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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.

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.

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.

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