

9 PM Current Affairs Weekly Compilation

For UPSC CSE mains examination



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Features :

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Most complete coverage of major
News Papers editorials

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Giving women farmers the recognition they deserve

Source: The post "Giving women farmers the recognition they deserve" has been created based on "A law to give women farmers the recognition they deserve" published in "Indian Express" on 16th July 2026.

UPSC Syllabus: GS 3- Social Justice

Context: Maharashtra has become the first state in India to enact the **Maharashtra Women Farmers Empowerment Act, 2026**, making it a landmark initiative for recognising and empowering women farmers. The Act also aligns with the **International Year of the Woman Farmer (2026)**, which seeks to promote fair, inclusive and sustainable agrifood systems.

Need of the Act

1. Women undertake a significant share of agricultural work, ranging from production to processing, yet their contribution remains largely unrecognised. They continue to face barriers in accessing institutional credit, crop insurance, extension services, technology and markets, while most government benefits remain linked to land ownership, which is predominantly held by men.
2. According to the **Periodic Labour Force Survey (2025)**, **82% of the rural female workforce** in Maharashtra is engaged in agriculture compared to **58% of rural men**, but **less than one-fifth of operational landholdings** are owned by women.
3. The increasing migration of men in search of employment has placed greater responsibility on women for agriculture, food security and nutrition.

Key Provisions of the Maharashtra Women Farmers Empowerment Act, 2026

1. The Act adopts a broad definition of "**agriculture**" and "**farmer**" in line with the **National Policy for Farmers (2007)** and recognises women engaged in crop husbandry, animal husbandry, poultry, fishery, agro-forestry, vermiculture, mushroom cultivation and primary processing, whether as landowners or labourers.
2. It provides for the issuance of a **Woman Farmer Certificate (WFC)** through the Gram Sabha or Nagar Panchayat, thereby formally recognising women as farmers without making land ownership a mandatory condition.
3. The Act enables women farmers to access government schemes, institutional credit, extension services and market opportunities, while also promoting gender-responsive skill development programmes and targeted support for single women farmers.
4. To ensure effective implementation, the Act establishes a digital registry of women farmers, a special fund, empowerment cells at different administrative levels, a **State-level Monitoring Committee** headed by the Chief Secretary and a **Governing Council** headed by the Chief Minister.

Significance of the Act

1. The Act provides formal recognition to women as farmers and promotes gender equality by improving their access to agricultural entitlements, productive resources and financial services.
2. By removing land ownership as a prerequisite for farmer recognition, it enhances women's access to government benefits, institutional credit, markets and extension services, thereby strengthening their economic empowerment.
3. The digital registry and institutional mechanisms will facilitate better targeting of welfare schemes and improve policy formulation for women farmers.

4. The Act also strengthens women's role in agricultural decision-making, food and nutrition security and climate change adaptation, and can serve as a model for other states.

Way Forward

1. The Act should be supported through adequate funding, effective implementation and regular monitoring, along with awareness campaigns to encourage eligible women to obtain the **Woman Farmer Certificate (WFC)**.
2. Women's access to credit, insurance, technology, markets and extension services should be further strengthened, while the digital registry should be regularly updated to ensure efficient delivery of benefits.
3. Other states should adopt similar legislative measures to provide legal recognition and equal opportunities to women farmers across India.

Conclusion: The **Maharashtra Women Farmers Empowerment Act, 2026** is a landmark step towards addressing gender inequalities in agriculture by formally recognising women as farmers and expanding their access to rights and entitlements. Effective implementation of the Act can strengthen women's economic empowerment, promote inclusive rural development and contribute to sustainable agrifood systems.

Question: Recognising women as farmers is essential for achieving inclusive and sustainable agricultural development. In this context, discuss the significance of the Maharashtra Women Farmers Empowerment Act, 2026.

Source: Indian Express

Empowering India's Skill Ecosystem

Source: The post "Empowering India's Skill Ecosystem" has been created based on "Empowering India's Skill Ecosystem" published in "PIB" on 16th July 2026.

UPSC Syllabus: GS 3- Indian Economy

Context: India's demographic dividend can become a demographic advantage only through a **skilled, productive and innovation-driven workforce**. Recognising this, the Government has adopted a **life-cycle approach** integrating education, skilling, employment, entrepreneurship and lifelong learning to achieve the vision of **Viksit Bharat 2047**.

Government Initiatives to Strengthen India's Skill Ecosystem

1. Building Skills from School Level

- a. **Samagra Shiksha** integrates vocational education from school level through **138 job roles** across **25,140 schools** covering over **35.5 lakh students**.
- b. **PM SHRI Schools** promote NEP 2020 by developing **21st-century skills** and holistic education.
- c. **Atal Tinkering Laboratories (ATLs)** foster innovation, creativity and problem-solving among students.
- d. **SOAR (Skilling for AI Readiness)** imparts AI education to students and teachers in partnership with industry.
- e. **YUVA AI for ALL** promotes AI literacy through free self-paced courses.

- f. **NSQF** integrates academic and vocational education while enabling lifelong learning and career mobility.
- g. **Vidyanjali Programme** strengthens community participation through mentoring, career guidance and skill development.

2. Workforce Upskilling and Reskilling

- a. **Skill India Mission (SIM)** provides NSQF-aligned skilling through PMKVY, JSS, NAPS and CTS.
- b. **PMKVY 4.0** focuses on demand-driven skilling, future skills and industry-specific job roles.
- c. **Jan Shikshan Sansthan (JSS)** provides community-based skill training, especially benefiting women and tribal communities.
- d. **National Apprenticeship Promotion Scheme (NAPS)** promotes industry-led apprenticeship through the **Earn While You Learn** model.
- e. **Craftsmen Training Scheme (CTS)** strengthens Industrial Training Institutes (ITIs) through long-term vocational education.
- f. **PM-SETU** modernises ITIs through hub-and-spoke clusters and National Centres of Excellence.
- g. **FutureSkills Prime** and **IndiaAI FutureSkills Pillar** promote AI, digital and emerging technology skills.
- h. **Pradhan Mantri Viksit Bharat Rozgar Yojana** incentivises first-time employment and employer-led hiring.

3. Entrepreneurship Development

- a. **PM Vishwakarma** supports traditional artisans through skill upgradation, credit, toolkit incentives and market access.
- b. **Startup India Courses** provide free online entrepreneurship and business management training.
- c. **Entrepreneurship Development Programmes (EDPs/ESDPs)** by NIESBUD, IIE and MSME Ministry promote self-employment and enterprise creation.

4. Women-Centric Skilling

- a. **AI Careers for Women** equips rural women with AI and future-ready skills.
- b. **Swavalambini Programme** promotes women entrepreneurship through awareness and development programmes.
- c. **NAVYA** provides vocational training, financial literacy and digital skills to adolescent girls in aspirational districts.

5. International and Private Sector Partnerships: Collaboration with **industry, academia, Microsoft, HCL, NASSCOM and international organisations** ensures industry-relevant curriculum, AI readiness and global employability.

Challenges

1. **Persistent Skill Mismatch:** There is a persistent mismatch between the skills imparted through training programmes and the skills demanded by industries, leading to lower employability.
2. **Inadequate Training Infrastructure:** The quality of skill training infrastructure remains uneven across regions, with rural and remote areas having limited access to modern training facilities.
3. **Limited Apprenticeship Opportunities:** Apprenticeship opportunities remain inadequate, particularly in the informal sector, which employs a large proportion of India's workforce.

4. **Low Female Labour Force Participation:** Despite several women-centric skilling initiatives, female labour force participation continues to remain low due to social, economic and workplace barriers.
5. **Digital Divide:** The digital divide restricts access to online learning platforms, especially for learners in rural and economically weaker regions.
6. **Weak Placement and Post-Training Support:** Placement services, trainee tracking and post-training support mechanisms remain weak, reducing the long-term effectiveness of skilling programmes.
7. **Rapid Technological Changes:** The curriculum requires continuous revision to keep pace with emerging technologies such as Artificial Intelligence (AI), green technologies and advanced manufacturing.

Way Forward

1. Strengthen **industry-academia collaboration** for demand-driven curriculum design.
2. Expand apprenticeships and work-integrated learning across sectors.
3. Improve quality assurance through regular assessment and outcome-based monitoring.
4. Promote digital infrastructure and multilingual e-learning platforms.
5. Increase focus on AI, green skills, semiconductor, robotics and advanced manufacturing.
6. Enhance women-centric skilling with childcare support, safe workplaces and flexible training.
7. Strengthen international mobility partnerships to position India as a **global talent hub**.
8. Integrate skilling with employment generation, entrepreneurship and lifelong learning for sustainable workforce development.

Conclusion: India's life-cycle approach to skill development is transforming the country from **classroom to enterprise** by integrating education, employment and entrepreneurship. Continued reforms focused on quality, inclusion and future-ready skills will enable India to harness its demographic dividend and emerge as the **world's leading talent hub** while realising the vision of **Viksit Bharat 2047**.

Question: "India's vision of becoming the global talent hub requires a life-cycle approach to skill development." Discuss the major government initiatives to strengthen India's skill ecosystem. Also examine the challenges and suggest the way forward.

Source: [PIB](#)

The Crisis at the Heart of Non-Proliferation

UPSC Syllabus: Gs Paper 3- International Relations

Introduction

The present dispute over **Iran's nuclear programme** has exposed deeper contradictions within the global **nuclear non-proliferation regime**. Iran is being asked to dismantle its enriched uranium stockpile, while recognised nuclear weapon states continue to retain and modernise their arsenals without similar obligations. This has revived questions about the fairness, consistency and credibility of the existing nuclear order and the slow progress towards universal nuclear disarmament.

Understanding the Global Nuclear Non-Proliferation Regime

1. **Purpose of Non-Proliferation:** Non-proliferation seeks to prevent the spread of nuclear weapons while allowing the peaceful use of nuclear energy. It mainly depends on diplomacy, international cooperation, inspections, and negotiated agreements.
2. **NPT-Based Nuclear Order:** The **Treaty on the Non-Proliferation of Nuclear Weapons (NPT)** divided countries into recognised nuclear weapon states and non-nuclear weapon states. It expected restraint from non-nuclear states while nuclear powers continued to retain and modernise their arsenals.
3. **Difference from Counterproliferation:** Non-proliferation relies on cooperation and transparency. Counterproliferation uses sanctions, military pressure, cyber operations, and covert actions to stop suspected nuclear programmes.
4. **Growing Shift from Non-Proliferation to Counterproliferation:** The increasing use of force-based measures has reduced trust in diplomatic solutions. This shift has weakened the cooperative spirit that originally guided the non-proliferation regime.

Iran's Nuclear Programme and the Present Deadlock

1. **Earlier Diplomatic Engagements:** Iran signed the **Tehran Declaration (2003)**, accepted the **Additional Protocol (2003)**, concluded the **Paris Agreement (2004)**, and proposed limited uranium enrichment for civilian purposes in **2005**. These initiatives sought to reduce tensions through negotiations and international cooperation.
2. **JCPOA and its Collapse:** The **Joint Comprehensive Plan of Action (JCPOA)**, negotiated in **2015**, represented a major diplomatic breakthrough. However, the **US withdrawal in 2018**, followed by the reimposition of sanctions, undermined the agreement and deepened mistrust between Iran and the West.
3. **Current Diplomatic Impasse:** Talks in Doha remain stalled over frozen Iranian assets and verification mechanisms. Iran is also being asked to dismantle its enriched uranium stockpile in return for economic compensation.
4. **Iran's Position:** President **Masoud Pezeshkian** has stated that Iran will not give up its sovereign right to enrich uranium. Iran argues that enrichment remains its legal right.
5. **Demand for Complete Dismantlement:** Iran faces pressure to eliminate its enrichment capability. At the same time, existing nuclear weapon states are not required to surrender their arsenals.
6. **Core Question Raised:** The present dispute raises the issue of why Iran alone should abandon a capability that **nine nuclear-armed states** continue to possess.

Why is the Existing Non-Proliferation Order Criticised?

1. **Unequal Rules for Different States:** The present system applies different standards to different countries. Nuclear powers continue to possess weapons while demanding restraint from others.

2. **Different Treatment of Nuclear States: India and Pakistan**, despite remaining outside the NPT, are accepted as strategic partners. **Israel's** undeclared nuclear capability also faces no comparable international pressure.
3. **Iran's Different Experience:** Iran pursued uranium enrichment within a legal framework and accepted the most extensive inspection system under the **Joint Comprehensive Plan of Action (JCPOA)**. Even after compliance, it faced renewed sanctions and military threats.
4. **Question of Fairness:** The unequal application of nuclear rules creates the perception that geopolitical interests influence non-proliferation more than equal enforcement.

The JCPOA and the Crisis of Trust

1. **A Successful Diplomatic Agreement:** The **JCPOA**, negotiated during the **Barack Obama** administration, showed that difficult nuclear disputes could be addressed through multilateral diplomacy.
2. **US Withdrawal from the Agreement:** The **Donald Trump** administration withdrew from the agreement in **2018**. This decision ended an important diplomatic understanding despite Iran's compliance.
3. **Loss of Confidence in Future Agreements:** The collapse of the JCPOA created doubts about whether future nuclear agreements with the United States would remain reliable over time.
4. **Impact on the Present Crisis:** If the present Iran nuclear dispute becomes more severe, the breakdown of the JCPOA will remain one of its major immediate causes.

Historical and Ethical Dimensions

1. **Legacy of Hiroshima and Nagasaki:** The atomic bombings of **Hiroshima** and **Nagasaki** remain the only use of nuclear weapons in war. They demonstrated both the destructive power of nuclear weapons and the acceptance of their use under claims of strategic necessity.
2. **Moral Authority Under Question:** A country that has used nuclear weapons occupies a unique position when it seeks to regulate the nuclear ambitions of others. This creates a continuing ethical contradiction.
3. **Selective Interpretation of International Norms:** States demanding restraint from others are criticised for applying international law selectively. This weakens the moral basis of the existing nuclear order.
4. **Call for Universal Disarmament:** **Albert Einstein** and **Bertrand Russell** argued in **1955** that nuclear weapons should be abolished by all countries without exception. Their warning remains relevant because deterrence alone cannot permanently prevent catastrophe.

Impact on the Global Nuclear Order

1. **Crisis in the Non-Proliferation Regime:** The global non-proliferation regime is facing a serious credibility crisis. Growing reliance on coercive measures has weakened cooperation, transparency, and confidence among states.
2. **Weakening of Arms Control:** Major arms-control agreements have become weaker over time. This has reduced confidence in cooperative nuclear governance and made future disarmament efforts more difficult.
3. **Declining Trust in International Agreements:** The collapse of the JCPOA and selective implementation of nuclear policies have reduced confidence in diplomatic commitments. Countries may become less willing to rely on future arms-control agreements.
4. **Risk of Nuclear Competition:** Growing insecurity and weakening diplomacy may encourage more countries to view nuclear weapons as security guarantees. This increases the possibility of regional arms races and long-term instability.
5. **Threat to Peaceful Nuclear Rights:** Greater use of sanctions and coercive measures may also affect the right of countries to develop peaceful nuclear energy under the NPT. This creates resentment among states that consider such restrictions unfair.

The Way Forward

1. **Restore Diplomacy:** Negotiations should remain the primary method for resolving nuclear disputes. Durable agreements require sustained dialogue instead of coercive measures.
2. **Ensure Equal Application of Rules:** Nuclear obligations should be applied consistently to all states. Equal standards are essential to restore the credibility and fairness of the global non-proliferation regime.
3. **Strengthen IAEA Verification:** States should continue allowing effective IAEA inspections and transparent verification mechanisms. Strong monitoring reduces mistrust and supports peaceful nuclear cooperation.
4. **Rebuild Confidence in Arms-Control Agreements:** Future nuclear agreements should be implemented in good faith by all parties. Reliable commitments are essential for restoring trust in multilateral diplomacy.
5. **Discourage Coercive Counterproliferation Measures:** Greater reliance on sanctions, sabotage, cyberattacks, and military operations should be avoided. Such measures weaken transparency, increase mistrust, and may escalate conflicts.
6. **Advance Universal Nuclear Disarmament:** Lasting global security requires the elimination of nuclear weapons by all states. Universal disarmament remains the most sustainable solution to the contradictions of the present nuclear order.

Conclusion

The Iran nuclear dispute highlights the deeper contradictions within the global non-proliferation system. **Selective enforcement, unequal treatment of states, and delayed disarmament commitments** have

weakened trust in the existing framework. A credible nuclear order requires **consistent rules, stronger diplomacy, reliable agreements, and universal commitment to nuclear disarmament**, instead of maintaining different standards for different countries.

Question for practice:

Examine how the Iran nuclear issue has exposed the contradictions within the global nuclear non-proliferation regime.

Source: [The Hindu](#)

UN Report on Need for AI Governance

UPSC Syllabus: Gs Paper 2- e-governance

Introduction

The **United Nations' Preliminary Report of the Independent International Scientific Panel on AI (IISPA)** has gained attention ahead of the inaugural **UN Global Dialogue on AI Governance**. The report warns that artificial intelligence is advancing much faster than scientific understanding, safety measures, and existing governance systems. It calls for stronger international cooperation, scientific assessment, and effective governance to ensure that AI develops in a safe, transparent, and inclusive manner.

About the Independent International Scientific Panel on AI (IISPA)

1. **UN Scientific Initiative:** The **Independent International Scientific Panel on AI (IISPA)** is the first independent scientific assessment of AI commissioned by the United Nations. It studies AI capabilities, opportunities, risks, and governance needs.
2. **Leadership and Composition:** The **40-member panel** is co-chaired by **Yoshua Bengio**, a Turing Award laureate, and **Maria Ressa**, a Nobel Peace Prize laureate. It brings together scientific expertise for evidence-based policymaking.
3. **Areas of Assessment:** The panel studies AI across **seven themes**, including AI science, healthcare, education, agriculture, economy, security, environment, human rights, democracy, cultural wellbeing, governance, and reliability.
4. **Periodic Assessment Mechanism:** The preliminary report is the first in a series of regular assessments. A more comprehensive report is expected next year to strengthen global scientific understanding of AI.

Why AI Governance Has Become Urgent

1. **AI Advancing Faster than Governance:** AI capabilities are growing much faster than scientific understanding, public oversight, and existing regulations. Governments may respond only after serious harms have already occurred.

2. **Rise of Frontier and Agentic AI:** Frontier AI models and autonomous AI agents can perform complex tasks with limited human intervention. While they improve productivity, they also create new governance and safety concerns.
3. **Weak Governance Mechanisms:** Existing AI governance frameworks are fragmented across countries and are largely influenced by a few corporations. Independent methods to assess AI capabilities and risks remain underdeveloped.
4. **Need for Scientific Evidence:** Policymakers require independent scientific assessments to frame effective AI regulations. Better evidence can help balance innovation with safety and public interest.

Key Concerns Identified by the UN Report

1. **Compute Divide:** The global AI race is increasingly shaped by control over computing infrastructure rather than talent or innovation alone. The **United States holds about 75%** of global AI computing capacity, **China 15%**, while the **rest of the world shares only 10%**.
2. **Concentration of AI Power:** AI development depends on expensive chips, cloud infrastructure, specialised talent, and large investments. This has concentrated AI capabilities in a few countries and companies, reducing competition and increasing dependence.
3. **Growing Safety and Cybersecurity Risks:** Highly autonomous AI systems are moving beyond direct human supervision. This raises cybersecurity concerns and increases the risk of society losing effective control over these systems.
4. **Threats to Democracy and Human Rights:** AI-powered deepfakes and persuasion algorithms can spread misinformation, weaken public trust, and influence elections. Concentrated AI capabilities may also weaken democratic accountability and exclude many linguistic and cultural communities.
5. **Human and Child Safety:** AI-generated child sexual abuse material (CSAM) has increased rapidly. Some engagement-driven chatbots have also worsened mental distress among vulnerable users by encouraging harmful behaviour.
6. **Language and Cultural Bias:** Most AI models are designed mainly for a few dominant languages. Poor performance in underrepresented languages, including medical mistranslations, can create serious risks.
7. **Challenges for Developing Countries:** Limited access to computing infrastructure, advanced chips, and quality datasets may prevent many developing countries from building sovereign AI capabilities. In **2025**, institutions in the **United States produced 59 notable AI models**, **China 35**, and the **rest of the world only 13**, highlighting the widening AI gap.

Significance for India

1. **Strengthening Domestic AI Infrastructure:** India's **IndiaAI Mission** and investment in computing hardware support the goal of building stronger domestic AI capacity. Expanding indigenous compute infrastructure is becoming strategically important.

2. **Building Sovereign AI Capabilities:** Better access to computing power, advanced chips, and quality datasets can help India develop AI suited to its own languages and development priorities.
3. **Preventing Long-Term Dependence:** Expanding indigenous compute infrastructure can help India reduce technological dependence and strengthen its role in global AI development.
4. **Role in Global AI Governance:** India is participating in the **United Nations Global Dialogue on AI Governance** through its official delegation, contributing to discussions on global AI cooperation and governance.

Recommendations of the UN Panel

1. **Build Local AI Capacity:** Countries should invest in domestic computing infrastructure, skilled talent, and research to build sovereign AI capabilities and reduce dependence on a few global providers.
2. **Promote Wider Access to AI Resources:** Greater access to computing infrastructure, scientific resources, and public-interest AI should be encouraged so that more countries can participate in AI development.
3. **Strengthen Independent Oversight:** Governments should require independent third-party capability and risk assessments instead of relying only on company-led safety evaluations.
4. **Regulate AI System Design:** Governance should focus not only on AI-generated content but also on the underlying architecture and behavioural design of AI systems.
5. **Protect Human Rights:** Human rights and child rights impact assessments should be applied throughout the AI lifecycle, including design, deployment, and auditing.
6. **Support Open Scientific Research:** Open scientific collaboration and stronger evaluation methods can improve transparency, accountability, and trust in AI systems.
7. **Establish a Continuous UN Platform:** A permanent United Nations-based platform should bring together governments, scientists, and AI developers to coordinate global AI governance and safety standards.

Conclusion

Artificial intelligence is becoming a strategic technology with major economic, social, and security implications. Its rapid development requires stronger global governance supported by independent scientific assessment and international cooperation. Wider access to AI resources, greater transparency, accountability, and robust human oversight are essential. These measures can help ensure that AI benefits all countries instead of widening existing technological and governance inequalities.

Question for practice:

Evaluate the need for global AI governance in light of the United Nations' Preliminary Report of the Independent International Scientific Panel on AI (IISPA).

Source: [Indian Express](#)

Smoke and Noise - The E20 Confusion

Source: The post "Smoke and Noise - The E20 Confusion" has been created based on "Smoke and Noise - The E20 Confusion" published in "The Hindu" on 17th July 2026.

UPSC Syllabus: GS 3 –Environment

Context: India achieved the target of **20% ethanol blending (E20)** in petrol in **July 2025**, nearly five years ahead of the original deadline. From **April 2026**, all **BS VI vehicles** are required to comply with **E20 emission standards**, making E20 the standard fuel across the country. While the policy aims to improve energy security and reduce dependence on imported crude oil, it has also created uncertainty among consumers regarding vehicle performance and costs.

Issues and Concerns

1. **Reduced fuel efficiency:** The Central Government has acknowledged that **E20 petrol reduces fuel efficiency by around 3.5% compared to E10** and by an even greater margin when compared with pure petrol. This increases the running cost for vehicle owners.
2. **Concerns over vehicle durability:** Many vehicle owners believe that E20 fuel may increase **wear and tear of engines, fuel lines, and rubber components**. Although the government states that there is no evidence of such damage, consumer concerns continue.
3. **Lack of policy clarity:** The government's FAQ does not clearly explain whether **existing vehicles should be modified, serviced, or replaced** for safe use of E20 fuel. This has left consumers uncertain about the future of their vehicles.
4. **Limited consumer choice:** Consumers who prefer conventional petrol have **very few alternatives**, as ethanol-free petrol has almost disappeared from fuel stations due to the nationwide shift towards ethanol blending.
5. **Confusion over E20 compatibility:** The government has cited that **Maruti Suzuki serviced about 1.5 crore older vehicles without finding damage** to engines or fuel components. This has created confusion about why E20-compatible vehicles are necessary if older vehicles are also considered safe.
6. **Higher cost to consumers:** The government purchases ethanol at **attractive prices to encourage production**, and the financial burden of these incentives is ultimately reflected in the price paid by consumers.
7. **Concerns over resource use:** The editorial highlights that **grain diversion for ethanol production**, which accounts for nearly two-thirds of ethanol supplies, and **high water consumption in sugarcane cultivation** are important concerns that require attention.

Benefits of the Ethanol Blending Programme

1. **Reduction in crude oil imports:** Ethanol blending helps reduce India's dependence on imported petroleum by replacing a part of petrol consumption with domestically produced ethanol.
2. **Savings in foreign exchange:** The government estimates that **a 20% reduction in crude oil imports could save ₹30,000–40,000 crore annually**, although this estimate does not fully account for the loss in fuel efficiency.
3. **Improved energy security:** Greater use of domestically produced ethanol strengthens India's **energy security** by reducing dependence on volatile international energy markets.
4. **Support to farmers:** The government's procurement of ethanol at attractive prices provides **additional income opportunities for sugarcane, maize, and paddy farmers**, thereby supporting the agricultural sector.

Way Forward

1. **Provide clear policy guidance:** The Central Government should issue **clear and comprehensive guidelines** on the compatibility of existing vehicles with E20 fuel and specify whether any modifications are required.
2. **Ensure greater transparency by automobile companies:** Automobile manufacturers should clearly communicate the **E20 compatibility of different vehicle models** so that consumers can make informed purchasing decisions.
3. **Protect consumer choice:** Consumers should be allowed to make **informed choices** among different fuel options, including **EVs, CNG, ethanol-blended petrol, and conventional petrol wherever feasible**.
4. **Adopt a balanced long-term fuel strategy:** The government should develop a **comprehensive energy strategy** that balances import reduction, environmental sustainability, affordability, and technological advancements across multiple fuel options.
5. **Address sustainability concerns:** Future ethanol expansion should also address concerns related to **food grain diversion and excessive water use** to ensure that energy security does not come at the cost of food security and environmental sustainability.

Conclusion: The E20 programme is an important step towards improving India's energy security and reducing crude oil imports. However, its long-term success will depend on **greater policy clarity, consumer confidence, and a balanced transition that protects both economic and environmental interests**.

Question: The rapid adoption of E20 petrol has raised concerns regarding vehicle compatibility, fuel efficiency, and consumer interests. Discuss the issues and suggest a balanced way forward.

Source: [Business Line](#)

Strengthening Rural Credit for Inclusive Growth in India

UPSC Syllabus: Gs Paper 3- Indian economy and Infrastructure

Introduction

India's rural credit system provides timely and affordable finance for agriculture, allied sectors, rural enterprises and households. It supports income generation, asset creation and financial security, making it a key driver of inclusive rural development. Led by the **National Bank for Agriculture and Rural Development (NABARD)** and supported by a wide network of financial institutions, the system has evolved into a technology-enabled and inclusive credit ecosystem. **Around 51% of rural households now rely exclusively on formal credit sources**, reflecting its expanding reach.

Evolution of the Rural Credit System

1. Post-Independence Institutional Reforms: The Government and RBI initiated reforms to expand rural banking and strengthen institutional credit. These efforts gradually shifted rural finance from informal borrowing to a structured institutional system.

2. Expansion of Rural Banking (1955–1969): The National Agricultural Credit (Long-term Operations) Fund and the State Bank of India were established in 1955. In 1969, the nationalisation of 14 major commercial banks increased credit flow to priority sectors, especially small farmers.

3. Creation of NABARD (1982): NABARD integrated financing, development and supervision for agriculture and rural development. It also prepares district credit plans and supports financial inclusion by expanding access to formal finance.

4. Expansion of Farmer-Centric Credit: The SHG-Bank Linkage Programme (1992) connected rural households with formal banks, while the Kisan Credit Card (1998) improved access to timely and affordable agricultural credit.

5. Financial Inclusion Reforms: The launch of PM Jan Dhan Yojana (2014) expanded universal banking access, insurance, credit and Direct Benefit Transfers through the JAM Trinity. The MUDRA Scheme (2015) promoted collateral-free credit for rural micro and small enterprises.

6. Digital Transformation of Rural Credit: Since 2022, initiatives such as the Jan Samarth Portal and e-KCC have improved credit delivery through technology, making financial services more accessible and efficient.

Institutional Architecture of Rural Credit

1. NABARD as the Apex Institution: NABARD is the central institution for agriculture and rural development. It strengthens rural credit through refinance support, rural infrastructure financing, institutional development and supervision of Cooperative Banks and Regional Rural Banks.

2. Scheduled Commercial Banks (SCBs):

a) SCBs provide banking services through branches, Business Correspondents, digital platforms and Government programmes such as PMJDY and DBT.

b) Around 120 SCBs operate across the country, while rural branches increased by over 35%, from 41,464 in 2014 to 56,193 by July 2025.

3. Regional Rural Banks (RRBs): Established under the RRB Act, 1976, RRBs mainly serve small and marginal farmers, agricultural labourers, artisans and small entrepreneurs. At present, 28 RRBs operate through over 22,000 branches across 700 districts.

4. Co-operative Credit Institutions:

a) The cooperative banking system follows a multi-tier rural structure comprising **State Cooperative Banks (StCBs)**, **District Central Cooperative Banks (DCCBs)**, **Primary Agricultural Credit Societies (PACs)**, **State Cooperative Agriculture and Rural Development Banks (SCARDBs)**, and **Primary Cooperative Agriculture and Rural Development Banks (PCARDBs)**.

b) These institutions have expanded institutional credit and promoted banking habits in remote rural areas. The network includes **1,458 Urban Cooperative Banks, 34 State Cooperative Banks (StCBs), and 352 District Central Cooperative Banks (DCCBs).**

5. Small Finance Banks (SFBs):

a) Introduced after the Union Budget 2014–15, SFBs promote financial inclusion by providing savings and credit services to underserved groups.

b) They extend loans to small businesses, micro industries and small and marginal farmers through technology-driven and low-cost operations. At present, 11 SFBs are operational.

6. **Integrated Rural Credit Network:** Together, NABARD, SCBs, RRBs, Cooperative Banks and SFBs form a diversified institutional framework. This network expands formal credit access and supports inclusive rural development across the country.

Policy Framework Supporting Rural Credit

1. Priority Sector Lending (PSL):

a) PSL is an RBI-mandated framework that requires banks to provide credit to priority sectors that face difficulty in accessing formal finance.

b) Banks must allocate at least 18% of their Adjusted Net Bank Credit to agriculture, including sub-targets of 14% for non-corporate farmers and 10% for small and marginal farmers. Refinance support is also provided through dedicated rural credit funds.

2. Ground Level Credit (GLC):

a) The Government fixes annual agricultural credit targets for banks to ensure adequate finance for agriculture and allied sectors.

b) The GLC target increased from ₹8 lakh crore in FY2014–15 to ₹32.50 lakh crore in FY2025–26, including a ₹5 lakh crore sub-target for animal husbandry, dairying and fisheries.

c) NABARD supports these targets through refinance assistance.

3. SHG-Bank Linkage Programme and DAY-NRLM:

a) The Self-Help Group (SHG)-Bank Linkage Programme, launched by NABARD, connects rural SHGs with formal banks, improving access to affordable credit, especially for women.

b) Under the Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (DAY-NRLM), 19.83 lakh SHGs have received cumulative loans of ₹13.28 lakh crore, while 50,548 Bank Sakhis have strengthened credit linkage and ensured timely loan repayment.

4. Primary Agricultural Credit Societies (PACS): PACS serve as the grassroots institutions of the cooperative credit system by directly providing loans and other agricultural services to rural borrowers.

5. Modified Interest Subvention Scheme (MISS):

a) MISS provides affordable short-term agricultural credit through the Kisan Credit Card. Farmers receive loans at 7% interest, which can reduce to 4% through prompt repayment incentives.

b) The loan limit under MISS increased from ₹3 lakh to ₹5 lakh, while collateral-free loan limits also increased to improve farmers' access to affordable finance.

6. PM Dhan Dhanya Krishi Yojana (PM-DDKY):

a) Approved in July 2025, PM-DDKY targets 100 low-performing agricultural districts through the convergence of 36 Central schemes across 11 Ministries.

b) It aims to improve agricultural credit, productivity, crop diversification, irrigation, sustainable farming and post-harvest infrastructure.

Financial Inclusion and Digital Transformation

1. Kisan Credit Card (KCC):

a) KCC provides timely and flexible credit for crop cultivation, post-harvest activities, marketing, household needs, farm maintenance and allied sectors.

b) The scheme covers owner cultivators, tenant farmers, sharecroppers, SHGs and JLGs, while its scope has also been extended to dairy, fisheries and animal husbandry.

2. Digitalisation through e-KCC: NABARD's e-KCC portal enables end-to-end online processing of crop loans for RRBs and Cooperative Banks. Farmers can submit applications digitally or through Common Service Centres, allowing loan sanctions within about two days.

3. Financial Literacy Initiatives: The Government, RBI, NABARD and banks conduct Centres for Financial Literacy (CFLs), Financial Literacy Camps (FLCs) and Financial Literacy Week (FLW) to improve awareness about formal credit and KCC benefits among rural households.

4. Pradhan Mantri Jan Dhan Yojana (PMJDY): PMJDY provides universal banking access along with credit, insurance and pension facilities.

5. Jan Samarth Portal:

a) Launched in 2022, the Jan Samarth Portal acts as a single digital platform linking Government-sponsored credit and subsidy schemes.

b) It simplifies loan applications, improves coordination among stakeholders and expands access to institutional finance through end-to-end digital services.

6. Jan Dhan Darshak App: The Jan Dhan Darshak App helps citizens locate nearby banking outlets, including branches, ATMs, Bank Mitras and Common Service Centres.

Challenges of Rural Credit System in India

1. Limited Access to Formal Credit: Many remote rural areas still have inadequate access to banks and financial institutions. This limits the availability of timely institutional credit for rural households.

2. Dependence on Informal Lenders: The shortage of formal banking services forces many borrowers to depend on informal lenders. These lenders often charge very high interest rates, increasing the financial burden on rural families.

3. Collateral Constraints: Formal financial institutions generally require collateral for loans. Many rural households cannot provide adequate security, reducing their access to institutional credit.

4. Limited Credit Beyond Agriculture: Institutional finance mainly focuses on agriculture, while credit for education, healthcare and small rural businesses remains inadequate. This limits broader rural economic development.

5. Seasonal Repayment Risks: Agricultural income depends on crop seasons, leading to irregular cash flows. Farmers often face difficulty in repaying loans during off-season periods, increasing the risk of defaults.

6. Low Financial Literacy: Limited awareness about banking services and loan conditions affects the proper use of institutional credit. This also increases the risk of poor financial decisions and debt traps.

7. Governance and Infrastructure Issues: Cases of corruption, loan diversion and poor rural infrastructure increase the cost and difficulty of credit delivery and monitoring.

Way Forward

Expand Digital Credit Delivery: Digital platforms such as e-KCC, the Jan Samarth Portal and Enterprise Resource Planning (ERP)-enabled Primary Agricultural Credit Societies (PACS) should continue to improve the speed, transparency and accessibility of rural credit services.

Strengthen Institutional Outreach: National Bank for Agriculture and Rural Development (NABARD), Scheduled Commercial Banks (SCBs), Regional Rural Banks (RRBs), Cooperative Banks, and Small Finance Banks (SFBs) should further expand formal banking services to improve access to affordable credit across rural areas.

Deepen Financial Inclusion: Continued expansion of the Pradhan Mantri Jan Dhan Yojana (PMJDY), Kisan Credit Card (KCC), the Self-Help Group (SHG)-Bank Linkage Programme, and financial literacy initiatives can bring more rural households into the formal financial system.

Modernise Cooperative Institutions: Ongoing digitisation of Primary Agricultural Credit Societies (PACS) and technology-enabled banking should be strengthened to improve efficiency, transparency and last-mile credit delivery.

Sustain Policy Support: Continued implementation of **Priority Sector Lending (PSL)**, **Ground Level Credit (GLC)**, the **Modified Interest Subvention Scheme (MISS)**, and the **Pradhan Mantri Dhan Dhanya Krishi Yojana (PM-DDKY)** can ensure adequate institutional credit for agriculture, allied sectors and rural enterprises.

Conclusion

India's rural credit system has evolved into a **diversified, institution-led and technology-enabled framework** that supports agriculture and rural livelihoods. **Institutional reforms, policy measures and digital financial inclusion** have expanded access to affordable formal credit. Continued strengthening of these initiatives will further promote **inclusive rural development, agricultural growth and long-term economic resilience**.

Question for practice:

Discuss the evolution, institutional framework, policy initiatives, and financial inclusion measures that have strengthened India's rural credit system for inclusive rural development.

Source: [PIB](#)

How Serious is Kudankulam Data Leak?

UPSC Syllabus: Gs Paper 3- Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security

Introduction

The **Kudankulam Nuclear Power Plant** data leak has raised concerns over the cybersecurity of India's critical infrastructure. Although **NPCIL** stated that the reactor and nuclear safety systems were not affected, the ransomware attack exposed data linked to a contractor working on the project. The incident has highlighted concerns over breach disclosure, third-party cybersecurity, incident response, and the protection of sensitive infrastructure-related information.

About the Kudankulam Data Leak

1. **Nature of the Attack:** The breach resulted from a **ransomware attack** carried out by the cybercriminal group **World Leaks**. The attackers targeted systems linked to **Reliance Infrastructure**, an engineering contractor for **Units 3 and 4**.
2. **Extent of the Leak:** Around **14.3 GB** of Kudankulam-related files were leaked. These files formed part of nearly **1.2 TB** of data published after the ransom demand was reportedly not met.
3. **Role of Third-Party Service Provider:** The compromised data was hosted on servers managed by **Yotta Data Services**. Yotta detected suspicious activity on **May 29** and isolated the affected server before the ransomware could spread.
4. **Timeline of Disclosure:** The leaked files reportedly appeared on **World Leaks** on **June 11**. **NPCIL** issued its official clarification only on **July 15**, after widespread media reports.

5. **Ransom Demand: World Leaks** claimed that the leaked data was published because the ransom demand was reportedly not paid.

Was the Nuclear Reactor Affected?

1. **Core Reactor Remained Safe:** NPCIL stated that the leaked information did not relate to the reactor's operational systems. Nuclear safety and nuclear security systems remained unaffected.
2. **Balance of Plant Data:** The leaked files related only to **Balance of Plant (BOP)** common service facilities located outside the nuclear island. They did not include sensitive reactor control information.
3. **No Ransomware Execution:** Reliance Infrastructure stated that there was **no ransomware execution, data loss or lateral movement** during the incident.
4. **Incident Limited to One Server:** Yotta said the incident remained confined to a single customer-managed server. Its shared cloud platforms, AI infrastructure, data centres and other customers were not affected.

Why Does the Data Leak Matter?

1. **Infrastructure Layouts Exposed:** The leaked files reportedly include **ventilation layouts** and floor plans of an alleged control room.
2. **Operational Documents Released:** The data also contains **meeting records, inspection reports and equipment review documents** related to the project.
3. **Supplier Information Exposed:** **Supplier and vendor lists** were reportedly included in the leaked files.
4. **Insurance Documents Leaked:** The leaked data includes paperwork related to a **\$112 million insurance policy** against terrorist attacks.
5. **Potential Intelligence Value:** Even if reactor systems remain secure, infrastructure-related information can support **intelligence preparation** activities.
6. **Authenticity Yet to be Confirmed:** The leaked documents have **not been independently authenticated**, making official verification important.
7. **Strategic Importance of Kudankulam:** The plant operates **two 1,000 MWe VVER reactors**, while four more units are planned, making it central to India's nuclear power expansion.

Cybersecurity Challenges Exposed by the Incident

1. **Opaque Breach Disclosure:** Organisations often delay admitting cyber breaches because they fear damage to reputation, contracts and public confidence.
2. **Regulatory Concerns:** Fear of regulatory scrutiny also discourages timely public disclosure of cyber incidents.

3. **Compliance-Driven Security:** Many organisations continue to treat cybersecurity mainly as a compliance requirement. This weakens incident response and delays assessment of affected data.
4. **Delay in Public Communication:** Information about the leak surfaced weeks before the official clarification. Such delays increase uncertainty during major cybersecurity incidents.
5. **Repeated Cybersecurity Concerns:** Malware was detected on Kudankulam's administrative network in **2019**, although operational systems remained unaffected. The latest incident again highlights concerns over cyber risks around critical infrastructure.

India's Wider Cybersecurity Context

1. **Frequent Cyberattacks:** India is described as the **third-most breached country**. Earlier cyberattacks have affected **AIIMS Delhi, airlines and State government portals**.
2. **Growing Risk to Critical Infrastructure:** As strategic projects become more digitally connected, contractors and service providers also become attractive targets for cybercriminals.
3. **Third-Party Vulnerability:** The attack did not directly target **NPCIL** but affected a contractor and its data hosting service. This shows that supply chain partners can become weak points.
4. **Need for Better Cyber Readiness:** Cybersecurity must cover every organisation connected to critical infrastructure, not only the primary operator.

Measures to Strengthen Critical Infrastructure Cybersecurity

A. Immediate Actions

1. **Verify the Leaked Files:** CERT-In and NPCIL should clarify the authenticity and nature of the leaked documents.
2. **Confirm Data Exfiltration:** Authorities should establish whether any information was copied before the attack was detected.
3. **Check Account Exposure:** The investigation should determine whether **credentials, supplier accounts or vendor accounts** were compromised.
4. **Complete the Investigation:** Findings shared by **Reliance Infrastructure, Yotta**, and the **CERT-In** investigation should establish the full scope of the incident.
5. **Ensure Timely Communication:** Authorities should provide clear and timely public updates, even if complete transparency is not possible.

B. Long-Term Reforms

1. **Strengthen Cyber Hygiene:** Organisations should make cybersecurity a regular operational practice instead of treating it only as a compliance requirement.

2. **Improve Incident Response:** Organisations should build stronger capabilities to quickly detect, assess and contain cyberattacks.
3. **Strengthen Supply Chain Security:** Contractors, data centres and other third-party service providers should follow robust cybersecurity practices because they handle sensitive project information.
4. **Promote Better Breach Disclosure:** Organisations should adopt more transparent and timely reporting practices to improve public trust and cyber resilience.

Conclusion

The **Kudankulam** data leak did not compromise reactor operations or nuclear safety systems, but it exposed weaknesses in cybersecurity, third-party risk management and breach disclosure. Strengthening **cyber hygiene, incident response, supply chain security and timely communication**, along with completing the ongoing investigation, is essential to protect critical infrastructure and maintain public confidence.

Question for practice:

Examine the cybersecurity concerns highlighted by the Kudankulam Nuclear Power Plant data leak and discuss the measures needed to strengthen the security of India's critical infrastructure.

Source: [The Hindu](#)

Promise of chips: On the India Semiconductor Mission phase II

Source: The post “**Promise of chips: On the India Semiconductor Mission phase II**” has been created based on “**Promise of chips: On the India Semiconductor Mission phase II**” published in “**The Hindu**” on 18th July 2026.

UPSC Syllabus: GS-3 -Economy

Context: India's **Semiconductor Mission** has entered its **second phase** after the success of the first phase. It aims to **build a strong domestic semiconductor manufacturing ecosystem** and position India as a strategic destination in the global electronics value chain.

Significance of India's Semiconductor Mission

1. **Expanded Scope:** The second phase goes beyond manufacturing by supporting individual semiconductor projects through equity participation.
2. **Domestic Manufacturing:** It seeks to strengthen India's capabilities in semiconductor production and component manufacturing.
3. **Strategic Positioning:** The mission aims to establish India as a key player in the global electronics value chain.
4. **Long-term Capacity Building:** It focuses on creating human capital and intellectual property instead of expecting immediate commercial outcomes.
5. **Employment Generation:** Investments in semiconductor manufacturing will boost the electronics industry, which is a major source of employment.
6. **Public Investment:** Government support is essential because semiconductor manufacturing requires large capital investment and has a long gestation period.

Challenges

1. **Delayed Production:** Semiconductor facilities approved under the first phase are yet to commence commercial production.
2. **Technology Gap:** India currently lacks advanced technologies such as extreme ultraviolet (EUV) lithography needed for cutting-edge chip manufacturing.
3. **Global Competition:** Competing with countries that possess mature semiconductor ecosystems remains a major challenge.
4. **Ecosystem Development:** Building a complete semiconductor ecosystem requires sustained investment, technology acquisition, and skilled manpower.

Way Forward

1. **Technology Investment:** Continue investing in advanced semiconductor technologies despite current technological limitations.
2. **Strategic Capability:** Build capabilities that attract global investment, talent, and cutting-edge technology.
3. **Talent Utilisation:** Leverage India's globally recognized pool of engineers and chip designers.
4. **Talent Retention:** Create high-value research, design, and manufacturing opportunities to prevent brain drain.
5. **Collaborative Ecosystem:** Strengthen partnerships among government, industry, and academia to promote innovation.
6. **Supply Chain Resilience:** Develop resilient domestic supply chains while remaining integrated with global semiconductor value chains.

Conclusion: India's Semiconductor Mission represents a strategic long-term investment rather than a short-term industrial initiative. By strengthening domestic capabilities while integrating with global supply chains, India can emerge as a leading semiconductor and electronics manufacturing hub.

Question: Chipmaking is more than a seasonal obsession in India now." Discuss the significance of India's Semiconductor Mission, its challenges, and the way forward.

Source: [The Hindu](#)

India now has the funds, the talent and the opening for a research leap

Source: The post "India now has the funds, the talent and the opening for a research leap" has been created based on "India now has the funds, the talent and the opening for a research leap" published in "Indian Express" on 18th July 2026.

UPSC Syllabus: GS-3 Economy

Context: Recent disruptions such as the Strait of Hormuz crisis highlighted the risks of dependence on external sources for critical technologies and resources. Technological resilience and long-term self-reliance can be achieved only by building strong domestic research and innovation capabilities.

Need for Strengthening R&D

1. **Strategic Autonomy:** Critical technologies have become instruments of geopolitics, making technological self-reliance essential for national security.
2. **Supply Chain Resilience:** Domestic R&D reduces vulnerability to export restrictions, technology denial, and global supply chain disruptions.
3. **Innovation-led Growth:** Strong research capabilities enable India to transition from a consumer of intellectual property to a producer of advanced technologies.
4. **Global Competitiveness:** Indigenous innovation enhances India's position in global value chains and strategic sectors.

Current Status of India's R&D Ecosystem

1. **Low R&D Spending:** India spends only **0.64% of GDP** on R&D, which is significantly below the global average.
2. **Limited Private Participation:** Barely two-fifths of India's R&D expenditure is financed by private industry, compared to over three-fourths in countries like China, South Korea, and the USA.
3. **Untapped Potential:** India possesses a large talent pool and strong digital infrastructure but requires greater investment in research.

Government Initiatives

1. **Anusandhan National Research Foundation (ANRF):** Established as a statutory body to promote collaboration among academia, industry, start-ups, philanthropy, and the diaspora.
2. **Research, Development and Innovation (RDI) Fund:** Provides **₹1 lakh crore** over six years to support private-sector research.
3. **ANRF Core:** Allocates **₹50,000 crore** over five years for fundamental scientific research.
4. **Catalytic Funding:** Public investment aims to leverage significantly higher private investment for commercialization and scaling of innovations.
5. **Ecosystem Development:** Aligns funding, procurement, and regulatory support to strengthen the innovation ecosystem.

Role of Industry

1. **Private Investment:** Mobilise greater corporate investment in research beyond public funding support.
2. **Strategic Research:** Prioritise technologies critical for national security and economic competitiveness.
3. **Institutional Capacity:** Establish dedicated R&D centres, corporate venture funds, and long-term innovation strategies.
4. **Collaborative Innovation:** Partner with academia, start-ups, Global Capability Centres (GCCs), and ANRF for joint research projects.
5. **Talent Retention:** Create world-class research opportunities to retain highly skilled scientific talent in India.
6. **Example of Pharmaceutical Success:** After adopting the WTO intellectual property regime, Indian pharmaceutical companies invested in process innovation and regulatory excellence, transforming India into the "pharmacy of the world." This demonstrates the benefits of sustained domestic capability building.

Way Forward

1. **Increase R&D Expenditure:** Raise national R&D spending with greater private-sector participation.
2. **Strengthen Academia-Industry Linkages:** Promote collaborative research and commercialization of innovations.
3. **Support Deep-tech Ecosystem:** Encourage start-ups, venture capital, and technology-intensive enterprises.
4. **Leverage India's Advantages:** Utilise India's demographic dividend, digital public infrastructure, and favourable global supply chain diversification.
5. **Adopt Long-term Vision:** Focus on sustained capability building instead of short-term commercial gains.

Conclusion: The government can create an enabling ecosystem, but industry must invest in long-term research and innovation. By strengthening domestic R&D capabilities, India can achieve technological self-reliance, improve strategic resilience, and emerge as a global innovation leader.

Question: Technological self-reliance requires strong domestic research and development (R&D) capabilities. Discuss the role of research, industry, and government in making India a global innovation hub.

Source: [Indian Express](#)

What is BIMSTEC, and why is it in focus ahead of its 30th anniversary?

UPSC Syllabus: Gs Paper 3- Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

Introduction

What is BIMSTEC, and why is it in focus ahead of its 30th anniversary?

Introduction

The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is emerging as an important regional platform as it approaches its **30th anniversary in 2027**. The organisation is expanding cooperation to address **terrorism, organised crime, cyber threats, maritime security and disaster management**. Its growing focus on regional security was highlighted at the **Fifth BIMSTEC National Security Chiefs' Meeting**, where member countries discussed measures to strengthen cooperation against both traditional and emerging security challenges.

What is BIMSTEC?

1. **Regional Organisation:** BIMSTEC stands for the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation. It brings together countries connected by the Bay of Bengal and acts as a bridge between South Asia and Southeast Asia.
2. **Member Countries:** The organisation has seven members—Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka and Thailand.

3. **Evolution of the Grouping:** The organisation began as BIST-EC in 1997 with Bangladesh, India, Sri Lanka and Thailand. It became BIMST-EC after Myanmar joined and was renamed BIMSTEC in 2004 after Nepal and Bhutan became members.
4. **Renewed Momentum:** The grouping remained largely inactive for many years. It gained fresh momentum after 2016, when India increased its engagement following the Uri terrorist attack and the boycott of the SAARC Summit in Islamabad.

Why was BIMSTEC Established?

1. **Bridge Between Two Regions:** BIMSTEC provides a common platform where countries of South Asia and Southeast Asia can work together on shared regional issues.
2. **Alternative to SAARC:** With SAARC remaining largely inactive, BIMSTEC has emerged as an important platform for regional cooperation among neighbouring countries.
3. **Supporting Landlocked Members:** Nepal and Bhutan can benefit from better access to the Bay of Bengal through stronger regional connectivity with other BIMSTEC members.
4. **Shared Regional Interests:** The grouping allows members to cooperate in areas such as connectivity, security, economic development and disaster management, which affect all countries around the Bay of Bengal.

Why is BIMSTEC Strategically Important?

1. **Addressing Common Security Threats:** BIMSTEC provides a platform to tackle terrorism, transnational organised crime, cyber security and maritime security through regional cooperation.
2. **Regional Significance:** BIMSTEC connects South and Southeast Asia and represents about 1.7 billion people, nearly 22% of the world's population, with a combined GDP of about \$5 trillion.
3. **Maritime Importance:** The Bay of Bengal is an important route between the Indian and Pacific Oceans. Cooperation through BIMSTEC can improve maritime safety, freedom of navigation and better use of the Bay's natural resources.
4. **Economic Potential:** BIMSTEC represents around 1.7 billion people, nearly 22% of the world's population, with a combined GDP of about \$5 trillion, making it an economically significant regional grouping..
5. **Managing Future Risks:** The organisation provides a platform for members to respond together to challenges created by climate change, pandemics and global conflicts, which affect regional stability and economic resilience.
6. **Supporting India's Northeast:** Better connectivity with Bangladesh and Myanmar can improve development in India's Northeast. Projects such as the India–Myanmar–Thailand Trilateral Highway and the Kolkata–Siliguri–Guwahati–Imphal link support this objective.

7. **Closer Engagement with ASEAN:** Stronger cooperation with Thailand and Myanmar can improve India's engagement with ASEAN. The BIMSTEC Connectivity Master Plan also complements the ASEAN Master Plan on Connectivity 2025.
8. **Strategic Balance in the Region:** China's Belt and Road Initiative (BRI) has expanded infrastructure investment across most BIMSTEC countries except India and Bhutan. BIMSTEC gives India an alternative platform to promote regional connectivity and present the Bay of Bengal as an open and peaceful region.

Why is BIMSTEC in Focus Ahead of its 30th Anniversary?

1. **National Security Chiefs' Meeting:** India hosted the Fifth BIMSTEC National Security Chiefs' Meeting in New Delhi under the leadership of National Security Adviser Ajit Doval. Senior security officials from all seven member countries participated.
2. **New Maritime Cooperation Framework:** Member countries adopted common guidelines for Humanitarian Assistance and Disaster Relief (HADR) operations and guiding principles for interactions between maritime law enforcement agencies at sea.
3. **Improving Disaster Response:** The new HADR guidelines aim to make disaster response faster, better coordinated and more effective during natural disasters and emergencies.
4. **Safer Maritime Operations:** The guiding principles for maritime law enforcement agencies will improve operational coordination and make interactions at sea more predictable and safer.
5. **Expanding Security Agenda:** Members agreed to deepen cooperation against terrorism, organised crime, cyber threats, maritime security and energy security. They also discussed regional connectivity, disaster response and other emerging security challenges.
6. **Need for Regional Cooperation:** The meeting recognised that geopolitical conflicts, supply-chain disruptions, technological threats and economic stress require closer cooperation among member countries.
7. **Progress in Institutional Capacity:** BIMSTEC reviewed progress in counter-terrorism, disaster management and institutional capacity building, showing the organisation's expanding security agenda.
8. **India's Regional Vision:** India described BIMSTEC as an important pillar of its Neighbourhood First Policy, Act East Policy and MAHASAGAR vision, placing regional security, connectivity, economic resilience and capacity building at the centre of future cooperation.

Challenges Before BIMSTEC

1. **Regional Political Tensions:** Disputes between Bangladesh and Myanmar and tensions between India and Bangladesh after Sheikh Hasina's removal have affected regional cooperation.

2. **Myanmar Crisis:** The continuing civil war in Myanmar has reduced its role as a land bridge between South Asia and Southeast Asia.
3. **Pending Regional Agreements:** Important agreements such as the Free Trade Agreement, Coastal Shipping Agreement and Motor Vehicles Agreement have remained unresolved despite repeated negotiations.
4. **Slow Institutional Progress:** BIMSTEC has often progressed slowly. It even took around 17 years to establish a permanent secretariat.
5. **Limited Multilateral Focus:** Member countries have generally given greater importance to bilateral relations, slowing the growth of stronger regional cooperation.
6. **Concerns Over India's Role:** Some members have raised concerns that India plays a dominant role while the interests of smaller countries do not always receive equal attention.
7. **Competing Regional Priorities:** Myanmar and Thailand continue to focus strongly on ASEAN, reducing the attention given to BIMSTEC.
8. **Resource Constraints:** Limited financial and human resources continue to affect the organisation's functioning, even though India contributes about 32% of the annual budget.

Way Forward

1. **Strengthen Economic Integration:** Member countries should increase intra-BIMSTEC trade, build regional supply chains and improve economic cooperation to reduce external vulnerabilities.
2. **Improve Disaster Preparedness:** Members should strengthen disaster cooperation, and India should encourage them to join the Coalition for Disaster Resilient Infrastructure (CDRI).
3. **Enhance Security Cooperation:** Countries should complete the remaining legal framework that allows law enforcement agencies to cooperate more effectively against terrorism, organised crime, violent extremism and cyber-attacks.
4. **Build Stronger Regional Institutions:** BIMSTEC should develop stronger collective institutional capacity while protecting the interests of all member countries through balanced regional cooperation.
5. **Promote Equal Partnership:** India should continue working as an equal and trusted partner so that all member countries feel greater ownership of the organisation.
6. **Accelerate Connectivity Projects:** Faster implementation of pending connectivity projects can improve trade, mobility and regional integration across the Bay of Bengal.

Conclusion

As BIMSTEC approaches its **30th anniversary**, it is becoming a stronger platform for regional cooperation in **security, connectivity and disaster management**. Recent initiatives show the members' commitment to deeper collaboration. Addressing institutional and political challenges while strengthening coordination can help BIMSTEC become a more effective and result-oriented organisation for the **Bay of Bengal region**.

Question for practice:

Discuss the significance of BIMSTEC and explain why it is in focus ahead of its 30th anniversary.

Source: [Indian Express](#)

Perils of Unchecked Cybercrime

UPSC Syllabus: Gs Paper 3- Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.

Introduction

India's digital transformation has strengthened governance, financial inclusion and public services through platforms like **UPI** and **Aadhaar**. However, the rapid rise of cybercrime has emerged as a serious challenge to this progress. In **2025**, India reported **28.15 lakh cybercrime complaints** and losses of **₹22,495 crore**, with complaints rising **24% over 2024**. Cybercrime has now become a structural threat to economic growth, public trust and the vision of **Viksit Bharat 2047**.

Why Cybercrime is Emerging as a National Security and Economic Concern

1. **Rapid rise in cybercrime:** Cybercrime has grown at an alarming pace. India reported **28.15 lakh cases in 2025**, while financial losses crossed **₹22,495 crore**, showing the growing scale of the crisis.
2. **Threat to Digital India:** India's digital platforms have improved service delivery and financial inclusion. However, the same digital ecosystem has become a major target for organised cybercriminals.
3. **Beyond a law-and-order issue:** Cybercrime is no longer limited to individual fraud cases. It has become a structural challenge that directly affects economic growth and national development.
4. **Challenge to Viksit Bharat:** A secure digital environment is essential for achieving **Viksit Bharat 2047**. Large-scale cyber fraud weakens confidence in digital governance and digital transactions.

Major Dimensions of the Cybercrime Ecosystem

1. **Transnational scam networks:** Organised scam compounds operate across the **Golden Triangle** and the **Cambodia-Thailand border**. Many of these networks function with strong cross-border support and organised supply chains.
2. **Human trafficking for cyber fraud:** Young Indians are trapped through fake overseas job offers. They are forced to run investment scams and **Digital Arrest** frauds against victims across different countries.

3. **Digital Arrest frauds:** Fraudsters impersonate customs, narcotics or police officials and falsely accuse victims of serious crimes. Victims are kept under fake video surveillance and pressured into transferring their savings.
4. **Emerging technology-driven threats:** **Generative AI** and **deepfake audio and video** are making impersonation much easier. They are increasingly used to deceive citizens by pretending to be officials, family members or executives.

Consequences for Economy, Society and Governance

1. **Massive financial losses:** India's cybercrime losses increased nearly **41 times**, from **₹551 crore in 2021** to over **₹22,800 crore in 2024**. This reflects the rapidly expanding financial impact of cybercrime.
2. **Loss of household savings:** Fraudulent transactions drain personal savings that could otherwise support household spending and economic consumption. This weakens overall economic activity.
3. **Disruption to business productivity:** Cyberattacks interrupt normal business operations and essential services. They also increase operational risks for both public and private institutions.
4. **Impact on investment climate:** Frequent cyber incidents raise concerns about the security of India's digital economy. This increases the cost of attracting domestic and foreign investment.
5. **Psychological and emotional harm:** Cyber fraud causes serious emotional distress along with financial loss. **NITI Aayog** has recognised that the psychological impact often exceeds the monetary damage suffered by victims.
6. **Declining trust in digital governance:** Citizens expect digital payments, hospitals and Aadhaar-linked services to remain secure. Repeated cyber incidents reduce confidence in digital governance and online public services.
7. **Need for cyber resilience as an economic strength:** Countries like **Singapore** have made cyber resilience part of their economic strength, while **Israel** has developed it into a strategic industry. India also needs strong cyber resilience to support its digital economy and future growth.

Cyber Threats to Critical Infrastructure and National Security

1. **Attack on healthcare infrastructure:** The **2022 AIIMS Delhi ransomware attack** disrupted outpatient, inpatient, laboratory and billing services for nearly **two weeks**. Around **1.3 terabytes of data** were encrypted, and records of **3-4 crore patients** were feared to be compromised.
2. **Concerns over digital public platforms:** Allegations of a **2023 CoWIN data exposure** raised questions about the security of important digital public platforms. Such incidents highlight the need to strengthen data protection across government systems.
3. **Cross-border links in major attacks:** Investigations into the AIIMS attack traced digital trails to **Hong Kong and China**. The case required coordinated action by **CERT-In, Delhi Police, MHA and NIA**, showing the complexity of modern cyber investigations.

4. **Foreign-backed cyber fraud networks:** In January 2026, Delhi Police dismantled a **Taiwan-linked syndicate operated from Pakistan** that cheated citizens of nearly **₹100 crore** by posing as Anti-Terrorist Squad officers. This shows that organised cybercrime often operates across multiple countries.
5. **Malicious applications affecting public safety:** Some **Chinese battery management apps** disrupted e-rickshaw operations in Delhi, creating traffic problems and threatening public safety. The government later directed that these apps be removed from app stores.

Institutional Response and Existing Gaps

1. **Financial fraud prevention efforts:** The **Indian Cyber Crime Coordination Centre (I4C)** has helped freeze over **₹8,031 crore** in fraudulent transactions. This has reduced losses in many reported cyber fraud cases.
2. **Citizen reporting mechanism:** The **Citizen Financial Cyber Fraud Reporting System** has saved more than **₹7,130 crore** across **23 lakh complaints**. Quick reporting has improved the chances of stopping fraudulent transactions.
3. **Need for better institutional coordination:** Cybersecurity requires real-time coordination among **I4C, CERT-In, RBI, intelligence agencies and state police**. A fragmented response cannot effectively tackle organised cybercrime.
4. **Shortage of cyber-forensic professionals:** India faces a shortage of trained cyber investigators and forensic experts. Expanding skilled manpower is necessary to investigate increasingly complex cyber offences.
5. **Low cyber awareness among users:** Digital access has expanded rapidly, but cyber literacy has not grown at the same pace. New internet users, especially in **Tier-2 and Tier-3 towns**, remain highly vulnerable to online fraud.

Measures Needed to Build Cyber Resilience

1. **Whole-of-government cybersecurity:** Cybersecurity should become a national priority with real-time coordination among I4C, CERT-In, RBI, intelligence agencies and state police.
2. **Cyber hygiene as a public movement:** Cyber awareness should become part of school education and corporate training. Preventive awareness can reduce the success of online fraud.
3. **Use AI for cyber defence:** Artificial Intelligence should identify mule accounts and suspicious behaviour in real time. This can shift the response from reactive policing to predictive threat detection.
4. **Strengthen international cooperation:** India should pursue bilateral and multilateral cooperation through extradition frameworks, mutual legal assistance, Interpol coordination and diplomatic pressure to dismantle scam networks in South-East Asia.

Conclusion

Unchecked cybercrime threatens India's economy, governance, national security and public trust. A secure digital ecosystem is essential for **Digital India** and **Viksit Bharat 2047**. Strengthening institutions, improving cyber awareness, expanding international cooperation and protecting critical digital infrastructure are necessary to build trust and ensure safe, resilient and sustainable digital growth.

Question for practice:

Examine the growing threat of unchecked cybercrime in India and discuss its implications for the economy, national security, governance, and the measures needed to build cyber resilience.

Source: [Businessline](#)

Vikram-1: Charting India's Cosmic Future

Source: The post "Vikram-1: Charting India's Cosmic Future" has been created based on "Vikram-1: Charting India's Cosmic Future" published in "PIB" on 20th July 2026.

UPSC Syllabus: GS-3-Science and Technology

Context: India's space sector has entered a new phase with the **Indian Space Policy, 2023**, which has opened the entire space value chain to private participation. The upcoming **Vikram-1**, India's first privately developed orbital launch vehicle, reflects the success of these reforms.

Key Reforms in India's Space Sector

1. The **Indian Space Policy, 2023** allows Non-Government Entities (NGEs) to participate across the entire space value chain and promotes innovation, private investment, and international collaboration.
2. **IN-SPaCe** has been established as a single-window regulator to authorise private space activities, provide access to ISRO facilities, and ensure transparent and predictable regulatory approvals.
3. The Government has introduced **financial support mechanisms**, including the IN-SPaCe Seed Fund Scheme, the ₹1,000 crore Venture Capital Fund, and the ₹500 crore Technology Adoption Fund, to encourage innovation and commercialisation of indigenous technologies.
4. **NewSpace India Limited (NSIL)** has been designated as ISRO's commercial arm to undertake commercial launches, transfer technologies to industry, and promote private participation in satellite and launch vehicle production.
5. The **liberalised FDI policy** permits higher levels of automatic foreign investment in satellite manufacturing, launch vehicles, and satellite components, thereby attracting global investment and technology.

Significance of the Reforms

1. The reforms have significantly increased **private participation**, with the number of Indian space startups growing from one in 2014 to more than 400 in 2026.
2. The reforms have strengthened **indigenous technological capabilities** by encouraging the development of advanced launch vehicles, satellites, and propulsion technologies.
3. The reforms are expected to expand India's **space economy** from nearly USD 8.4 billion at present to USD 40–45 billion by 2030 and USD 100 billion by 2040.

4. The reforms have enhanced India's **commercial launch capabilities**, enabling the country to emerge as a trusted provider of cost-effective launch services.
5. The reforms have promoted **public-private partnerships** in sectors such as agriculture, disaster management, climate monitoring, Earth observation, and satellite-based services.
6. The reforms have generated **employment, investment, and high-technology manufacturing**, thereby strengthening India's knowledge economy.
7. The reforms have improved **strategic self-reliance** by reducing dependence on foreign technologies and strengthening India's position in the global space sector.

Challenges

1. The space sector continues to face **high capital requirements** and long gestation periods, which discourage private investment.
2. Private companies still have **limited access to advanced testing, manufacturing, and launch infrastructure** compared to established global competitors.
3. The regulatory framework requires **further simplification** to ensure faster approvals and ease of doing business.
4. Indian companies face **intense global competition** from well-established international private space enterprises.
5. There is a need to develop a **larger pool of skilled manpower** in advanced space technologies, manufacturing, and research.

Way Forward

1. The Government should strengthen **research and innovation** by promoting collaboration among ISRO, industry, startups, and academic institutions.
2. Greater **financial support and private investment** should be encouraged through expanded venture funding and easier access to credit.
3. India should develop **world-class testing, manufacturing, and launch infrastructure** to support private space enterprises.
4. The regulatory framework should be **further streamlined** to provide faster approvals and long-term policy certainty.
5. India should expand **international partnerships** while simultaneously promoting indigenous technology development under the vision of **Atmanirbhar Bharat**.

Conclusion: India's space sector reforms have created a strong foundation for innovation, commercialisation, and private participation. With sustained policy support, stronger public-private partnerships, and successful missions such as **Vikram-1**, India is well positioned to emerge as a leading global space power and a key contributor to the future space economy.

Question: Recent space sector reforms have transformed India from an ISRO-led model to a vibrant public-private space ecosystem. Discuss the key reforms and their significance in making India a global space power.

Source: [PIB](#)

Balancing energy security, environmental concerns

Source: The post “Balancing energy security, environmental concerns” has been created based on “Balancing energy security, environmental concerns” published in “Business Line” on 20th July 2026.

UPSC Syllabus: GS-3-Science and Technology

Context: Coal gasification is the process of converting coal into **synthesis gas (syngas)** using controlled oxygen and steam at high temperature and pressure. It enables the production of ammonia, urea, methanol, hydrogen, synthetic natural gas, and liquid fuels while reducing dependence on imported feedstocks.

Significance of Coal Gasification

1. Coal gasification can **strengthen India's energy security** by reducing dependence on imported natural gas, ammonia, methanol, and urea.
2. It enables **productive utilisation of India's vast coal reserves**, which include around **400 billion tonnes of coal and 47 billion tonnes of lignite**.
3. The recently approved **₹375 billion incentive scheme** aims to gasify **75 million tonnes of coal by 2030**, thereby promoting domestic production of industrial feedstocks.
4. The scheme is expected to **attract investments worth ₹2.5–3 trillion** and generate nearly **50,000 direct and indirect jobs**, boosting industrial growth.
5. Coal gasification supports the development of a **domestic coal-to-chemicals ecosystem**, thereby improving supply chain resilience during global geopolitical disruptions.
6. It also provides an **alternative use for coal** as India's electricity sector gradually shifts towards renewable energy.

Environmental Concerns

1. Hydrogen production through coal gasification **generates nearly twice the carbon dioxide emissions** compared to natural gas-based production.
2. Replacing imported feedstocks through the coal-to-syngas route could **increase annual CO₂ emissions from about 47–52 million tonnes to 106–111 million tonnes**.
3. Higher greenhouse gas emissions could make it **more difficult for India to achieve its climate commitments and net-zero goals**.
4. Coal gasification also remains **dependent on carbon-intensive fossil fuels**, thereby slowing the transition towards cleaner energy sources.
5. India's **Carbon Capture, Utilisation and Storage (CCUS)** ecosystem remains underdeveloped, with only a few operational projects, limiting the ability to manage additional emissions.

Challenges

1. The technology requires **high capital investment** and involves long project gestation periods.
2. Large-scale deployment depends on the **rapid development of CCUS infrastructure**, which is currently inadequate.
3. Coal gasification projects require **continuous policy support, financing, and technological innovation** to remain economically viable.
4. Environmental concerns and stricter climate regulations may affect the **long-term sustainability and public acceptance** of such projects.

Way Forward

1. India should **integrate coal gasification projects with Carbon Capture, Utilisation and Storage (CCUS)** to minimise carbon emissions.
2. The Government should **promote research and development** in cleaner coal technologies and low-carbon hydrogen production.
3. Public and private investment should be encouraged to **expand CCUS infrastructure and improve technological efficiency**.
4. Coal gasification should complement, rather than replace, **renewable energy and green hydrogen initiatives** to ensure balanced energy transition.
5. A balanced policy approach should simultaneously promote **energy security, industrial growth, and environmental sustainability**.

Conclusion: Coal gasification offers India a strategic opportunity to reduce import dependence, improve energy security, and promote industrial development. However, its long-term success will depend on effectively managing its carbon footprint through cleaner technologies, robust CCUS infrastructure, and a balanced transition towards a low-carbon economy.

Question: Coal gasification can strengthen India's energy security but raises significant environmental concerns." Discuss.

Source: [Business Line](#)

The Stark Reality of the Missing Jobs for India's Gen Z

UPSC Syllabus: Gs Paper 3- Indian economy and Infrastructure

Introduction

India has one of the world's largest youth populations, making its demographic dividend a major opportunity. However, this advantage depends on whether young people can successfully move from education into productive, secure and meaningful employment. High unemployment, poor job quality, weak labour market transition and changing workplace expectations show that many Gen Z workers are struggling to realise their potential. Unless these challenges are addressed together, India's demographic dividend may remain an unrealised promise.

Demographic Dividend and Employment Challenges

1. **Large youth population, unrealised dividend:** India has **371 million youth (UN, 2025)**. However, the demographic dividend can succeed only when young people move into productive and secure employment.
2. **Gen Z forms a major workforce:** According to **PLFS 2023-24**, India has **29.94 crore working-age Gen Z**, making their successful employment essential for India's future growth.

3. **Delayed labour market transition:** A large share of Gen Z remains in education, with **41.7% of young males** and **38.4% of young females** still studying. This delays their entry into the labour market.
4. **Low labour force participation:** The **Labour Force Participation Rate (LFPR) among Gen Z is 41.7%**, compared with **75% among Millennials**. Rural Gen Z records a higher LFPR (**44.1%**) than urban Gen Z (**37.2%**).
5. **Persistent gender gap:** Female participation remains significantly lower than male participation. The **LFPR among rural Gen Z females is 28%** and **21.1% among urban females**, compared with **59.3%** and **51.3%** respectively for young men.
6. **High youth unemployment:** The **overall unemployment rate among Gen Z is 11.9%**, compared with **2% among Millennials**. It rises to **17.1% among urban Gen Z**, while **urban Gen Z women face the highest unemployment at 22.6%**.
7. **Graduate unemployment signals a jobs crisis:** The unemployment rate reaches **29% among graduate Gen Z males** and **36.9% among graduate Gen Z females**, showing that higher education is no longer guaranteeing suitable employment.
8. **Poor quality of employment:** Many young workers enter unpaid family work, casual employment or insecure jobs. Only **20.1% of Gen Z workers** receive social security, **14.1%** have formal job contracts, and only **17.3%** have contractual employment.
9. **Women's unpaid work remains high:** About **35% of Gen Z women** remain outside the labour force because of domestic duties. Childcare, safety concerns, mobility constraints and social norms continue to limit their participation.
10. **Changing workplace expectations:** Gen Z increasingly values learning opportunities, meaningful work and work-life balance. According to the **Naukri Gen Z Work Code Report 2026**, **57%** define career growth through learning new skills, while **34%** cite poor work-life balance and **31%** limited career growth as major stress factors.

Structural Causes Behind the Crisis

1. **Weak school-to-work transition:** The biggest challenge is not education but the weak transition from classrooms to productive employment.
2. **Job creation has not matched the growing workforce:** India is producing educated youth faster than it is creating quality employment.
3. **Skill mismatch and technological change:** The education system is not fully aligned with labour market needs. At the same time, automation and the growing use of **Artificial Intelligence (AI)** are changing the nature of available jobs.
4. **Structural barriers limit women's employment:** Childcare responsibilities, safety concerns, mobility constraints and social norms continue to keep many women outside paid employment or push them into unpaid work.

5. **Workplaces are not meeting Gen Z expectations:** Many organisations are designed around older career models. However, Gen Z gives greater importance to continuous learning, meaningful work and work-life balance than to promotions alone.
6. **Digital and financial pressures increase workplace stress:** Despite being the most digitally connected generation, Gen Z reports high levels of digital loneliness. Mental health disorders are more common in urban areas, while algorithmic burnout, financial insecurity and unstable incomes have become major workplace concerns.
7. **Limited managerial support weakens employee well-being:** Many managers are promoted for technical skills but are not trained to recognise or respond to mental health concerns. This reduces psychological safety and employee engagement.

Implications for India's Economy and Society

1. **Demographic dividend may remain unrealised:** A large youth population cannot become an economic advantage unless young people find productive and secure employment.
2. **Loss of educated human capital:** Rising graduate unemployment means the economy is unable to fully utilise its educated workforce. This reduces the returns from investment in education.
3. **Growing frustration among young people:** When education fails to improve employment prospects, frustration increases and confidence in future opportunities weakens. This also puts financial pressure on families investing in higher education.
4. **Expansion of insecure employment:** The growth of informal and poorly protected jobs leaves many young workers without contracts or social security. This increases employment insecurity and weakens long-term workforce stability.
5. **Changing workplace behaviour:** Many Gen Z employees now avoid work beyond their assigned responsibilities (**Quiet Quitting**), continue in unsatisfying jobs while showing frustration (**Resenteeism**), prepare alternative career options while remaining employed (**Career Cushioning**), or consciously reduce their work engagement to protect their mental health (**Deliberate Disengagement**). These behaviours reflect changing workplace expectations rather than a lack of ambition.
6. **Lower organisational performance:** Organisations that overlook employee well-being face lower engagement and higher attrition. At the same time, many continue to measure participation in wellness programmes instead of their actual outcomes.
7. **Rising labour dissatisfaction:** Poor wages, insecure employment and weak labour protection can increase worker frustration, as reflected in recent labour protests demanding better wages and working conditions.

Way Forward

1. **Expand labour-intensive sectors:** Job creation should receive greater priority so that more young people can move into productive and decent employment.

2. **Strengthen school-to-work pathways:** Apprenticeships, closer links between training institutions and employers, and stronger industry connections can improve the transition from education to employment.
3. **Promote formal employment:** Formal hiring incentives, better job contracts and wider social security coverage are needed to improve employment quality.
4. **Support women's workforce participation:** Safe transport, childcare support and measures that reduce barriers to paid work can help more women join and remain in the labour force.
5. **Build healthier workplaces:** Organisations should create clear career pathways, encourage continuous skill development and strengthen psychological safety at work.
6. **Train managers to support employee well-being:** Managers should receive practical training to identify workplace stress and support employees before problems become severe.
7. **Measure real well-being outcomes:** Organisations should focus on improvements in employee well-being, retention and productivity instead of only tracking participation in wellness programmes.

Conclusion

India's demographic dividend will succeed only when education leads to productive employment and workplaces support long-term well-being. Creating quality jobs, strengthening labour market transition, expanding formal employment and building healthier workplaces are equally important. Without these changes, India's growing youth population may become an unrealised opportunity rather than its greatest economic strength.

Question for practice:

Examine the major employment and workplace challenges faced by India's Gen Z and suggest measures to realise the country's demographic dividend.

Source: [The Hindu](#)

India's F&O Boom Needs Adequate Protections

UPSC Syllabus: Gs Paper 3- Indian economy

Introduction

India's Futures and Options (F&O) market has grown rapidly, making India one of the world's largest derivatives markets. While derivatives are meant to help investors manage financial risks, rising retail participation has increasingly shifted the market towards speculation. Heavy and repeated losses, mounting debt, and growing financial distress among small investors have exposed serious gaps in investor protection. This has made stronger regulation and suitability safeguards an urgent policy priority.

Understanding the Futures & Options (F&O) Market

1. **Meaning of F&O:** Futures and Options are derivative contracts that allow investors to buy, sell, or lock the price of an underlying asset at a future date without owning the asset. These assets include stocks, market indices, and commodities.
2. **Purpose of Derivatives:** Institutional investors mainly use F&O contracts to hedge their existing portfolios against market risks. Many retail investors, however, enter the market mainly to speculate for quick financial gains.
3. **Rapid Expansion of the Market:** India has moved from being a marginal player to one of the world's largest F&O markets within the last eight years. The introduction of weekly expiry contracts during **FY16–FY19** played a major role in this rapid growth.
4. **Easy Access to Trading:** Mobile trading applications, instant UPI payments, discount brokerages, and simple account opening have made F&O trading easily accessible to a large number of people.
5. **Role of Market Conditions:** A strong bull market and the growing popularity of social media trading content encouraged more individuals to participate in derivative trading.

The Growing Crisis in India's F&O Market

1. **Large-Scale Retail Losses:** A **July 2025 SEBI study** found that **over 90%** of individual traders incurred losses during **FY22–FY25**. Their cumulative losses crossed **₹2.8 lakh crore**, while the average net loss exceeded **₹4 lakh** per trader.
2. **Very Few Profitable Traders:** Only **1%** of retail traders earned a profit of more than **₹1 lakh**. This shows that consistent success remains rare for individual participants.
3. **Profile of Affected Investors:** Around **86.3%** of traders are men, **over 72%** come from Tier-2 and Tier-3 cities, and **75%** earn less than **₹5 lakh annually**. These losses therefore affect financially vulnerable households more severely.
4. **Debt and Financial Distress:** Continuous trading losses have pushed many investors into debt. In several cases, mounting financial pressure has also resulted in suicides.
5. **Growing Retail Participation:** Even after regulatory measures reduced overall F&O activity, retail investors continued to increase their presence. **NSE data for May 2026** shows that individual investors accounted for **31%** of the equity derivatives market, a **4% year-on-year increase**.

Why Do Retail Investors Continue to Lose Money?

1. **Speculative Trading:** F&O contracts are mainly designed for hedging against market risks. However, many retail investors use them mainly to earn quick profits, increasing their exposure to repeated losses.
2. **Uneven Playing Field:** Retail investors compete against institutions using advanced algorithmic trading, superior technology, faster execution, and better market access. **97%** of institutional profits and **96%** of proprietary trading profits come from algorithmic trading, making competition highly unequal.

3. **Behavioural and Psychological Biases:** The hope of recovering losses, the attraction of quick profits, and repeated near-success experiences encourage many investors to continue trading despite heavy losses.
4. **Digital Trading Ecosystem:** Mobile trading apps, instant UPI payments, discount brokerages, and social media trading content have made speculative trading easy and attractive. This environment encourages frequent participation, especially among inexperienced investors.
5. **High Transaction Costs:** Many traders ignore brokerage charges, exchange fees, and taxes while focusing only on price movements. More than **70%** of transaction costs arise from brokerage and exchange charges.
6. **Unequal Distribution of Gains:** During **FY24**, retail traders lost **₹74,800 crore**, while proprietary traders earned **₹33,000 crore** and FPIs earned **₹28,000 crore**, reflecting the unequal outcomes within the market.
7. **Persistent Participation Despite Losses:** More than **75%** of loss-making traders continue trading year after year, showing that financial losses alone are not discouraging speculative participation.

Regulatory Measures and Their Limitations

1. **Measures Introduced by SEBI:** Regulators increased minimum contract sizes, restricted weekly expiries, made upfront premium payments compulsory, enforced a **50% cash collateral** rule, strengthened intraday position monitoring, and required brokers to display prominent risk warnings.
2. **Limited Impact on Retail Participation:** These measures temporarily reduced trading volumes, but they did not discourage retail investors. Instead, individuals increased their share in the equity derivatives market to **31%** in **May 2026**, up **4% year-on-year**.
3. **Focus on Market Rules Rather Than Behaviour:** The reforms mainly changed trading conditions, but they did not address the behavioural factors and speculative mindset that continue to attract retail investors.
4. **Need to Move Beyond Warning-Based Regulation:** Experience shows that warnings alone cannot prevent repeated losses. Stronger entry safeguards are required to protect financially vulnerable investors.
5. **Balancing Market Growth and Investor Safety:** Regulation should encourage healthy market development while reducing avoidable financial risks for small investors.

Way Forward

1. **Adopt Global Best Practices:** India can strengthen investor protection by learning from mature derivatives markets that rely on strict suitability checks instead of only issuing risk warnings.
2. **Customer Knowledge Assessment:** Singapore requires brokers to conduct a formal **Customer Knowledge Assessment** before allowing investors to trade exchange-traded derivatives. This helps ensure that investors understand the risks.

3. **Broker Responsibility in Global Markets:** In the United States, brokers are legally responsible for assessing the suitability of retail clients. Approving inexperienced traders for complex strategies can result in severe penalties and civil liability.
4. **Introduce Entry Standards:** SEBI should consider prescribing a minimum liquid capital requirement and mandatory entry examinations before allowing retail participation in the F&O market.
5. **Strengthen India's Regulatory Framework:** SEBI should place the legal responsibility of verifying investor suitability on brokerages before granting F&O access, ensuring stronger protection for retail investors.
6. **Protect Financial Stability:** Stronger safeguards should ensure that the expansion of India's derivatives market and the proposed NSE public listing do not come at the cost of retail investor welfare and overall financial stability.

Conclusion

India's F&O market has expanded faster than its investor protection framework. Passive risk warnings alone cannot safeguard retail investors in a market dominated by technology and speculation. Strong suitability checks, stricter entry standards, greater broker accountability, and balanced regulation are essential to protect vulnerable investors while ensuring the long-term stability and credibility of India's derivatives market.

Question for practice:

Examine the reasons behind the rising retail investor losses in India's Futures and Options (F&O) market and suggest measures needed to strengthen investor protection.

Source: [The Hindu](#)

The precarity of living in urban slums

Source: The post "The precarity of living in urban slums" has been created based on "The precarity of living in urban slums" published in "Business Line" on 21st July 2026.

UPSC Syllabus: GS Paper 2 – Governance

Context: Urban India has witnessed significant expansion in schools, health centres, Anganwadis, water supply, and municipal services. However, field observations show that the quality of public service delivery in urban slums remains uneven because of weak institutional design, fragmented accountability, and inadequate community participation.

Reason behind quality outcomes remaining uneven in urban slums

1. **Weak institutional design:** Urban governance structures remain administratively present, but they are too distant from slum communities to effectively address their daily needs.
2. **Fragmented accountability:** Although public infrastructure has improved, poor maintenance of schools, sanitation facilities, and drinking water systems reflects weak institutional accountability.
3. **Irregular basic services:** Water tankers supply water to uncovered bastis, but the absence of fixed schedules forces women to spend several hours collecting water, causing drudgery and health concerns.

4. **Challenges in school education:** Many teachers work sincerely, but excessive non-teaching responsibilities reduce the time available for classroom teaching. At the same time, weak teacher accountability in some schools adversely affects learning outcomes.
5. **Limited childcare services:** Anganwadis provide essential nutrition and childcare services, but their limited working hours prevent them from functioning as full-day childcare centres.
6. **Inadequate primary healthcare:** The absence of nearby public clinics forces slum residents to travel long distances even for minor illnesses, resulting in delayed treatment and increased health risks.
7. **Health vulnerabilities of migrants:** Migrant populations face occupational health risks, poor housing conditions, and a higher incidence of communicable diseases. The fear of losing daily wages often discourages them from seeking timely medical care.
8. **Sustainability concerns in waste management:** Waste-to-wealth initiatives have expanded through public-private partnerships, but their long-term sustainability remains uncertain because private partners face profitability concerns.
9. **Digital exclusion:** The increasing use of technology has improved service delivery, but inadequate community-level handholding often excludes vulnerable groups from accessing these services.

Measures to improve last-mile governance

1. **Basti-centric collaborative governance:** Urban governance should actively involve local communities in planning, implementation, and monitoring of public services.
2. **Devolution of untied funds:** Communities should receive untied financial resources so that they can address local priorities and improve the maintenance of public infrastructure.
3. **Community-managed public services:** Professional organisations and civil society groups should support communities in managing schools, health centres, sanitation facilities, and other public services.
4. **Strengthening primary healthcare:** Municipal governance should integrate a stronger public health focus by establishing accessible clinics with doctors, medicines, and diagnostic facilities in slum areas.
5. **Community learning centres:** Secondary schools should remain accessible beyond school hours so that children can use them as community learning centres despite overcrowded housing conditions.
6. **Women's empowerment through SHGs:** Self-Help Groups should be further strengthened because they promote savings, access to credit, leadership, and social support. Simultaneously, efforts should be made to reduce patriarchal barriers that limit women's financial and social autonomy.
7. **Greater local accountability:** Smaller governance units and elected representatives at the basti level should be created to improve accountability, trust, and responsiveness.
8. **Technology with community support:** Technology should be treated as a tool for improving service delivery and should be complemented by community-level assistance to prevent exclusion.

Conclusion: The major challenge in urban slums is not the lack of infrastructure but the absence of accountable and participatory governance. A basti-centric governance model based on devolved resources, stronger community participation, enhanced women's agency, and improved local accountability can ensure effective and inclusive last-mile service delivery.

Question: Urban social infrastructure has expanded, but quality outcomes remain uneven due to weak institutional design and the absence of meaningful community participation. Discuss in the context of urban slums. Suggest measures to improve last-mile governance.

Source: [Business Line](#)

Give talent its space

Source: The post “Give talent its space” has been created based on “Give talent its space” published in “Financial Express” on 21st July 2026.

UPSC Syllabus: GS Paper 3 – Science & Technology

Context: India's space sector has expanded rapidly after opening it to private participation in 2020. However, the recent resignations of ISRO scientists and the Department of Space's decision to restrict their exits have raised concerns about balancing talent retention with the development of a vibrant space ecosystem.

Challenges in talent retention at ISRO

1. **Restricting resignations does not address the root causes of attrition.** A memorandum cannot create motivation or commitment among scientists working on critical missions like Gaganyaan.
2. **Exit restrictions may discourage young talent from joining ISRO.** Scientists are more likely to prefer institutions that provide professional freedom and career flexibility.
3. **Treating every resignation as a national loss ignores the changing space ecosystem.** Scientists moving to Indian private space companies continue to contribute to national space capabilities.
4. **India's growing private space sector requires experienced professionals.** Start-ups developing launch vehicles, satellites, propulsion systems, and space-based services depend on skilled personnel trained by ISRO.
5. **ISRO's traditional role needs to evolve.** The organisation should be evaluated by the ecosystem it creates rather than by how tightly it retains its workforce.
6. **Institutional issues within ISRO also contribute to attrition.** Slow promotions, delayed projects, rigid hierarchies, limited recognition, and reduced professional autonomy encourage scientists to leave.
7. **The absence of robust succession planning increases disruption.** The departure of experienced scientists affects critical missions when specialised expertise is concentrated in a few individuals.

Measures to strengthen India's space ecosystem

1. **ISRO should focus on institutional reforms instead of imposing exit restrictions.** Faster career progression, performance-based rewards, and greater professional autonomy can improve job satisfaction.
2. **Collaboration between ISRO and the private sector should be strengthened.** Partnerships should move beyond procurement to include joint missions, shared research facilities, and collaborative innovation.
3. **Talent mobility should be institutionalised.** Fixed-term deputations, fellowships, and opportunities for scientists to move between ISRO, industry, and academia should be encouraged.
4. **IN-SPACE should develop frameworks for safe talent mobility.** It can facilitate knowledge sharing while protecting sensitive technologies and strategic projects.
5. **ISRO should concentrate on frontier research and strategic missions.** Routine commercial activities can increasingly be undertaken by private companies.
6. **Stronger succession planning and deeper technical teams should be developed.** This will reduce dependence on individual experts and minimise disruptions caused by resignations.

Conclusion: A dynamic space ecosystem requires the free flow of talent, technology, and innovation across public and private institutions. Instead of restricting scientists from leaving, India should strengthen ISRO

through institutional reforms, greater collaboration, and talent mobility to realise its long-term space ambitions.

Question: Talent mobility between public institutions and private industry is essential for building a robust space ecosystem. In this context, discuss the challenges of talent retention in ISRO and suggest measures to strengthen India's space sector.

Source: [Financial Express](#)

Canada-India Defence Collaboration for a Secure Future

Introduction

Canada and India are entering a new phase of defence cooperation as the global security environment undergoes rapid change. The rise of advanced military technologies, geopolitical uncertainty, and the need for trusted strategic partners have encouraged both countries to deepen defence engagement. Recent political initiatives, institutional reforms, defence industrial cooperation, technology partnerships, and collaboration in critical minerals together provide a strong foundation for building a secure, resilient, and long-term strategic partnership.

Changing Global Security Landscape

1. **Changing Nature of Warfare:** Modern conflicts are increasingly shaped by drones, autonomous systems, and weapons in orbit. These technologies are changing how wars are fought and reducing traditional security barriers.
2. **Emerging Security Risks:** Future conflicts can emerge much closer to national borders than before. Countries must therefore prepare for faster and more complex security threats.
3. **Changing Global Order:** The existing world order is undergoing a major transformation. Both Canada and India recognise that the present decade is marked by growing global uncertainty.
4. **Canada's Defence Modernisation:** Canada has announced a plan to rebuild, rearm, and reinvest in its armed forces. It is preparing its military for future security challenges.
5. **Higher Defence Spending:** Canada plans to spend 5% of GDP on defence by 2035 and had already crossed 2% of GDP in March 2026. This reflects its commitment to strengthening national defence.
6. **Need for Trusted Partnerships:** The new security environment requires dependable international partners. Canada views India as a natural partner for long-term defence cooperation.

Renewed Canada-India Strategic Engagement

1. **Political Commitment:** Meetings between Prime Ministers Mark Carney and Narendra Modi have renewed momentum in bilateral relations. Both leaders have agreed to strengthen cooperation across strategic sectors.
2. **Strategic Partnership:** Canada and India have shared a Strategic Partnership since 2018. Recent leadership meetings and the New Roadmap have expanded cooperation in defence, political and economic sectors.
3. **Institutional Defence Dialogue:** Both countries have agreed to establish a Defence Dialogue. This will help identify common priorities, improve coordination, and align defence capabilities.

4. **Strong Foundation of Trust:** Nearly 80 years of diplomatic relations and a shared history of cooperation, including common sacrifices during the Second World War, continue to strengthen mutual trust and support deeper defence collaboration

Strengthening Bilateral Defence Cooperation

1. **Defence Advisers:** Canada and India have accredited Defence Advisers in Ottawa and New Delhi. This improves direct communication between both defence establishments.
2. **Military Exercises:** The navies of both countries participated in the Rim of the Pacific (RIMPAC) and Talisman Sabre exercises. These engagements improve operational coordination and interoperability.
3. **Professional Military Exchanges:** A delegation from India's National Defence College visited Canada in June 2026. Direct exchanges with Canadian military colleges and bases strengthen professional learning.
4. **Defence Reforms:** Canada has established a Defence Investment Agency and launched a Defence Industrial Strategy to modernise procurement and diversify defence supply chains.

Major Pillars of Canada–India Defence Collaboration

1. **Defence Industrial Cooperation:** Canada has invited India to participate in co-development, subsystem manufacturing, and sustainment, creating opportunities for deeper industrial collaboration.
2. **Aerospace and Space Cooperation:** Canada has advanced aerospace, satellite, and space robotics capabilities, while India has the world's third-largest domestic aviation market, low-cost space platforms, and expanding manufacturing capacity. These complementary strengths support joint research, aerospace technologies, defence innovation, and the use of RADARSAT for strengthening India's naval capability.
3. **Defence Innovation:** Canada is investing half a billion dollars in next-generation defence technologies, including a drone innovation hub. This investment supports future collaboration in advanced defence technologies.
4. **Critical Minerals Partnership:** Critical minerals are essential for modern defence technologies. The Canada–India MoU on the Critical Minerals Value Chain supports stable and resilient supply chains between both countries.
5. **Canada's Strategic Resource Base:** Canada possesses 31 critical minerals, including the 10th largest rare earth reserves, the 3rd largest recoverable uranium resources, and 5% of global tungsten reserves. It was also the second-largest producer and exporter of uranium, accounting for 24% of global production in 2024.
6. **Economic Security and Defence Security:** The crisis in West Asia has shown that economic security and national security are closely linked. Trusted critical mineral partnerships can strengthen long-term defence preparedness.

Strategic Significance of the Partnership

1. **Combining National Strengths:** Canada's technology strengths complement India's manufacturing capacity. This creates mutual advantages in defence production and innovation.
2. **Strengthening Defence Industries:** Joint manufacturing, technology development, and industrial cooperation can improve defence capabilities in both countries.
3. **Diversified Defence Supply Chains:** Canada seeks to reduce reliance on a single supplier, while India seeks dependable technology partners. This creates a strong basis for long-term collaboration.

4. **Regional Security:** Defence cooperation, maritime capabilities, and advanced technologies can strengthen security in the wider region.
5. **Broader Strategic Relations:** Defence cooperation also supports stronger political, economic, and technological engagement between the two countries. It strengthens confidence across the overall partnership.
6. **Long-Term Partnership:** Regular dialogue, institutional cooperation, and strategic trust can transform Canada-India relations into a durable security partnership.

Conclusion

Canada and India are well placed to build a stronger defence partnership based on strategic trust, technology, industrial cooperation, and resilient supply chains. Continued political commitment, institutional engagement, defence collaboration, and innovation can help both countries respond to emerging security challenges while supporting long-term regional stability and a more secure future.

Question for practice:

Examine the significance of Canada-India defence collaboration in addressing emerging security challenges and strengthening the long-term strategic partnership between the two countries.

Source: [The Hindu](#)

Why Inflation is Rising in India

UPSC Syllabus: Gs Paper 3- Indian economy

Introduction

Inflation in India remained relatively low for more than a decade, except during the COVID-19 pandemic. However, it has increased sharply in recent months, with **Wholesale Price Index (WPI) inflation reaching nearly 10% in June** after remaining low until December. The current inflation is mainly driven by higher fuel prices, rising production costs, and disruptions in food supply. It reflects the growing influence of supply-side and cost-related factors rather than a sharp increase in consumer demand.

What is Inflation?

1. **Meaning of Inflation:** Inflation is the continuous rise in the general prices of goods and services over time. As prices increase, the purchasing power of money declines because the same amount of money buys fewer goods and services.
2. **Measures of Inflation:** Inflation in India is mainly measured through the Wholesale Price Index (WPI) and the Consumer Price Index (CPI). WPI tracks changes in wholesale prices of goods, while CPI measures changes in retail prices paid by consumers and also includes services.
3. **Components of WPI:** WPI is a weighted average of primary articles (food, minerals and other agricultural products), fuel and power, and manufactured products. The recent rise in WPI has mainly been driven by fuel and power and manufactured products.
4. **Need to Understand Inflation:** Inflation is often explained only through demand and supply. However, different goods follow different pricing mechanisms, making it necessary to understand the actual sources of rising prices.

Types of Inflation

1. **Types Based on the Rate of Price Rise:** Inflation is classified as creeping, walking, galloping, and hyperinflation depending on how rapidly prices increase. These categories explain the speed of inflation rather than the reasons behind it.
2. **Types Based on the Causes of Inflation:** Inflation can also be classified according to the factors responsible for rising prices. The main types include demand-pull, cost-push, structural, built-in, and protein inflation, each arising from different economic conditions.
3. **Demand-pull Inflation:** Demand-pull inflation occurs when demand grows faster than available supply. It is generally seen in primary commodities where production cannot increase immediately.
4. **Cost-push Inflation:** Cost-push inflation occurs when production costs increase. Producers pass higher input costs to consumers, resulting in higher prices of manufactured goods.
5. **Structural Inflation:** Structural inflation arises because different sectors of the economy respond differently to changes in demand and supply. Primary commodities and manufactured goods therefore do not experience inflation in the same manner.
6. **Present Nature of Inflation:** India's recent inflation is largely a combination of cost-push and structural inflation, as higher production costs and supply constraints have contributed more than excess demand.

Understanding the Recent Rise in Inflation

1. **Sharp Rise in WPI Inflation:** WPI inflation remained low or even negative until December but increased sharply from March and reached nearly 10% in June, indicating a rapid rise in wholesale prices.
2. **Major Contributors:** Fuel and power and manufactured products have contributed the most to the recent increase in WPI inflation. Primary articles have also contributed, but their role has been comparatively smaller.
3. **Imported Nature of Fuel Inflation:** Fuel and power prices are closely linked to international crude oil prices because India imports a significant share of its oil. Higher global crude prices have therefore increased domestic fuel prices.
4. **Structural Difference in Price Determination:** Primary articles (food, minerals, etc.) are mainly demand-determined because their supply remains almost fixed in the short run. A fall in production quickly raises prices. In contrast, manufactured goods are mainly cost-determined because factories usually increase production to meet higher demand. Their prices rise mainly when production costs increase, not simply because demand increases.

Why is Inflation Rising in India?

1. **Higher Material Costs:** The recent rise in manufactured inflation is mainly due to higher material costs rather than higher wage costs. Costlier inputs have increased production expenses across industries.
2. **Oil as the Main Input:** Oil is one of the most important inputs in industrial production. The movement of fuel and power prices almost matches manufactured inflation, showing that higher fuel costs directly increase manufacturing and transportation costs.
3. **Limited Role of Wages:** Although wages are part of production costs, they have not been the main driver of inflation because most Indian workers have little bargaining power and are largely price-takers.
4. **Food Supply Disruptions:** Weak monsoon conditions caused by the El Niño effect have reduced agricultural production and the availability of food items, increasing food prices.
5. **Impact of Drought:** Food inflation may also occur during periods of strong demand, but drought remains a sufficient, though not necessary, condition for a sharp rise in food prices.

6. **Supply-side Nature of Inflation:** The current inflation is mainly driven by supply constraints rather than excessive consumer spending. Higher fuel costs, increased production expenses, and lower food supply have together pushed up prices across the economy.

Measures to Control Inflation

1. **Reduce Dependence on Monsoon:** Agriculture should become less dependent on rainfall by investing in irrigation infrastructure. Stable irrigation can reduce production losses caused by poor monsoon conditions.
2. **Strengthen Agricultural Infrastructure:** Better agricultural infrastructure can improve food production and reduce supply shocks. This can help maintain stable food prices over the long term.
3. **Countercyclical Tax Policy:** The government can reduce customs and excise duties when international crude oil prices rise to limit domestic fuel prices. Earlier tax reductions helped keep pump prices stable, while withdrawal of this measure contributed to the sharp rise in WPI inflation.
4. **Control Production Costs:** Stable fuel prices reduce transportation and manufacturing costs. Lower production costs also reduce the need for industries to increase product prices.
5. **Supply-side Measures:** Improving supply efficiency and reducing production costs can help control inflation more effectively when inflation is driven by supply-side factors.
6. **Balanced Inflation Management:** Inflation management should not rely only on the inflation-targeting framework. Cost-side fiscal measures should also be used when inflation is mainly driven by supply constraints.

Conclusion

India's recent inflation is mainly the result of **cost-push and supply-side pressures** rather than excessive demand. Rising global crude oil prices, higher production costs, and weather-related disruptions have increased both manufactured and food prices. Long-term investment in irrigation, stronger agricultural infrastructure, efficient supply chains, and timely fiscal measures to moderate fuel costs can reduce inflationary pressures and support greater price stability in the future.

Question for practice:

Discuss the major factors responsible for the recent rise in inflation in India and suggest measures to control it.

Source: [The Hindu](#)

EPFO 3.0: India's Universal Pension Reform to Reshape Social Security

Source: The post "EPFO 3.0: India's Universal Pension Reform to Reshape Social Security" has been created based on "EPFO 3.0: India's Universal Pension Reform to Reshape Social Security" published in "Indian Express" on 22nd July 2026.

UPSC Syllabus: GS Paper II – Social Justice

Context: The Employees' Provident Fund Organisation (EPFO) is proposing **EPFO 3.0** to extend social security coverage to the entire workforce, including gig, platform and unorganised workers. The reforms aim to create a flexible, technology-driven and universal pension system.

Key Features of EPFO 3.0

1. Universal Pension Cover

- a. EPFO 3.0 proposes a universal pension scheme based on a **defined contribution framework** for all workers.
- b. At the time of retirement, members will have the option to choose either an **annuity** or a **Systematic Withdrawal Plan (SWP)**.

2. Multiple Sources of Contributions

- a. The pension corpus will be built through contributions from workers, employers, government co-contributions for low-income workers, aggregators, CSR funds and other third parties.
- b. This is the first time that EPFO is proposing such a flexible contribution model.

3. Target Retirement Sum (TRS)

- a. Members will be able to set a **Target Retirement Sum (TRS)** according to their retirement goals.
- b. The system will calculate the required contribution amount and frequency and will allow members to revise their retirement target whenever required.

4. Personalised Digital Dashboard

- a. Every member will have access to a personalised dashboard displaying total contributions, real-time corpus status and progress towards the Target Retirement Sum.
- b. The dashboard will help members monitor and plan their retirement savings effectively.

5. Pension Simulation and Inflation-adjusted Projections

- a. The platform will allow members to simulate their future pension based on variables such as age, retirement age, corpus and interest rate.
- b. It will also provide optional inflation-adjusted projections and compare multiple retirement scenarios to support informed decision-making.

6. Flexible Withdrawal Options

- a. Members opting for the Systematic Withdrawal Plan will be able to increase or decrease their monthly withdrawals after retirement.
- b. Lower withdrawals will allow interest to accumulate, while higher withdrawals will draw from the principal amount.

7. Inclusion of Gig and Platform Workers

- a. EPFO 3.0 aims to extend pension and provident fund benefits to nearly **2.5 crore** gig workers and Building and Other Construction Workers (BOCW) over the next five years.
- b. A single Universal Account Number (UAN) will be linked with multiple employers and aggregators while maintaining separate contribution records.

8. Third-party and Aggregator Contributions

- a. The proposed system will allow contributions from NGOs, individuals, donor organisations, CSR funds and aggregators.

- b. It will also facilitate flexible co-contribution models for delivery partners, drivers and other platform workers.

9. Family and Survivor Pension

- a. The proposal includes pension benefits for spouses, children and orphans through a pooled **Family Benefit Fund** managed on actuarial principles.
- b. This provision aims to strengthen social security for workers' families.

10. Integration of Existing Provident Funds

- a. Members of EPF, GPF and other provident funds may be allowed to transfer their accumulated balances into the new pension framework.
- b. This will improve portability and consolidation of retirement savings.

11. Adoption of Core Banking Solution (CBS)

- a. EPFO plans to adopt a **Core Banking Solution (CBS)** to handle real-time transactions and improve service delivery.
- b. The upgraded platform is designed to support the social security needs of over **60 crore** workers.

12. Alignment with the Code on Social Security

- a. EPFO 3.0 supports the implementation of the **Code on Social Security** by extending provident fund and pension coverage to gig and unorganised workers.
- b. The platform will also support split-payment mechanisms for seamless social security contributions.

Significance

1. EPFO 3.0 will significantly expand social security coverage to the unorganised, gig and platform workforce.
2. It will provide workers with greater flexibility in retirement planning through multiple pension options.
3. It will improve transparency by providing real-time access to retirement savings and contribution records.
4. It will strengthen retirement income by allowing contributions from multiple stakeholders.
5. It will enhance portability of benefits for workers with multiple employers.
6. It will create a robust, technology-driven social security ecosystem capable of serving India's expanding workforce.

Conclusion: EPFO 3.0 marks a major step towards universal and inclusive social security by extending pension coverage beyond the organised sector and creating a flexible, technology-enabled retirement framework for India's workforce.

Question: EPFO 3.0 seeks to expand India's social security architecture beyond the organised workforce. Discuss the key features of the proposed reforms and their significance.

Source: [Indian Express](#)

A checklist for a new-age courtroom

Source: The post "A checklist for a new-age courtroom" has been created based on "A checklist for a new-age courtroom" published in "Indian Express" on 22nd July 2026.

UPSC Syllabus: GS Paper II – Governance

Context: The Supreme Court has released **draft regulations** for the use of Artificial Intelligence (AI) in courts to govern AI adoption, create oversight institutions and prescribe approval processes. As AI is still at an early stage in the judiciary, the regulatory framework must remain adaptable while establishing strong institutional and technical foundations.

Key Concerns in the Use of AI in Courts

1. Lack of Long-term Institutional Framework

- a. The draft regulations propose multiple AI governance bodies at the Supreme Court, High Court and district levels.
- b. Creating separate institutions for every new technology may fragment accountability and delay decision-making.
- c. The judiciary requires a permanent institution capable of managing all technology-related functions rather than technology-specific committees.

2. Absence of Uniform Technical Standards

- a. The regulations specify **who** will approve AI systems but do not define **what standards** AI systems must satisfy before approval.
- b. The absence of common benchmarks may result in inconsistent evaluation of AI systems.

3. Risk of Inconsistent Justice

- a. Each High Court may independently decide what constitutes an acceptable AI system.
- b. Differences in technical capacity across High Courts could lead to varying approval standards and inconsistent judicial outcomes.

4. Lack of Clear Performance Benchmarks

- a. The regulations do not specify the level of explainability required from AI systems.
- b. They also do not define acceptable error rates for different judicial functions such as bail decisions and case scheduling.
- c. The source and quality of AI training data have also not been prescribed.

5. Conflict between Standard-setting and Procurement

- a. The same institution should not both set standards and procure AI systems.
- b. Combining these functions may compromise neutrality and transparency in AI governance.

Measures for Responsible AI Adoption

1. Establish a Permanent Technology Institution

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- a. The judiciary should create a permanent institution that integrates existing e-Committee functions with future AI governance.
- b. Such an institution would provide continuity, expertise and clear ownership of technology reforms.

2. Develop Uniform National Standards

- a. Standardised benchmarks should define explainability, accuracy, acceptable error rates and training data requirements for AI systems.
- b. Uniform standards would ensure consistency across all courts.

3. Create an Independent Standards Body

- a. The proposed **Centre of Research and Excellence on AI (CoRE-AI)** should function as an independent technical body with no procurement role.
- b. It should focus exclusively on developing and updating AI standards.

4. Separate Standards from Procurement

- a. A permanent technical institution should procure AI systems based on established standards.
- b. A judicial committee should independently approve AI systems to maintain transparency and accountability.

5. Build Future-ready Governance

- a. AI regulations should establish principles that remain relevant as technology evolves.
- b. The governance framework should support future technological innovations beyond AI.

Conclusion: AI has the potential to improve judicial administration, but its adoption must be guided by strong institutions, uniform standards and independent oversight. A future-ready governance framework will ensure that AI strengthens efficiency without compromising consistency, fairness and the integrity of the justice system.

Question: Discuss the key concerns in the use of Artificial Intelligence (AI) in the Indian judiciary. Suggest measures for ensuring responsible AI adoption in courts.

Source: [Indian Express](#)

Coming to Grips with Rare Earths

UPSC Syllabus: Gs Paper 3- Infrastructure

Introduction

India is trying to build a domestic rare-earth magnet industry to reduce its dependence on imports and strengthen critical mineral security. The government has introduced financial incentives and policy measures to develop a complete mine-to-magnet value chain. However, the biggest obstacle is not the availability of minerals or funding. Success depends on acquiring advanced refining technology, manufacturing expertise, and industrial experience needed to produce high-quality rare-earth magnets at a commercial scale.

About Rare-Earth Magnets

1. **Definition:** Rare-earth magnets are **permanent magnets** made from alloys of rare-earth elements. They produce very strong magnetic fields despite their compact size.
2. **Major Types:** The two most common rare-earth magnets are **Neodymium-Iron-Boron (Nd-Fe-B)** and **Samarium-Cobalt (SmCo)**. Nd-Fe-B magnets contain **neodymium, iron, and boron**, while SmCo magnets contain **samarium and cobalt**.
3. **Key Properties:** These magnets have **high magnetic strength, high energy density, and excellent performance** compared to ordinary magnets. However, they are brittle and prone to corrosion, so they are usually coated with nickel.
4. **Major Uses:** Rare-earth magnets are used in **electric vehicles, wind turbines, MRI and PET scanners, smartphones, hard drives, industrial motors, aviation, defence equipment, consumer electronics, and jewellery**.
5. **Cannot Be Easily Replaced:** Their unique atomic structure gives them exceptional magnetic strength. For high-temperature applications, **dysprosium and terbium** are added to maintain magnetic performance.

Strategic Importance of Rare-Earth Magnets

1. **Foundation of Modern Technologies:** Rare-earth magnets are essential for **electric vehicles, wind turbines, industrial motors, semiconductors, data centres, jet aircraft, and guided missiles**. Their supply is vital for both economic growth and national security.
2. **Critical for Green Energy Transition:** Rare-earth elements support renewable energy technologies and clean mobility. Their demand is rising as countries expand electric transport and renewable power generation.
3. **Growing Strategic Market:** The global rare-earth market exceeded **\$7.2 billion in 2025** and is projected to reach **\$12.6 billion by 2035**. Its strategic value is much greater than its market size because it supports advanced technologies.
4. **India's Heavy Import Dependence:** India imports **85–90%** of its rare-earth magnets, with almost all supplies coming from **China**. This creates a major strategic and industrial vulnerability.
5. **Supply Disruptions Can Halt Industries:** China's export restrictions in **2025** disrupted automobile production across several countries and sharply increased the price of neodymium outside China.
6. **Limited Domestic Buffer:** At the time of the export restrictions, India's rare-earth magnet stocks were estimated to last only **two to three weeks**, exposing the country's weak supply security.

Government Initiatives and Policy Support

1. **Rare-Earth Magnet Incentive Scheme:** India has announced a **₹7,280 crore** incentive scheme to support **five manufacturers** in establishing **6,000 tonnes** of annual magnet production capacity.

2. **National Critical Minerals Mission:** The government has launched the ₹34,300 crore **National Critical Minerals Mission** to strengthen domestic critical mineral production and improve supply security.
3. **Rare-Earth Industrial Corridors:** The Union Budget has proposed **rare-earth corridors in four States** to promote investment and build a domestic manufacturing ecosystem.
4. **Pilot Manufacturing Facility:** A **pilot rare-earth magnet plant at Hyderabad** has been planned to support domestic production and technology development.
5. **Building the Complete Value Chain:** The overall objective is to create a complete domestic chain covering mining, refining, processing, and magnet manufacturing.

Why Rare-Earth Magnet Manufacturing is Technologically Challenging

1. **Processing is More Difficult than Mining:** Rare-earth deposits are available in many countries, but converting them into usable materials requires advanced processing technologies.
2. **Refining Determines Competitiveness:** Refining produces magnet-grade material and is the most valuable stage of the value chain. Countries that master refining control the industry.
3. **Unique Magnetic Properties:** Neodymium magnets retain strong magnetic performance because of their atomic structure, making them far more powerful than ordinary iron magnets.
4. **Role of Heavy Rare Earths: Dysprosium and terbium** are added to magnets used in electric vehicles, wind turbines, and guided missiles because they help maintain magnetic strength at high temperatures.
5. **Perfect Grain Alignment is Essential:** A magnet performs well only when millions of microscopic magnetic grains are aligned in one direction. Poor alignment significantly reduces magnetic performance.
6. **Complex Multi-Step Manufacturing:** Producing a rare-earth magnet requires **more than a dozen precision steps**, including separation, powder preparation, magnetic pressing, furnace treatment, machining, coating, and magnetisation.
7. **Know-How Cannot Be Purchased Easily:** Maintaining powder purity, preventing contamination, and controlling furnace conditions require specialised knowledge that develops only through years of practical experience.

China's Dominance in the Global Rare-Earth Value Chain

1. **Early Investment Created Leadership:** China invested heavily in rare-earth refining and manufacturing from the early **1990s**, allowing it to build unmatched industrial capabilities over three decades.
2. **Control Beyond Mineral Reserves:** China produces about **60%** of the world's magnet-grade rare earths but carries out nearly **91%** of global refining, giving it greater control over the supply chain.

3. **Complete Production Ecosystem:** China remains the only country with a complete rare-earth production cycle, covering mining, refining, processing, magnet manufacturing, and related technologies.
4. **Dominance in Permanent Magnets:** China supplies nearly **94%** of the world's permanent magnets, making global manufacturing highly dependent on its production capacity.
5. **Use of Export Controls:** China has strengthened its position through **export controls, production quotas, technology restrictions, and equipment controls** on strategically important rare-earth materials.
6. **Strategic Economic Leverage:** China uses its dominance to influence global prices, regulate supplies, and strengthen its position in technological and economic competition with other major powers.
7. **Technology is the Real Advantage:** China's greatest strength is not simply its mineral deposits. Its real advantage comes from decades of refining expertise, manufacturing experience, and continuous industrial learning that other countries are still trying to develop.

Key Challenges Before India

1. **Technology Dependence:** Companies require specialised refining technology, furnace expertise and manufacturing know-how. Without access to these capabilities, domestic production cannot expand rapidly.
2. **Manufacturing Complexity and Quality Risks:** Rare-earth magnet production involves more than a dozen precision steps. Small errors reduce product quality, while rejected batches increase manufacturing costs.
3. **Long Industrial Learning Curve:** Manufacturing becomes economical only through repeated production, experimentation and process improvements. Financial incentives cannot replace years of industrial learning.
4. **Limited Domestic Production Capacity:** Indian Rare Earths (IREL) Limited currently produces only 400–500 tonnes of key refined material annually, while it aims to increase production to 10,000 tonnes by 2027. This gap highlights India's limited refining and processing capacity.
5. **Supply Chain Vulnerability:** Heavy dependence on imported magnets exposes India's industries to export restrictions, price volatility, and disruptions in global supply chains.

Way Forward

1. **Invest in Technology and Skilled Manpower:** Focus on refining technology, chemistry, furnace operations and technical expertise.
2. **Strengthen Domestic Refining Capacity:** Increase refining capacity because refining is the most critical stage of the value chain.

3. **Support Industrial Learning:** Policy support should recognise that manufacturing expertise develops gradually through continuous production, quality improvement, and practical experience rather than one-time financial incentives.
4. **Promote Rare-Earth Recycling:** India imports magnets within motors, drives, speakers, and electronic products. Recovering magnets from discarded equipment can reduce dependence on fresh processing and skip several complex manufacturing stages.
5. **Leverage International Partnerships:** India should utilise its mineral partnerships with **Australia, Japan, and Western countries** to gain access to technology, expertise, and industrial knowledge while strengthening domestic capabilities.
6. **Develop a Complete Domestic Value Chain:** Long-term success requires integrating mining, refining, processing, magnet manufacturing, and technology development into a single domestic ecosystem.
7. **Focus on Technology Security:** Lasting self-reliance will depend on mastering production technologies and manufacturing skills rather than only securing access to mineral resources.

Conclusion

India's rare-earth challenge is ultimately a technology challenge rather than a resource challenge. Financial incentives alone cannot build a competitive magnet industry without strong refining capabilities, manufacturing expertise, and continuous industrial learning. Developing a complete domestic value chain through technology, recycling, skilled manpower, and international partnerships will strengthen supply-chain resilience, reduce import dependence, and improve India's long-term strategic and technological security.

Question for practice:

Discuss the importance of rare-earth magnets and examine the challenges in developing a domestic rare-earth magnet industry in India.

Source: [Businessline](#)

New Trade Pact: A Win-Win for India and the U.K.

UPSC Syllabus: Gs Paper 2-International Relations

Introduction

The India-U.K. Comprehensive Economic and Trade Agreement (CETA), which came into force on July 15, marks a significant milestone in bilateral relations. More than a conventional tariff reduction pact, it reflects the strategic alignment of two major democracies seeking deeper economic cooperation in a changing global order. Aligned with the India-U.K. Vision 2035, the agreement expands trade, investment, technology, and temporary business mobility while supporting the shared goal of increasing bilateral trade to over \$100 billion by 2030.

Key Features of the India-U.K. CETA

1. **Strategic Economic Partnership:** The agreement is one of India's most comprehensive trade agreements. It provides a stable institutional framework to deepen cooperation in trade, investment, technology, climate, and innovation.
2. **Large-Scale Tariff Liberalisation:** India has secured **zero-duty access for 99% of its exports** to the U.K. Tariffs ranging from **70% on processed foods** and **12% on textiles** will be reduced to zero, making Indian products more competitive.
3. **Balanced Market Access:** Steel export concerns have been addressed through arrangements that reduce market disruption and provide certainty for exporters. Electric vehicle imports will follow tariff-rate quotas with phased tariff reduction, while **agriculture and dairy remain protected through safeguards**.
4. **Expanded Market Opportunities:** Indian firms can now participate in a wider range of U.K. government procurement contracts, especially in **infrastructure services and consulting**, creating new business opportunities.
5. **Future-Oriented Trade Rules:** Modern provisions cover **digital trade, labour, gender, intellectual property, and innovation**. These provisions support integration into global value chains and encourage investment in emerging sectors.

Major Benefits for India

1. **Boost to Labour-Intensive Exports:** Zero-duty access is expected to increase exports from **textiles, leather, footwear, marine products, and gems and jewellery**, where lower prices improve competitiveness.
2. **Support for High-Value Manufacturing:** Engineering goods and chemicals will gain from stable market access. Better export conditions can improve margins and expand market opportunities.
3. **Growth in Services Sector:** Indian providers in **IT, education, healthcare, financial services, and professional services** will receive wider access to the U.K. market, strengthening India's role as a global services hub.
4. **Expanded Business Mobility:** The agreement provides greater certainty for temporary movement under existing visa categories and expands access for business visitors, intra-company transferees, graduate trainees, contractual service suppliers, independent professionals, and expansion workers. It also introduces an annual quota of 1,800 visas for chefs de cuisine, yoga teachers, and classical musicians.
5. **Temporary Business Mobility:** The agreement facilitates short-term movement of professionals for business assignments. It does not create a new immigration route or pathway to permanent settlement in the U.K.
6. **Technology and Investment Opportunities:** The agreement supports investment in **fintech, green technologies, startups, and Global Capability Centres**. It also encourages collaboration in emerging technologies such as **Artificial Intelligence (AI)**.

7. **Higher Investment Flows:** The U.K. is India's sixth-largest investor and has contributed around 5% of cumulative FDI equity inflows since April 2000. The agreement is expected to increase bilateral investment further.

8. **Balanced Protection for Domestic Interests:** India has protected sensitive sectors such as agriculture and dairy, adopted tariff rate quotas for electric vehicles, and secured arrangements to reduce uncertainty for steel exports, balancing trade liberalisation with domestic priorities.

What the Agreement Does Not Change

1. **No New Immigration Route:** The agreement does not create any new pathway for Indians to obtain employment in the United Kingdom (U.K.). It only facilitates **temporary business mobility** through existing visa categories.

2. **No Settlement or Citizenship Benefits:** The agreement does not provide **permanent residency, British citizenship, or visa-free travel**. It is not intended as a route for long-term migration or settlement.

3. **Existing Immigration Rules Continue:** Applicants must continue to satisfy all existing U.K. immigration requirements, including **employer sponsorship, salary thresholds, qualification criteria, visa fees, and the Immigration Health Surcharge**.

4. **U.K. Retains Full Immigration Control:** The U.K. government continues to have the authority to revise immigration policies, sponsorship rules, salary thresholds, and visa conditions. The agreement does not limit this power.

5. **Visa Violations Continue to Attract Penalties:** Overstaying or breaching visa conditions can still lead to **deportation, re-entry bans, and difficulties in obtaining future visas**. The agreement does not relax immigration enforcement.

Strategic Gains for the United Kingdom

1. **Stronger Presence in a Fast-Growing Economy:** The agreement strengthens the U.K.'s long-term economic partnership with one of the world's fastest-growing major economies. It creates new opportunities for trade and investment.

2. **Greater Commercial Opportunities:** The agreement gives U.K. businesses wider opportunities to expand trade, investment, and commercial activities in India's growing market through a stronger institutional framework.

3. **Education Partnership:** The provision allowing U.K. institutions to establish campuses in India increases educational cooperation. It also supports long-term skill and knowledge partnerships.

4. **Long-Term Investment Prospects:** The agreement supports the shared objective of increasing **bilateral trade to over US\$100 billion by 2030**. It also strengthens the institutional framework needed to achieve this target.

Implementation Priorities and Role of Industry

1. **Improving Product Quality:** Indian industries need to invest in **quality upgradation, standards compliance, and sustainability** to fully benefit from the agreement.
2. **Using Mobility Provisions:** Indian companies should use professional mobility provisions to strengthen their presence in the U.K. services market. Building partnerships and long-term capabilities will improve competitiveness.
3. **Supporting MSMEs:** Industry bodies should help **Micro, Small and Medium Enterprises (MSMEs)** understand compliance requirements and procurement opportunities. This will allow smaller businesses to benefit from new export opportunities.
4. **Sector-Focused Guidance:** Special support is needed for sectors such as **processed foods, textiles, handicrafts, IT-enabled services, and business services**. Proper guidance can improve participation in the U.K. market.

Broader Economic and Strategic Significance

1. **Strengthening Rules-Based Trade:** The agreement reinforces the importance of **open, rules-based international trade** at a time when many countries are increasing regulatory barriers.
2. **Supporting Atmanirbhar Bharat:** Better market access and higher competitiveness help strengthen the objectives of **Atmanirbhar Bharat** while encouraging domestic industries to compete globally.
3. **Complementing National Initiatives:** The agreement supports **Make in India** and **Digital India** by expanding manufacturing opportunities, services exports, and professional mobility.
4. **Reshaping Trade and Investment Flows:** A stronger institutional framework can increase bilateral trade and investment, creating new economic opportunities for both countries.
5. **Promoting Employment and Innovation:** Higher exports and investment can create **quality jobs** and help India move towards a more **innovation-driven economy**.
6. **Setting a Benchmark for Future FTAs:** The agreement serves as a model for India's future trade agreements by combining market access with modern trade provisions.
7. **Building Trilateral Economic Partnerships:** It creates opportunities to combine **India's manufacturing strength and skilled workforce** with the **U.K.'s financial, technological, and commercial networks** for wider economic cooperation.
8. **Strengthening Regional Value Chains:** The **United Kingdom's membership in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)** and the proposed **India-European Union (EU) Trade Agreement** can help Indian businesses integrate into wider regional value chains, diversify exports, and strengthen supply chain resilience.

Conclusion

The India-U.K. CETA establishes a strong foundation for a long-term economic partnership by expanding trade, investment, services, technology, and temporary business mobility while preserving each country's policy priorities. It can strengthen competitiveness, create quality employment, and serve as a benchmark for future

trade agreements, helping both countries achieve their shared goal of over **\$100 billion** in bilateral trade by **2030**.

Question for practice:

Examine the key features and broader economic and strategic significance of India-U.K. Comprehensive Economic and Trade Agreement (CETA).

Source: [The Hindu](#)

EPFO 3.0: India's Universal Pension Reform to Reshape Social Security

Source: The post "EPFO 3.0: India's Universal Pension Reform to Reshape Social Security" has been created based on "EPFO 3.0: India's Universal Pension Reform to Reshape Social Security" published in "Indian Express" on 22nd July 2026.

UPSC Syllabus: GS Paper II – Social Justice

Context: The Employees' Provident Fund Organisation (EPFO) is proposing **EPFO 3.0** to extend social security coverage to the entire workforce, including gig, platform and unorganised workers. The reforms aim to create a flexible, technology-driven and universal pension system.

Key Features of EPFO 3.0

1. Universal Pension Cover

- a. EPFO 3.0 proposes a universal pension scheme based on a **defined contribution framework** for all workers.
- b. At the time of retirement, members will have the option to choose either an **annuity** or a **Systematic Withdrawal Plan (SWP)**.

2. Multiple Sources of Contributions

- a. The pension corpus will be built through contributions from workers, employers, government co-contributions for low-income workers, aggregators, CSR funds and other third parties.
- b. This is the first time that EPFO is proposing such a flexible contribution model.

3. Target Retirement Sum (TRS)

- a. Members will be able to set a **Target Retirement Sum (TRS)** according to their retirement goals.
- b. The system will calculate the required contribution amount and frequency and will allow members to revise their retirement target whenever required.

4. Personalised Digital Dashboard

- a. Every member will have access to a personalised dashboard displaying total contributions, real-time corpus status and progress towards the Target Retirement Sum.
- b. The dashboard will help members monitor and plan their retirement savings effectively.

5. Pension Simulation and Inflation-adjusted Projections

- a. The platform will allow members to simulate their future pension based on variables such as age, retirement age, corpus and interest rate.
- b. It will also provide optional inflation-adjusted projections and compare multiple retirement scenarios to support informed decision-making.

6. Flexible Withdrawal Options

- a. Members opting for the Systematic Withdrawal Plan will be able to increase or decrease their monthly withdrawals after retirement.
- b. Lower withdrawals will allow interest to accumulate, while higher withdrawals will draw from the principal amount.

7. Inclusion of Gig and Platform Workers

- a. EPFO 3.0 aims to extend pension and provident fund benefits to nearly **2.5 crore** gig workers and Building and Other Construction Workers (BOCW) over the next five years.
- b. A single Universal Account Number (UAN) will be linked with multiple employers and aggregators while maintaining separate contribution records.

8. Third-party and Aggregator Contributions

- a. The proposed system will allow contributions from NGOs, individuals, donor organisations, CSR funds and aggregators.
- b. It will also facilitate flexible co-contribution models for delivery partners, drivers and other platform workers.

9. Family and Survivor Pension

- a. The proposal includes pension benefits for spouses, children and orphans through a pooled **Family Benefit Fund** managed on actuarial principles.
- b. This provision aims to strengthen social security for workers' families.

10. Integration of Existing Provident Funds

- a. Members of EPF, GPF and other provident funds may be allowed to transfer their accumulated balances into the new pension framework.
- b. This will improve portability and consolidation of retirement savings.

11. Adoption of Core Banking Solution (CBS)

- a. EPFO plans to adopt a **Core Banking Solution (CBS)** to handle real-time transactions and improve service delivery.
- b. The upgraded platform is designed to support the social security needs of over **60 crore** workers.

12. Alignment with the Code on Social Security

- a. EPFO 3.0 supports the implementation of the **Code on Social Security** by extending provident fund and pension coverage to gig and unorganised workers.
- b. The platform will also support split-payment mechanisms for seamless social security contributions.

Significance

1. EPFO 3.0 will significantly expand social security coverage to the unorganised, gig and platform workforce.
2. It will provide workers with greater flexibility in retirement planning through multiple pension options.
3. It will improve transparency by providing real-time access to retirement savings and contribution records.
4. It will strengthen retirement income by allowing contributions from multiple stakeholders.
5. It will enhance portability of benefits for workers with multiple employers.
6. It will create a robust, technology-driven social security ecosystem capable of serving India's expanding workforce.

Conclusion: EPFO 3.0 marks a major step towards universal and inclusive social security by extending pension coverage beyond the organised sector and creating a flexible, technology-enabled retirement framework for India's workforce.

Question: EPFO 3.0 seeks to expand India's social security architecture beyond the organised workforce. Discuss the key features of the proposed reforms and their significance

Source: [Indian Express](#)

A checklist for a new-age courtroom

Source: The post "A checklist for a new-age courtroom" has been created based on "A checklist for a new-age courtroom" published in "Indian Express" on 22nd July 2026.

UPSC Syllabus: GS Paper II – Governance

Context: The Supreme Court has released **draft regulations** for the use of Artificial Intelligence (AI) in courts to govern AI adoption, create oversight institutions and prescribe approval processes. As AI is still at an early stage in the judiciary, the regulatory framework must remain adaptable while establishing strong institutional and technical foundations.

Key Concerns in the Use of AI in Courts

1. Lack of Long-term Institutional Framework

- a. The draft regulations propose multiple AI governance bodies at the Supreme Court, High Court and district levels.
- b. Creating separate institutions for every new technology may fragment accountability and delay decision-making.
- c. The judiciary requires a permanent institution capable of managing all technology-related functions rather than technology-specific committees.

2. Absence of Uniform Technical Standards

- a. The regulations specify **who** will approve AI systems but do not define **what standards** AI systems must satisfy before approval.

- b. The absence of common benchmarks may result in inconsistent evaluation of AI systems.

3. Risk of Inconsistent Justice

- a. Each High Court may independently decide what constitutes an acceptable AI system.
- b. Differences in technical capacity across High Courts could lead to varying approval standards and inconsistent judicial outcomes.

4. Lack of Clear Performance Benchmarks

- a. The regulations do not specify the level of explainability required from AI systems.
- b. They also do not define acceptable error rates for different judicial functions such as bail decisions and case scheduling.
- c. The source and quality of AI training data have also not been prescribed.

5. Conflict between Standard-setting and Procurement

- a. The same institution should not both set standards and procure AI systems.
- b. Combining these functions may compromise neutrality and transparency in AI governance.

Measures for Responsible AI Adoption

1. Establish a Permanent Technology Institution

- a. The judiciary should create a permanent institution that integrates existing e-Committee functions with future AI governance.
- b. Such an institution would provide continuity, expertise and clear ownership of technology reforms.

2. Develop Uniform National Standards

- a. Standardised benchmarks should define explainability, accuracy, acceptable error rates and training data requirements for AI systems.
- b. Uniform standards would ensure consistency across all courts.

3. Create an Independent Standards Body

- a. The proposed **Centre of Research and Excellence on AI (CoRE-AI)** should function as an independent technical body with no procurement role.
- b. It should focus exclusively on developing and updating AI standards.

4. Separate Standards from Procurement

- a. A permanent technical institution should procure AI systems based on established standards.
- b. A judicial committee should independently approve AI systems to maintain transparency and accountability.

5. Build Future-ready Governance

- a. AI regulations should establish principles that remain relevant as technology evolves.
- b. The governance framework should support future technological innovations beyond AI.

Conclusion: AI has the potential to improve judicial administration, but its adoption must be guided by strong institutions, uniform standards and independent oversight. A future-ready governance framework will ensure that AI strengthens efficiency without compromising consistency, fairness and the integrity of the justice system.

Question: Discuss the key concerns in the use of Artificial Intelligence (AI) in the Indian judiciary. Suggest measures for ensuring responsible AI adoption in courts.

Source: [Indian Express](#)

Where does the law stand on internet shutdowns in India?

UPSC Syllabus: Gs Paper 2- Government policies and interventions for development in various sectors and issues arising out of their design and implementation. And Governance

Introduction

Internet shutdowns are legally permitted in India only under limited circumstances to address public emergency or public safety concerns. They are governed by the **Telecommunications Act, 2023** and the **Telecommunications (Temporary Suspension of Services) Rules, 2024**, which prescribe clear legal and procedural safeguards. However, repeated shutdowns and gaps in implementing these safeguards have raised concerns over **necessity, proportionality, transparency, accountability, and the protection of fundamental rights**.

Internet Shutdown: Meaning and Purpose

1. **Meaning of Internet Shutdown:** An internet shutdown is the **intentional disruption of internet or electronic communication services** in a specific area or for a particular group. It makes these services inaccessible or seriously limits their use to control the flow of information.
2. **Different Forms of Shutdown:** A shutdown may involve a **complete suspension of internet services**, slowing down internet speed, or blocking access to specific online platforms. The method depends on the objective of the order.
3. **Situations in Which Shutdowns Are Used:** Internet shutdowns are commonly imposed when large gatherings are expected during **political events, peaceful demonstrations, violent protests, or religious celebrations**. Authorities use them to prevent possible disturbances to public order.
4. **Legal Basis for Imposing Shutdowns:** Under **Section 20(2)(b) of the Telecommunications Act, 2023**, internet services can be suspended only during a **public emergency** or in the interest of **public safety**. The order must be based on the grounds specified in the law and supported by written reasons.
5. **Protest Is Not a Sufficient Ground:** A protest by itself is **not a lawful reason** to suspend internet services. The government must also show that the suspension is necessary for purposes such as maintaining **public order**.

6. **Consideration Before Suspension:** Before suspending internet services, authorities must examine whether less restrictive measures can achieve the same objective. Internet suspension should not become the first response.

Legal Framework Governing Internet Shutdowns in India

1. **Shift to the New Legal Framework:** Internet shutdowns were earlier governed by **Section 5(2) of the Indian Telegraph Act, 1885** and the **2017 Rules**. They are now governed by **Section 20 of the Telecommunications Act, 2023** and the **Telecommunications (Temporary Suspension of Services) Rules, 2024**.
2. **Grounds for Suspension:** A shutdown may be ordered only during a **public emergency** or in the interest of **public safety** for the grounds specified in the law, such as **public order, sovereignty and integrity of India, defence, State security, friendly relations with foreign States**, or preventing incitement to an offence.
3. **Competent Authority:** The **Central Government, State Government, or an authorised officer** can issue a shutdown order only by following the prescribed legal procedure.
4. **Statutory Requirements:** Every shutdown order must be issued in writing, record reasons, specify the affected area and duration, be published, and consider whether less restrictive measures can achieve the same objective.
5. **Scope of the 2024 Rules:** The **2024 Rules** seek to prevent arbitrary shutdowns by prescribing clear procedures and safeguards before internet services can be suspended.

Supreme Court Safeguards: *Anuradha Bhasin v. Union of India (2020)*

1. **Recognition of Fundamental Rights:** The Supreme Court held that access to the internet is closely linked to the freedoms under **Articles 19(1)(a) and 19(1)(g)**. Internet restrictions can therefore affect freedom of speech and the freedom to carry on trade or business.
2. **Legality of Shutdown Orders:** The Court held that every internet shutdown must have a **clear legal basis**. Authorities cannot suspend internet services without following the law.
3. **Necessity and Proportionality:** The Court ruled that a shutdown must pursue a **legitimate objective**, remain **necessary**, and be **proportionate** to the situation. Blanket restrictions cannot be imposed without proper justification.
4. **Least Restrictive Measure:** The Court observed that a complete suspension of telecom services should be imposed only when it is **necessary and unavoidable**. Authorities must first examine whether a less restrictive measure can achieve the same objective.
5. **Procedural Safeguards:** The Court directed that shutdown orders should contain **detailed reasons**, remain limited in **scope and duration**, be **published**, and undergo review by a competent committee.
6. **No Indefinite Suspension:** The Court held that **indefinite internet shutdowns are impermissible**. Further, under the **Telecommunications (Temporary Suspension of Services) Rules, 2024**, a suspension order cannot remain in force for more than **15 days**.
7. **Judicial Review:** The Court clarified that shutdown orders are open to **judicial review**. Such orders can be challenged before the **High Court under Article 226** or, in appropriate cases, before the **Supreme Court under Article 32**.

Issues in Implementation

1. **Continued Use of Repealed Provisions:** Several State governments have continued to issue internet shutdown orders under the **Indian Telegraph Act, 1885** and the **2017 Rules**, even after the **Telecommunications Act, 2023** and the **2024 Rules** came into force.
2. **Frequent Use Despite Strict Law:** Internet shutdowns continue to be imposed regularly in India, even though the law allows them only under limited and exceptional conditions. This has raised concerns about their repeated use.
3. **Generic Reasons in Shutdown Orders:** Many orders rely on broad statements such as the possibility of misuse of social media or threats to law and order. They often do not provide specific facts or evidence to justify the suspension.
4. **Failure to Meet Legal Standards:** Several shutdown orders do not satisfy the legal requirements of **necessity, proportionality, and reasoned justification**. Blanket suspensions have been issued without showing why they were the only available option.
5. **Limited Transparency:** Only a small number of shutdown orders are available in the public domain. Many became accessible only after applications were filed under the **Right to Information (RTI) Act**, reducing transparency and public scrutiny.
6. **Use of Similar Justifications Across States:** Shutdown orders issued in **Manipur, Jammu & Kashmir, Haryana, Rajasthan, Punjab, and Odisha** have shown a similar pattern of using vague and general reasons. This weakens accountability and raises the possibility of misuse.
7. **Administrative Overreach:** Some shutdown orders have gone beyond suspending internet services by also blocking **websites and mobile applications**. Such actions exceed the powers available under the **2024 Rules**.
8. **Poor Application of Mind:** Some orders blocked outdated platforms such as **Google+, Viber, and WeChat**, even though they were no longer operational in India. This indicates inadequate scrutiny before issuing the orders.
9. **Impact on Constitutional Rights:** Vague and unsupported shutdown orders restrict the **right to freedom of speech and expression**, including the right to access information under **Article 19(1)(a)**. They also conflict with the standards laid down by the Supreme Court in **Anuradha Bhasin (2020)**.

Internet Shutdowns in India: Current Scenario

1. **Global Position:** India continues to record **one of the highest numbers of internet shutdowns** in the world. According to **Access Now**, **65 shutdowns** were recorded across **12 States and Union Territories in 2025**.
2. **State-wise Distribution:** According to the **SFLC Internet Shutdown Tracker**, **Jammu & Kashmir** has recorded about **449 shutdowns since 2012**, followed by **Rajasthan (115)** and **Manipur (62)**.

3. **Recent Trend:** India recorded around **24 internet shutdowns in 2026** up to **22 July**, showing that the use of internet suspensions continues under the new legal framework.
4. **Continuing Concern:** The high number of shutdowns, along with repeated procedural shortcomings, shows that the challenge is no longer the absence of a legal framework but the **effective implementation of the existing safeguards**.

Way Forward

1. **Strict Compliance with the Law:** Authorities should issue internet shutdown orders only after fully satisfying the conditions laid down in the **Telecommunications Act, 2023** and the **2024 Rules**. Every order should contain specific and recorded reasons instead of general statements.
2. **Apply Shutdowns Only Under Prescribed Conditions:** Internet services should be suspended only during a **public emergency** or in the interest of **public safety** and only for the purposes allowed under the law. Authorities should also ensure that all prescribed safeguards are followed before imposing a shutdown.
3. **Strengthen Judicial and Administrative Oversight:** Review mechanisms should carefully examine whether every shutdown order complies with constitutional principles and statutory safeguards. Authorities who fail to follow the **2024 Rules** should also be held accountable.
4. **Improve Transparency and Public Access:** Governments should place all internet shutdown orders on the official website of the State Home Department. The orders should clearly explain the reasons for the suspension and should also be available in the regional language.
5. **Ensure Periodic Review:** Every shutdown order should remain **time-bound** and be reviewed regularly. This can prevent unnecessary continuation of restrictions beyond the period for which they are genuinely required.
6. **Use Shutdowns as the Last Resort:** Internet suspension should be imposed only when no less restrictive measure can achieve the same objective. It should remain an exceptional measure rather than a routine administrative response.

Conclusion

Internet shutdowns are lawful only when they strictly satisfy the conditions laid down under the Telecommunications Act, 2023, the 2024 Rules, and the Anuradha Bhasin (2020) judgment. The real challenge lies in ensuring faithful implementation of these safeguards so that internet suspensions remain an exceptional measure while balancing public safety with constitutional freedoms.

Question for practice:

Discuss the legal framework, constitutional safeguards, and implementation challenges related to internet shutdowns in India.

Source: [The Hindu](#)

India Must Lead in Securing the Strait of Bab el-Mandeb

UPSC Syllabus: Gs Paper 2- International Relation

Introduction

The **Bab el-Mandeb Strait** has emerged as a major maritime security concern after reports that Iran asked the Houthis to close the Strait if the **United States** attacked Iran. Any disruption could threaten **around one-third of India's trade**, disrupt global shipping, and increase economic risks. As uncertainty in the Red Sea grows, the situation highlights the need for **India to play a proactive role in securing this critical maritime route**.

Strategic Importance of the Bab el-Mandeb Strait

1. **Geographical Location:** The **Bab el-Mandeb Strait** lies between **Yemen and the Horn of Africa**. It connects the **Indian Ocean** with the **Red Sea** and the **Suez Canal**, making it a key maritime passage.
2. **Gateway for Global Trade:** Although the Strait is only **about 30 kilometres wide** at its narrowest point, it carries **around 12% of global trade**. It is one of the busiest shipping routes connecting **Asia and Europe**.
3. **Energy Transportation Corridor:** Nearly **11% of global maritime oil trade** and **about 8% of global LNG trade** pass through this route. Any disruption can affect global energy supplies and increase oil prices.
4. **Importance for India:** The Strait is vital for India's trade with Europe and supports **around one-third of India's overall trade**. It also ensures smooth movement of imports, exports and global supply chains.

Evolution of the Red Sea Crisis (2023–25)

1. **Origin of the Crisis:** After the **Gaza conflict** began in **October 2023**, the Houthis declared support for the Palestinians and started launching drones and missiles at Israel. They later expanded their attacks to commercial shipping in the Red Sea.
2. **Escalation of Houthi Attacks:** Between **November 2023 and March 2024**, the Houthis targeted **at least 40 commercial vessels**, claiming they were linked to or bound for Israel. These attacks disrupted one of the world's busiest maritime routes.
3. **International Response:** The **United States** and its partners launched **Operation Prosperity Guardian** in **December 2023** to ensure freedom of navigation in the Red Sea. The **United Nations Security Council Resolution 2722 (2024)** also called for safeguarding shipping, while Israel carried out separate strikes against the Houthis.
4. **India's Maritime Role:** The **Indian Navy** played an active humanitarian role by rescuing the crew of a British tanker that caught fire on **January 26–27, 2024**. India also engaged with Iran to help stop attacks on India-bound ships.
5. **Economic Consequences of the Crisis:** Marine insurers treated the region as highly risky, with **over 90% of global shipping insured by only 12 Protection and Indemnity (P&I) Clubs**. Between

November 2023 and March 2024, at least 2,000 ships avoided the **Suez Canal** and sailed around the **Cape of Good Hope**, delaying supplies and increasing transport costs.

6. **Global Trade Disruptions:** The diversion of ships increased voyage time and freight costs as shipping routes returned to paths used nearly **170 years ago**. Egypt lost **about one-quarter of the Suez Canal's revenue**, while Israel's **Eilat Port** filed for bankruptcy by **July 2024**.

Why is the Strait Facing Renewed Security Risks?

1. **Iran-Houthi Coordination:** Reports indicate that Iran instructed the Houthis to close the **Bab el-Mandeb Strait** if the United States attacked Iran's power plants. Even if this is strategic signalling, it has created serious concerns over the security of the route.
2. **Risk of Simultaneous Maritime Crises:** India is already facing uncertainty around the **Strait of Hormuz**. A fresh disruption in the **Bab el-Mandeb Strait** could place two of the region's most important maritime routes under pressure at the same time.
3. **Growing Uncertainty in the Region:** Unlike 2024, **United States** forces are now more focused on Iran. This creates uncertainty over whether a similar international naval effort will be available to secure the Red Sea.
4. **Changing Diplomatic Environment:** India relied on Iran in 2024 to help stop attacks on India-bound ships. The present situation is different, making such diplomatic engagement more difficult.
5. **Weak International Consensus:** The **United Nations Security Council** is more divided than before, reducing the possibility of approving a coordinated international security mission. At the same time, China is expected to continue protecting its shipping through its own arrangements with the Houthis.
6. **Limits of Military Action:** Experts argue that military strikes alone cannot permanently secure the Strait. Continued instability could also threaten **Saudi Arabia's East-West Pipeline**, reduce flexibility in global oil supplies and increase pressure on major oil-importing countries.

Impact of a Disruption

A. Global Impact

1. **Disruption to Global Shipping:** If ships cannot use the **Bab el-Mandeb Strait**, they must travel around the **Cape of Good Hope**. This adds thousands of kilometres, increases travel time and raises fuel consumption.
2. **Higher Freight and Insurance Costs:** Longer routes and greater security risks increase freight charges and marine insurance premiums. These additional costs affect businesses and global supply chains.
3. **Pressure on Energy Markets:** Any disruption affecting Saudi oil exports through the Red Sea can tighten global oil supplies. This may push international crude oil prices higher.

4. **Reduced Strategic Oil Buffers:** Many countries have already used a large share of their strategic petroleum reserves during recent Middle East conflicts. This leaves less capacity to absorb another major supply shock.

B. Impact on India

1. **Risk to India's Trade:** The **Red Sea-Suez Canal** route is India's main maritime link with Europe. Disruptions can delay cargo movement and affect a significant share of India's international trade.
2. **Impact on Energy Security:** India imports **more than 85% of the crude oil** it consumes. Higher global oil prices can increase India's oil import bill even if most Indian crude does not pass through the Strait.
3. **Challenges for Indian Exports:** Products such as **engineering goods, chemicals, pharmaceuticals, textiles and agricultural products** largely move through the Red Sea route. Longer voyages increase delivery time and transport costs.
4. **Inflationary Pressure:** Rising freight charges, insurance costs and crude oil prices increase business expenses. If these conditions continue, they can add to inflation in the Indian economy.
5. **Concerns for Indian Seafarers:** India has already restricted Indian mariners from ships operating through the **Strait of Hormuz**. Applying similar restrictions to the much busier **Bab el-Mandeb Strait** would be difficult and could affect the safety and welfare of thousands of Indian seafarers.

Challenges in Securing the Strait

1. **Reduced Scope for International Naval Protection:** During the previous Red Sea crisis, the **United States** led a multinational naval mission to protect commercial shipping. The present situation is different because U.S. military attention is now focused more on Iran, creating uncertainty over a similar response.
2. **Changed India-Iran Diplomatic Context:** In 2024, India engaged directly with Iran to help stop attacks on India-bound ships. The present diplomatic environment is different, making such engagement less certain.
3. **Divisions within the United Nations Security Council:** The **United Nations Security Council (UNSC)** is more divided than before. Even if it supports freedom of navigation, approving a force to enforce that decision is unlikely.
4. **China's Independent Maritime Approach:** China is expected to continue protecting its own shipping through separate understandings with the Houthis. Such unilateral actions may limit the scope for a coordinated international response.
5. **Balancing Maritime Security and Seafarer Welfare:** Restricting Indian mariners from operating through the **Bab el-Mandeb Strait** is not practical because it is one of the world's busiest shipping routes. Such restrictions could affect the safety, employment and welfare of thousands of Indian seafarers.

India's Response: The Way Forward

1. Building Strategic Maritime Partnerships

- **India-France-Japan Naval Cooperation:** India should work with **France** and **Japan** to create a proactive naval partnership for protecting commercial shipping. Both countries depend on safe Red Sea routes and have already conducted naval exercises with India.
- **Using Existing Regional Presence:** France and Japan maintain military bases in **Djibouti** near the Red Sea. Their existing presence can support quicker coordination and help prevent a repeat of the 2024 disruption.

2. Strengthening Regional Diplomacy

- **Engaging Egypt and Saudi Arabia:** India should deepen engagement with **Egypt** and **Saudi Arabia**, as both countries have strong economic interests in keeping the Red Sea open. The Houthi announcement of a **maritime embargo** on Saudi ships shows that regional stakeholders now face greater risks.
- **Coordinating with Regional Partners:** India should work closely with all concerned regional partners while keeping them informed about security efforts. Such cooperation can improve trust and strengthen collective action to secure the route from the **Suez Canal** to the **Bab el-Mandeb Strait**.

3. Creating a Rules-Based Maritime Security Framework

- **Trade Protection Task Force:** India should lead the creation of a **theatre-specific Trade Protection Task Force** instead of a broader military alliance. The task force should focus only on protecting commercial shipping and freedom of navigation.
- **Role of the Information Fusion Centre-Indian Ocean Region (IFC-IOR):** The **Information Fusion Centre-Indian Ocean Region (IFC-IOR)** can provide maritime domain awareness by sharing information on vessel movement and emerging threats. France and Japan can strengthen these efforts through logistics support from their regional bases.
- **Common Rules of Engagement:** Participating navies should agree on common rules for responding to hostile attacks. A coordinated approach will improve operational clarity during maritime emergencies.
- **Security for Commercial Shipping:** The task force should provide escorts and security cover to commercial and civilian vessels moving through the Strait, particularly ships travelling to or from **India, Europe and Japan**. This can reduce risks to trade and shipping.
- **Supporting the SAGAR Vision:** A coordinated maritime effort will demonstrate India's commitment to **Security and Growth for All in the Region (SAGAR)**. It will also reinforce respect for maritime rules and international norms.

Conclusion

The **Bab el-Mandeb Strait** has become a critical maritime chokepoint for global trade and India's economic security. As international coordination becomes more uncertain, India should take the lead in building a **rules-based maritime security framework** with like-minded partners. Such an approach can protect freedom of navigation, secure vital trade routes and strengthen **SAGAR** in the Indian Ocean Region.

Question for practice:

Discuss the strategic importance of the Bab el-Mandeb Strait and explain why India should lead efforts to secure it.

Source: [The Hindu](#)