compensation wherever legally justified.

4. Balance security with privacy: Transaction monitoring and information-sharing with law enforcement should follow clear legal safeguards and appropriate oversight.

5. Improve institutional trust: Fair, accountable and citizen-friendly policing can reduce the fear that fraudsters exploit to make threats of arrest appear believable.

Conclusion: Digital arrest scams cannot be tackled through banking controls alone. India needs a coordinated strategy combining financial vigilance, public awareness, accountable policing, international cooperation and victim protection. The objective must be to disrupt criminal networks without penalising innocent citizens or compromising their privacy and access to banking services.

Question: Digital arrest scams reveal not only weaknesses in banking security but also deeper institutional and regulatory challenges. Discuss the measures required to tackle such scams while safeguarding citizens' rights.

Source: The Hindu

Suboptimal Outcomes Social Security Boards for Unorganised, Gig and Platform Workers

UPSC Syllabus: Gs Paper 2- Constitution of India

Introduction

The Union Labour Ministry has constituted the National Social Security Boards for Unorganised Workers and Gig and Platform Workers under the Code on Social Security. These Boards aim to strengthen social protection for vulnerable workers through welfare schemes and institutional oversight. However, their **centralised composition and representation gaps** raise concerns about inclusive decision-making and cooperative federalism. **Effective implementation, adequate financing and stakeholder participation** are essential to achieve meaningful social security.

Social Security: Meaning, Significance and Constitutional Basis

1. **Meaning:** Social security protects individuals against economic and social distress arising from **old age, unemployment, sickness, disability, work injury, maternity and loss of the breadwinner**.
2. **Constitutional Basis: Entries 23 and 24 of the Concurrent List** cover social security, social insurance, employment and welfare-related matters, enabling both the Centre and States to legislate in relevant areas.
3. **Directive Principles of State Policy (DPSP): Article 41** provides for public assistance in cases of unemployment, old age, sickness and disability, subject to the State's economic capacity. **Article 42** promotes humane working conditions and maternity relief, while **Article 43** calls for a living wage and decent standard of life.

Gig and Platform Workers: Growing Workforce and Social Security Needs

1. **Workforce Size:** The NITI Aayog's June 2022 report estimated **77 lakh gig workers in 2020–21**, projecting an increase to **2.35 crore by 2029–30**. These figures are estimates and projections.
2. **Employment Share:** Gig workers constituted **2.6% of the non-agricultural workforce** in 2020–21, projected to rise to **6.7% by 2029–30**. Their corresponding shares of the total workforce were estimated at **1.5% and 4.1%**, respectively.
3. **Welfare Measures:** The **Union Budget 2025–26** announced identity cards, e-Shram registration and healthcare coverage under **Pradhan Mantri Jan Arogya Yojana (PM-JAY)** for gig workers, with **nearly 1 crore workers** expected to benefit.
4. **Registration:** The e-Shram portal had registered **31.82 crore unorganised workers** as of 3 August 2026, including workers from different categories. Registration **does not necessarily establish actual receipt of social security benefits**.

National Social Security Boards: Composition, Functions and Financing

1. **Legal Basis: Section 6 of the Code on Social Security** provides for the constitution of the **National Social Security Board for Unorganised Workers**, chaired by the Union Minister for Labour and Employment. The **separate Board for Gig and Platform Workers** is constituted under the relevant provisions of the Code.
2. **Board for Unorganised Sector Workers:** The Board has **40 members** nominated by the Union Government, including **7 representatives of unorganised sector workers** and **7 representatives of employers**.
3. **Board for Gig and Platform Workers:** The Board has **22 members**, including **5 representatives each from aggregators and gig and platform workers**, besides representatives of relevant institutions, experts and **5 representatives of State Governments**.

4. **Chairperson:** Both Boards are chaired by the **Union Minister for Labour and Employment**.
5. **Functions:** The Boards **recommend social security schemes**, advise the Central Government, **monitor central welfare schemes**, **review State-level recordkeeping** and examine expenditure from funds and accounts, besides performing other assigned functions.
6. **Nature of Powers:** The Boards primarily perform **advisory and monitoring functions**. Scheme notification and implementation remain dependent on the competent government and designated agencies, **limiting the Boards' direct enforcement role**.
7. **Social Security Benefits: Section 114 of the Code on Social Security** provides for schemes covering life and disability insurance, accident insurance, health and maternity benefits, old-age protection, crèche facilities and other benefits.
8. **Financing Framework:** Schemes may be financed by the **Central Government, State Governments, aggregators, workers** or through combined contributions, depending on the scheme. Eligible **Corporate Social Responsibility (CSR)** funds may also support welfare initiatives.
9. **Aggregator Contribution:** Section 114 provides for a notified contribution rate of **1%–2% of annual turnover**, subject to a **ceiling of 5% of the amounts paid or payable to gig and platform workers**. Taxes, levies and cesses paid or payable to the Central Government are excluded from annual turnover.

Key Concerns: Centralisation, Representation and Federalism

1. **Centralised Governance:** The Union Government's **dominant role** in constituting and nominating Board members may **limit decentralised decision-making and stakeholder participation**.
2. **Representation Gaps:** Concerns arise regarding adequate representation of **opposition Central Trade Unions**, **opposition-governed States** and diverse worker groups, potentially weakening **inclusive decision-making**.
3. **Federal Concerns:** Since labour is in the Concurrent List, social security requires **Centre-State coordination**. Centralised decision-making may **weaken cooperative federalism** despite State Governments' role in implementation.
4. **Stakeholder Influence:** Representation alone may not ensure **meaningful participation** unless workers' concerns influence scheme design, recommendations and implementation.
5. **Parallel State Frameworks:** State-level initiatives, including those in **Rajasthan, Karnataka, Bihar and Jharkhand**, highlight the need to coordinate national and State frameworks. Their legal and implementation status should be distinguished to **avoid fragmented protection**.

Persistent Social Security Deficit and Implementation Gaps

1. **Inadequate Protection:** A large section of India's workforce remains in informal or unorganised employment, facing **limited access to predictable income, insurance and welfare benefits**.
2. **Coverage versus Adequacy:** Reported social protection coverage rose from **19% in 2015** to **64.3% in 2025**, covering **over 94 crore people**. However, receipt of at least one benefit **does not necessarily ensure comprehensive protection**.
3. **Financing and Implementation:** Effective welfare delivery depends on **timely contribution notifications, adequate fund collection, predictable disbursement** and transparent expenditure.
4. **Portability Challenges:** Migrant and platform workers operating across States may face difficulties accessing benefits due to fragmented databases, registration systems and **inadequate portability**.

Way Forward

1. **Inclusive Representation:** Ensure **meaningful participation** of workers, trade unions, employers, aggregators, civil society and State Governments.
2. **Cooperative Federalism:** Institutionalise **Centre-State consultation**, coordination mechanisms and clear implementation responsibilities.
3. **Sustainable Financing:** Operationalise contribution mechanisms, ensure **timely fund collection and expenditure**, and strengthen **financial accountability**.
4. **Portable Protection:** Develop interoperable databases and **portable entitlements** to enable workers to access benefits irrespective of location or platform.
5. **Effective Implementation:** Establish **measurable targets**, transparent monitoring, **grievance-redress mechanisms** and regular reporting on actual benefit delivery.
6. **Institutional Reforms:** Strengthen **worker participation, accountability and federal cooperation** to translate welfare recommendations into **tangible outcomes**.

Conclusion

The Boards are an important step towards protecting vulnerable workers. However, their success depends on **inclusive representation, adequate financing and effective implementation**. Cooperative federalism and portable benefits must be strengthened. Social security commitments must translate into **accessible and reliable protection**.

Question for practice:

Examine the concerns associated with the composition and functioning of the National Social Security Boards for unorganised, gig and platform workers in India.

Source: The Hindu

Can India and China Coexist Peacefully?

UPSC Syllabus: GS Paper 2- India and its neighbourhood- relations.

Introduction

India and China remain in **managed coexistence** as they are not at war, yet border tensions and strategic distrust limit normal relations. Their unresolved boundary dispute, military competition and differing geopolitical interests raise a central question about whether two neighbouring civilisations can live peacefully in the coming decades. India's current approach **places peace and tranquillity along the Line of Actual Control (LAC) at the centre** of wider bilateral normalisation efforts.

Historical Roots of Mistrust and the Unresolved Border Dispute

1. **1962 War:** The **1962 war** deepened mistrust between the neighbours. China retained control of **Aksai Chin**, while the boundary dispute remained unresolved.
2. **Legacy of Betrayal:** The earlier slogan "**Hindi-Chini Bhai Bhai**" reflected hopes of friendship. The war shattered these expectations and left a lasting impact on Indian strategic thinking.

3. **Unsettled Boundary:** The border is not jointly delineated across sectors. Disagreements persist in **Ladakh** and along the **McMahon Line** in the eastern sector, making differing perceptions of the Line of Actual Control a recurring source of friction.
4. **Galwan Clash:** In **June 2020**, a violent clash in the Galwan Valley led to the deaths of **20 Indian soldiers**. It sharply damaged trust and transformed the political context of bilateral engagement.

Policy Evolution: From Compartmentalised Engagement to Security-First Diplomacy

1. **Compartmentalised Engagement:** During the 1990s and 2000s, India sought to expand trade and diplomacy while managing the boundary dispute separately. This approach enabled cooperation without resolving core disagreements.
2. **Confidence-Building Agreements:** Agreements in **1993, 1996, 2005 and 2013** created principles and mechanisms to maintain **border peace**. They aimed to reduce the risk of incidents, though implementation could not remove underlying mistrust.
3. **Rajiv Gandhi's Visit:** Prime Minister **Rajiv Gandhi's 1988 visit** to China and his meeting with Deng Xiaoping helped revive high-level dialogue. It demonstrated that sustained engagement could proceed despite unresolved differences.
4. **Galwan as a Turning Point:** The **2020 Galwan clash** exposed the limits of separating economic cooperation from security concerns. India consequently linked broader normalisation more closely to the restoration of **border peace**.
5. **Present Approach:** India now follows a **security-first approach**: **peace and tranquillity along the LAC** are treated as prerequisites for normal bilateral relations. Diplomatic and economic engagement therefore depends on credible border stability.

Strategic Challenges

1. **China-Pakistan Partnership:** China's close strategic and defence partnership with Pakistan complicates India's security calculations. It raises concerns about pressure across India's western and northern fronts.
2. **Indian Ocean and Connectivity:** China's growing presence in the **Indian Ocean** and its infrastructure connectivity initiatives, including the Belt and Road Initiative, contribute to India's strategic concerns over regional influence and security.
3. **Quad and Strategic Suspicion:** India's participation in the **Quad (Quadrilateral Security Dialogue)** with the United States, Japan and Australia supports Indo-Pacific cooperation. Beijing views some such groupings with suspicion, while India regards them as useful strategic partnerships.
4. **Economic Interdependence:** Bilateral economic links create opportunities but also vulnerabilities in **trade, technology and supply chains**. Trade imbalance and uncertain market access complicate the relationship despite substantial commercial engagement.
5. **Domestic Manufacturing:** India's dependence on Chinese imports in key sectors creates strategic vulnerabilities. Strengthening domestic manufacturing through Make in India and Production Linked Incentive (PLI) schemes remains challenging due to competitiveness and capacity constraints.
6. **Supply Chain Vulnerabilities:** Heavy reliance on Chinese inputs in critical sectors exposes India to supply disruptions and economic pressure. Diversifying supply chains is difficult due to cost considerations, alternative supplier limitations and deep economic interdependence.

Understanding China's Intentions and Military Capabilities

1. **Avoiding Exaggeration:** Sound policy requires neither underestimating China nor treating conflict as inevitable. India needs a realistic assessment of Beijing's interests, capabilities and constraints.

2. **Military Modernisation:** China's **People's Liberation Army (PLA)** and **People's Liberation Army Navy (PLAN)** have expanded their capabilities. This modernisation affects the military balance and demands sustained Indian preparedness.
3. **Limits of Power:** China's military strength should not be treated as unlimited. Geography, logistics and the costs of prolonged conflict can constrain the conversion of capabilities into decisive outcomes.
4. **Himalayan Conditions:** A numerical or technological advantage does not automatically guarantee success in the Himalayas. Terrain, altitude, supply lines and operational readiness shape the practical balance along the frontier.
5. **Long-Term Ambitions:** Conflict with India could impose economic and diplomatic costs on China and distract from its long-term development ambitions, including its **2049** national goal. Such costs create incentives for managing rivalry, though they cannot ensure restraint.
6. **Historical Complexity:** China's historical experience, including the legacy of the **Qing Dynasty**, influences its outlook on sovereignty and territorial questions. Understanding this context can inform diplomacy without endorsing contested claims.

Scope for Peaceful Coexistence and Constructive Engagement

1. **Conflict Is Not Inevitable:** Strategic competition does not make war unavoidable. Both countries have strong reasons to prevent escalation, protect development priorities and maintain regional stability.
2. **Diplomatic Precedent:** The **1988 Rajiv Gandhi visit** showed that political dialogue can create room for cooperation even when border disagreements persist. Its lesson is to sustain communication without assuming disputes have disappeared.
3. **Constructive Partnership:** The **2005 agreement** articulated a framework for developing constructive and cooperative relations. It also recognised the importance of safeguarding the interests of people living in settled border areas.
4. **Protection of Border Residents: Article VII of the 2005 agreement** provides that the two sides shall safeguard the interests of their **settled populations in border areas**. This human dimension should remain part of any boundary settlement.
5. **Continuing Dialogue:** In **July 2026**, External Affairs Minister S. Jaishankar met Chinese Foreign Minister Wang Yi in Manila. The meeting highlighted ongoing diplomacy, while India stressed that **border peace** remains essential to normal ties.

Way Forward

1. **Preventing Escalation:** Both sides should maintain agreed border protocols, avoid unilateral actions that heighten tensions and address local incidents quickly. **Preventing confrontation** is the first condition for stable relations.
2. **Military Communication:** Regular commander-level contacts, reliable hotlines and timely information-sharing can reduce miscalculation. These mechanisms should complement, not substitute for, political agreements and restraint.
3. **Sustained Diplomacy:** Dialogue should continue through leadership meetings, diplomatic channels and established border mechanisms. Consistent engagement can address disagreements before they develop into wider crises.
4. **Realistic Strategic Assessment:** India should combine credible defence preparedness with a clear-eyed understanding of China's capabilities and limitations. Policy must be guided by evidence rather than either alarmism or misplaced optimism.

5. **Selective Cooperation:** Where interests converge, both countries can pursue practical cooperation in trade, climate issues, multilateral forums and people-to-people exchanges. Such engagement should advance alongside, not instead of, border stability.
6. **Mutual Respect:** Durable coexistence requires **mutual respect, sensitivity and reciprocity**, including attention to concerns of border communities. Progress depends on translating diplomatic commitments into predictable conduct.

Conclusion

India and China can coexist peacefully, but normal relations cannot rest on dialogue or economic ties alone. Lasting progress requires **border peace, military restraint, realistic understanding of each other's intentions and mutual respect**. Rebuilding **strategic trust** can create space for wider cooperation and contribute to stability across the Indo-Pacific.

Question for practice:

Discuss the challenges and prospects of peaceful coexistence between India and China.

Source: The Hindu