

9 PM Current Affairs Weekly Compilation

For UPSC CSE mains examination



3rd Week

September. 2026

Features :

Arranged as per syllabus Topics
Most complete coverage of major
News Papers editorials

INDEX

Four priorities for India's AI policy	2
India joins US-led 6G initiative: How does it fit with Bharat 6G Mission?	3
Decoding India's GDP Base Revision	5
How AI Risks Can Outpace Safeguards	8
BRICS, and the future of cross-border payments	11
UPI Fee: Small Price, Smart Call, Smooth Going	13
Mining Amendment is Unfair to States	15
What Lies Beyond India's E20 Push.....	17
Government health schemes at a crossroads	20
Who has to pay MDR on UPI and who stands to gain the most?	22
A War Room for India in an Age of Sanctions.....	23
Uniform Civil Code Debate	26
U.S.A–Russia Sanctions Bill: Implications for India's Oil Imports and Trade	30
Orangutans in Odisha: Does India have to repatriate the primates? What law says	31
A Homegrown Innovation Ecosystem is Taking Root	33
Balancing Deep-Sea Discovery with Environmental Stewardship.....	37
India urgently needs a National Chemicals Code.....	40
The copyright stakes in the EU FTA.....	42
India's Real Rate Moment, the Cost of Delay	43
Missing Measure in India's Magnet Mission	46
Student Well-being and Institutional Reform in Higher Education.....	49
Unsafe space: On the U.S. and 'on-orbit space control weapons	51
A Malacca–Singapore Model for Resolving Hormuz	53
When the House Ceases to Hold Power to Account	56
Easing funding for coops.....	60
Why it's time to scrap dollar billing for local SEZ deals	62
Using Trade Treaty Policy to Strengthen Commercial Arbitration	64
Towards Recognising Women Farmers	67

Four priorities for India's AI policy

Source: The post “Four priorities for India's AI policy” has been created based on “Four priorities for India's AI policy” published in “Business Standard” on 16th September 2026.

UPSC Syllabus: GS Paper 3 – Science & Technology

Context: Artificial Intelligence (AI) is emerging as a transformative technology with applications across the economy and society. However, its rapid development also raises concerns regarding **human control, employment, inequality, sovereignty, democracy and resource consumption**. India therefore needs a policy framework that promotes innovation while preventing excessive dependence on others.

Four priorities for India's AI policy

1. Ensuring human control over AI development

- a. India should support a **global consensus** to ensure that the development and orientation of AI systems remain subject to meaningful human control.
- b. Regulation should prevent advanced AI systems from becoming difficult to **monitor, control or regulate**.

2. Protecting employment and ensuring fair distribution

- a. India should address the potential impact of AI on **employment and income distribution**.
- b. AI may substitute workers in certain skilled tasks, while returns from AI could increasingly accrue to **owners of AI models and technology**.
- c. Policy should therefore promote a **fair distribution of the economic gains from AI**.

3. Ensuring AI sovereignty and protecting democracy

- a. AI outputs may reflect the **biases and worldviews of their developers or governments**.
- b. Dependence on foreign AI models could therefore create concerns regarding **technological sovereignty and politically influenced information**.
- c. India needs greater capacity to develop and use **domestically controlled AI models**, particularly for strategic and sensitive applications.

4. Developing domestic data-centre capacity sustainably

- a. India needs to increase its **domestically owned data-centre capacity**, as data centres are essential AI infrastructure.
- b. Expansion must account for their significant **electricity and water requirements**.
- c. Data-centre development should therefore incorporate strong standards for **energy and water efficiency**.

Key challenges

1. Rapid advances in AI may make **regulation and human oversight** difficult.
2. AI-driven automation can lead to **job displacement and greater income inequality**.
3. Dependence on foreign AI models can create risks to **data and technological sovereignty**.

4. AI-generated information can potentially influence **public discourse and democratic communication**.
5. India faces a gap between its large volume of data generation and its **domestic data-centre capacity**.
6. Large AI systems require substantial **energy and water**, creating environmental concerns.

Way Forward

1. India should participate in developing **international rules and standards** for responsible and human-controlled AI.
2. It should promote **Indian AI models and domestic technological capabilities** to reduce excessive external dependence.
3. AI adoption should be accompanied by **reskilling and upskilling programmes** to help workers adapt to changing employment patterns.
4. India should develop mechanisms for a **fair distribution of AI-generated economic benefits** among technology companies, information providers and users.
5. AI systems used in sensitive areas should have appropriate **human oversight, transparency and accountability**.
6. Data-centre expansion should follow **energy-efficient and water-efficient standards**, while encouraging renewable energy.
7. India should balance **innovation, economic benefits, technological sovereignty, democratic values and environmental sustainability**.

Conclusion: India's AI policy should not focus merely on rapid adoption of AI. It should create an ecosystem where **AI remains human-controlled, economically inclusive, technologically sovereign and environmentally sustainable**, enabling India to harness its benefits while managing its emerging risks.

Question: What are the key priorities for India's AI policy? Discuss the challenges and suggest the way forward.

Source: [Business Standard](#)

India joins US-led 6G initiative: How does it fit with Bharat 6G Mission?

Source: The post "India joins US-led 6G initiative: How does it fit with Bharat 6G Mission?" has been created based on "India joins US-led 6G initiative: How does it fit with Bharat 6G Mission?" published in "Business Standard" on 16th September 2026.

UPSC Syllabus: GS Paper 3 – Science & Technology

Context India has joined the **US-led 'Call to Action for 6G Leadership and Security'**, along with 25 other countries, to promote secure, interoperable and resilient 6G networks. The initiative complements India's existing **Bharat 6G Vision and Bharat 6G Alliance**.

Key features of the US-led initiative

1. The initiative seeks to promote **open, interoperable, secure, resilient, AI-supported and resource-efficient 6G networks**.

2. The participating countries will cooperate to strengthen the **security and resilience of future telecommunications networks**.
3. The framework focuses on developing **secure and resilient 6G supply chains** and addressing cybersecurity risks associated with telecom investments.
4. The initiative seeks greater coordination between governments and industry for developing **global 6G standards**.
5. It promotes **innovation and competitiveness** by encouraging countries to cooperate on 6G technologies and infrastructure.
6. The framework provides for engagement with **telecom companies, research institutions, academia and other stakeholders**.
7. Participating governments will designate **government-level 6G contacts** and identify relevant industry and academic stakeholders.
8. The countries will discuss **barriers to 6G leadership** and examine resources that can strengthen their competitiveness.
9. The framework does not seek to replace **industry-led organisations** involved in the technical development of 6G and aims to avoid duplication with their work.
10. Participation in the initiative does not restrict countries from pursuing their **own positions and autonomy** in other 6G organisations.

Bharat 6G Mission

1. India's **Bharat 6G Vision**, released in March 2023, aims to make India a **frontline contributor to the design, development and deployment of 6G technologies by 2030**.
2. The Bharat 6G Vision is based on the principles of **affordability, sustainability and ubiquity**.
3. The **Bharat 6G Alliance (B6GA)** brings together Indian industry, telecom service providers, academia, national research institutions and standards organisations.
4. B6GA is an **industry-led body facilitated by the government** and focuses on strengthening indigenous 6G research and development.
5. B6GA has established international partnerships with the **US Next G Alliance, Europe's 6G-IA, Finland's 6G Flagship, South Korea's 6G Forum, Japan's XGMF, NGMN Alliance and 6G Brasil**.
6. These international partnerships are intended to promote **collaborative research and standardisation** in 6G.
7. India has also contributed to the **ITU IMT-2030 framework**, including 'Ubiquitous Connectivity' among the six 6G usage scenarios.

Strengthening India's Global 6G Engagement

1. India already has international engagement through the Bharat 6G Alliance, but the new initiative brings **governments directly into the framework**.
2. It therefore creates a **government-to-government channel** for cooperation on 6G leadership, security and resilience.
3. This governmental cooperation will operate alongside the existing **research, industry and standards-related engagement** under Bharat 6G.
4. The initiative can strengthen India's ability to participate in discussions on **global standards, secure supply chains and cybersecurity**.
5. It also provides India with an additional platform to discuss **barriers to 6G leadership and resources required for global competitiveness**.

Significance for India

1. The initiative can help India strengthen its role in **shaping global 6G technologies and standards**.
2. Cooperation with other countries can help India develop **secure and resilient telecommunications supply chains**.
3. Greater international collaboration can complement India's efforts to build **indigenous 6G research and technological capabilities**.
4. India can potentially contribute technologies, standards and **infrastructure models that can be scaled beyond the domestic market**.
5. At the same time, India's participation does not prevent it from maintaining its **autonomy and independent positions** in other international 6G bodies.

Conclusion: India's 6G strategy therefore combines **indigenous technological development with international cooperation**. While **Bharat 6G** focuses on building India's domestic research, industry and innovation ecosystem, the US-led initiative provides a **government-to-government platform for security, resilience, supply chains, innovation and global standards**. Together, these efforts can support India's objective of becoming a significant contributor to the **global 6G ecosystem by 2030**.

Question: India has joined the US-led 'Call to Action for 6G Leadership and Security' while pursuing its own Bharat 6G Mission. Discuss the significance of this initiative and explain how it complements India's existing 6G ambitions.

Source: [Business Standard](#)

Decoding India's GDP Base Revision

UPSC Syllabus: Gs Paper 3- Indian economic

Introduction

On **27 February 2026**, MoSPI released a new Gross Domestic Product (GDP) series with **FY 2022-23 as the base year**, replacing FY12. The revision changed estimates of India's economic size because newer data, wider coverage and improved methods provided a different picture of economic activity. **Nominal GDP was revised downward**, but the change mainly reflects statistical re-estimation rather than a sudden contraction in the economy.

GDP Base Revision: Why the Measuring Framework Matters

1. **Base year as a reference:** The base year provides the reference for calculating constant-price GDP, helping measure changes in economic activity after removing price effects.
2. **Need for periodic updating:** Economic structures change over time, so the statistical framework must be updated to capture new industries, formalisation and changing consumption patterns.
3. **Impact on nominal GDP:** Rebasing can also change nominal GDP because improved data and methods may produce a different estimate of the economy's rupee size.

4. **Revisions can move either way:** International statistical practice recognises that better evidence can raise or lower previously estimated GDP levels.
5. **India's earlier experience:** The earlier shift from **2004-05 to 2011-12** also changed India's estimated economic size, showing that revisions are not unusual.

Why FY23 Was Chosen as the New Base Year

1. **Post-pandemic reference year:** FY23 was selected because it represented a relatively normal economic year after the major disruptions caused by the COVID-19 pandemic.
2. **Avoiding distorted years:** The pandemic years saw abnormal supply, demand and production patterns, making them less suitable as a stable reference for national accounts.
3. **Capturing structural transformation:** FY23 better reflects changes since FY12, including **GST-led formalisation, digital payments, online activity and wider corporate reporting.**
4. **Improved data availability:** The period also offered richer administrative, financial and survey data, allowing economic activity to be measured more directly.

What Changed in the New GDP Methodology

1. **Wider data universe:** The new series uses data from the **Goods and Services Tax (GST), Ministry of Corporate Affairs (MCA), Public Financial Management System (PFMS), e-Vahan, Periodic Labour Force Survey (PLFS), Annual Survey of Unincorporated Sector Enterprises (ASUSE), Reserve Bank of India (RBI), National Bank for Agriculture and Rural Development (NABARD)** and state governments to improve coverage and measurement..
2. **Better informal-sector measurement:** ASUSE and PLFS provide a more direct basis for measuring unincorporated enterprises than earlier estimates based mainly on benchmark figures and proxy indicators.
3. **Improved price measurement:** Greater use of **double deflation** separately adjusts input and output prices, helping measure real value added more accurately.
4. **Better quarterly benchmarking:** The **proportional Denton method** replaces the earlier pro-rata approach, improving alignment between quarterly estimates and annual totals.
5. **Greater internal consistency:** **Supply-Use Tables** reconcile production and expenditure approaches, helping reduce discrepancies within the national accounts framework.

What the Revised GDP Estimates Reveal

1. **Downward nominal GDP revision:** Nominal GDP was revised down by **2.7% in FY23, 3.5% in FY24 and 3.8% in FY25** compared with the earlier series.
2. **Unincorporated sector as a major factor:** Improved measurement of the **unincorporated services sector** was a major driver of the downward revision in nominal GDP.

3. **Upward sectoral revisions:** Agriculture and allied activities rose by **3.8–5.9%**, while financial services, real estate, professional services and ownership of dwellings rose by roughly **7.8–9.0%**.
4. **Downward sectoral revisions:** Trade and transport and storage saw reductions of around **23–26%**, while **trade GVA fell 36%** and road transport by **16.9%**.
5. **Hotels and restaurants revised upward:** Hotels and restaurants' GVA increased by **5.7%**, mainly because of revised estimates for the unincorporated sector.
6. **Revisions carried forward:** Since later quarterly and annual estimates build on earlier figures, the revised FY23 estimate naturally affected subsequent GDP estimates.
7. **No sudden economic contraction:** A lower revised GDP level does not mean the economy suddenly became smaller or slowed during those years; it partly reflects a revised and better-measured starting point.

Implications for Policy, Markets and Economic Indicators

1. **Better policy foundation:** More current and comprehensive GDP estimates can provide policymakers with a better measurement base for assessing economic activity and trends.
2. **Clearer economic structure:** Sector-wise revisions provide a more detailed picture of where economic activity is being measured differently under the new framework.
3. **Effect on macro ratios:** Changes in nominal GDP can alter indicators such as the **fiscal deficit-to-GDP ratio**, even when underlying fiscal conditions remain unchanged.
4. **Improved statistical credibility:** A data-rich national accounts system can strengthen confidence among **investors, credit rating agencies and multilateral institutions**.
5. **Quarterly growth becomes clearer:** The revised series indicates that quarterly growth during FY2023–24 to FY2025–26 is **less volatile and more broad-based** than previously estimated.
6. **Statistical change versus economic change:** A lower revised GDP level does not mean the economy suddenly became smaller or slowed during those years; it reflects a different starting estimate.

Way Forward

1. **Release the historical back series:** A recalculated historical GDP series is needed so that long-term growth trends can be compared consistently under the new methodology.
2. **Publish detailed methodology:** A comprehensive **Sources and Methods** document can improve transparency about data sources, estimation techniques and sector-wise revisions.
3. **Improve informal-sector measurement:** Continued use of better survey and administrative data is important because revisions in the unincorporated sector vary significantly across activities.
4. **Keep the framework current:** Regular updating of the base year and statistical methods can ensure that national accounts continue to reflect India's changing economic structure.

Conclusion

India's GDP revision shows that **economic measurement must keep pace with economic change**. The downward nominal GDP revision mainly reflects better evidence and improved measurement, especially of the unincorporated sector. The new framework provides wider data coverage and improved methods for measuring economic activity. Its long-term value will depend on **transparent methods, consistent historical data and regular statistical updating**.

Question for practice:

Examine the significance of India's GDP base revision in improving the measurement of economic activity and understanding the changing structure of the Indian economy.

Source: [The Hindu](#)

How AI Risks Can Outpace Safeguards

UPSC Syllabus: Gs Paper 3- Science and Technology

Introduction

Artificial Intelligence (AI) capabilities are advancing rapidly, while safeguards may not always develop at the same pace. Recent cases show users already testing AI for harmful activities in biology, cybersecurity, surveillance and weapons-related work. At the same time, broader research identifies risks ranging from dangerous capabilities and cyberattacks to inequality and concentration of power. The central challenge is to ensure that **detection, access controls and governance develop alongside increasingly capable AI systems**.

From Hypothetical Risks to Real-World AI Misuse

1. **Evidence of actual misuse:** Anthropic documented harmful attempts involving **cybersecurity, surveillance and biotechnology**, moving AI-risk discussions from hypothetical scenarios towards observed misuse.
2. **Biological dual-use risk:** Biological capabilities can support legitimate research or harmful activities, making it difficult to distinguish beneficial research from potential misuse.
3. **Less stringent older-model safeguards:** **Opus 4 and Sonnet 4.5** had less stringent biological safeguards because Anthropic's evaluations found them below the capability level for meaningfully assisting sophisticated dangerous biological research.
4. **Delayed strengthening of controls:** Stronger biological safeguards were introduced with newer models, while Anthropic separately disclosed that blocking biological classifiers were inactive on roughly **133 million contractor exchanges** from May 2025 to April 2026.
5. **Examples of attempted misuse:** Users applied older Claude models to activities including **gain-of-function research on chikungunya** and a **guided-rocket programme**, after which Anthropic terminated accounts when potential illicit use became clear.

Limitations of Existing AI Safeguards

1. **Classifier limitations:** Input and output classifiers cannot always identify harmful intent from individual messages because the same technical knowledge can have legitimate or harmful uses; **pins and screws may form a rifle or wheelchair, while a control loop may serve a missile or air-conditioner.**
2. **Need for contextual patterns:** Harmful intent may become clear only after several related interactions reveal a broader pattern, making individual messages difficult to classify reliably.
3. **Generation-detection gap:** A dangerous output may already be generated before classifiers recognise the wider harmful pattern, creating a gap between **generation and intervention.**
4. **Data exfiltration risk:** Users can save harmful outputs offline before their accounts are terminated, so stopping further access cannot recover information already obtained.
5. **Limits of monitoring alone:** Monitoring individual interactions may not be sufficient for highly dangerous capabilities, raising the need to consider **who should receive access in the first place.**

The Expanding Spectrum of AI Risks

1. **Expert-based risk assessment:** A MIT FutureTech–University of Queensland study asked **272 international AI experts** to assess **24 AI risks** over the **2025–2030** period.
2. **Catastrophic-risk exposure:** Under business as usual, experts judged **18 of 24 risk areas** to have more than a **10% probability of catastrophic outcomes** over the next five years.
3. **Scale of catastrophic harm:** The study defined catastrophic outcomes as potentially causing **more than 1 million deaths, over \$100 billion in financial losses, or comparable civilizational-scale intangible damage.**
4. **Five risks despite mitigation:** Under pragmatic mitigation, five areas still had more than a **10% probability of catastrophic outcomes: dangerous capabilities (12%), AI-enabled weapons and cyberattacks (12%), environmental harm (12%), inequality and unemployment (11%), and power centralisation and unfair distribution of AI benefits (11%).**
5. **Dangerous capability expansion:** More capable AI can make difficult activities easier, including **persuasion, surveillance, deepfakes, and assistance with chemical or biological weapons.**
6. **Cyber and weapons exposure:** AI can identify software vulnerabilities, generate code and accelerate offensive cyber activities through its strengths in **coding, pattern recognition and information synthesis.**

The Governance and Responsibility Gap

1. **Sectoral vulnerability:** Experts identified the **information, finance and national security sectors** as particularly vulnerable to AI-related risks.

2. **Information-sector risks:** AI can increase **misinformation, disinformation, privacy loss and manipulation**, while weakening trust in the information people receive.
3. **National-security risks:** Increasingly capable AI can create concerns around **cyberattacks, weapons development, surveillance and hostile actors** using these systems.
4. **Financial-sector risks:** AI can amplify **fraud, cyber risks, market manipulation, privacy breaches and system failures** with wider economic effects.
5. **Unequal exposure and responsibility:** **AI users and the general public** were judged most vulnerable, while those exposed to risks are often not best positioned to address them.
6. **Developer and government responsibility:** Experts assigned the highest responsibility to **general-purpose AI developers and governance actors**, including governments, regulators and standards bodies.
7. **Competitive pressure:** Companies and countries seeking economic or strategic advantage may have incentives to **deploy AI quickly, resist constraints or underinvest in safety**, which can intensify other risks.

Way Forward

1. **Continuous risk assessment:** Organisations should regularly assess what increasingly capable AI systems can do and whether existing governance practices remain adequate.
2. **Risk-based prioritisation:** Leaders should focus on harms that experts consider both serious and plausible rather than treating every AI risk equally.
3. **Business-process review:** Organisations should examine where AI creates value, changes wider ecosystems, replaces human tasks or introduces new vulnerabilities.
4. **Access-based safeguards:** AI governance can learn from export controls by combining **restricted access, identified users and end-use conditions** with ongoing monitoring of dangerous capabilities.
5. **Integrated governance:** AI risk should become part of existing discussions on **cybersecurity, privacy, safety and business continuity**, rather than remaining a separate compliance issue.
6. **Continuous adaptation:** Safeguards cannot be a one-time adjustment because AI capabilities, methods of misuse and organisational exposure are changing rapidly.

Conclusion

AI misuse is no longer only hypothetical, as documented cases show users already testing advanced systems for harmful purposes. Existing safeguards can detect and disrupt misuse, but they may not prevent every dangerous transfer before detection. At the same time, AI risks extend beyond deliberate misuse into cybersecurity, national security, finance, inequality and power concentration. **Effective governance therefore requires safeguards, access controls and oversight to advance alongside AI capabilities.**

Question for practice:

Discuss how the rapid advancement of Artificial Intelligence (AI) can outpace existing safeguards and examine the measures needed to manage its emerging risks.

Source: The Hindu ; [MIT](#)

BRICS, and the future of cross-border payments

Source: The post “BRICS, and the future of cross-border payments” has been created based on “BRICS, and the future of cross-border payments” published in “Business Line” on 17th September 2026.

UPSC Syllabus: GS Paper 2- International Relations

Context: BRICS has been working towards greater use of national currencies and improved cross-border payment mechanisms since the **Ufa Declaration of 2015**. A **Payment Task Force of BRICS central banks was established in 2020**, and the initiative was formally called the **BRICS Cross-Border Payments Initiative at the Kazan Summit in 2024**. India has consistently maintained that it is **not pursuing de-dollarisation or a common BRICS currency**.

Reason behind Cross-Border Payments gaining importance

1. The importance of efficient cross-border payments has increased because **intra-BRICS exports reached \$1.17 trillion in 2024**, which was 13 times their level in 2003.
2. India's trade with BRICS countries crossed **\$417 billion in FY26**, although India recorded a trade deficit of about **\$226 billion**.
3. Cross-border payments continue to face delays because of **correspondent banking chains, different time zones, batch processing and largely manual compliance checks**.
4. According to the Financial Stability Board's 2025 report, **fewer than 45 per cent of global B2B payments were credited within one business day**, highlighting the need for faster systems.
5. BRICS countries now have large-scale domestic fast-payment systems such as **UPI in India, Pix in Brazil, SBP in Russia, QRIS in Indonesia and Aani in the UAE**, creating a technological base for interoperability.

Major Developments

1. The **New Delhi Declaration** encourages interoperability of payment and messaging channels and greater settlement of trade in local currencies while respecting the national priorities of member countries.
2. The Declaration recognises that there is **no one-size-fits-all approach** to cross-border payments and does not establish a common BRICS payment system or common settlement currency.
3. The proposed Russian settlement and depository infrastructure has remained at the **technical workshop stage rather than becoming a formal decision**.
4. The **Jaipur Consensus** has proposed studying an invoice-discounting mechanism to support MSME exporters.
5. The **BRICS Multilateral Guarantees initiative** is moving towards pilot transactions, which can facilitate cross-border trade.
6. The **New Development Bank** has been encouraged to expand its lending in local currencies.

Opportunities for India

1. Greater interoperability can make **cross-border payments faster, cheaper and more transparent** for Indian businesses and individuals.
2. International expansion of **UPI connectivity** can strengthen India's position in the global digital-payment ecosystem.
3. Faster payments can particularly benefit **MSME exporters by improving their cash flows and reducing payment-related delays.**
4. Direct connectivity between payment systems can reduce dependence on **multiple correspondent banking intermediaries.**
5. Local-currency settlement can facilitate bilateral trade where suitable mechanisms exist for managing accumulated currency balances.
6. The growth of cross-border payments can create opportunities for **Indian banks and regulated fintech companies** to develop innovative payment solutions.
7. Common technical standards among BRICS countries can make cross-border transactions more **accessible, secure and transparent.**

Challenges

1. BRICS countries have **different regulatory frameworks, currency-convertibility regimes, payment infrastructures and financial systems**, making a single common system difficult.
2. Unequal trade balances can create difficulties in local-currency settlement because one country may accumulate large balances of another country's currency.
3. India's experience with **rupee settlement for Russian oil** demonstrated this problem when surplus rupees accumulated faster than they could be utilised.
4. Cross-border payments involve different requirements for **KYC, settlement, reporting, data sharing and compliance**, which require coordination between countries.
5. Retail payments between travellers and consumers, exporter payments and central-bank settlements involve **different participants, risks and technical requirements** and therefore cannot necessarily be addressed through one mechanism.
6. Wholesale transactions between central banks may require specialised systems such as **CIPS and mBridge**, rather than retail fast-payment platforms.
7. Geopolitical factors, including **Russia's exclusion from SWIFT after 2022**, add complexity to discussions on alternative payment arrangements.

Way Forward

1. BRICS should adopt a **bilateral and layered approach** rather than attempting to immediately establish one common payment system.
2. BRICS countries should develop common **standards for messaging formats, QR interoperability, data exchange, security and dispute resolution.**
3. Domestic fast-payment systems should be connected where there is sufficient **trade volume, regulatory compatibility and mutual trust.**
4. India's **UPI-PayNow linkage with Singapore** provides an example of how bilateral payment connectivity can be developed.
5. The proposed **UPI-Aani linkage with the UAE and QRIS-UPI linkage with Indonesia** can further expand India's international payment connectivity.

6. Local-currency settlement should be accompanied by mechanisms that provide **productive avenues for surplus currency balances**, including appropriate investment options.
7. Regulators should establish common safeguards while allowing **banks and fintech companies to compete on speed, cost and transparency**.
8. India can build on its **2023 framework for cross-border payment aggregators**, which provides regulatory requirements relating to KYC, settlement and reporting.
9. The **New Development Bank can play a greater role in local-currency lending**, thereby supporting trade and investment among member countries.

Conclusion: The future of BRICS cross-border payments is likely to depend more on **interoperability, common standards and bilateral connectivity than on the creation of a common currency**. BRICS can provide a **broad common template while allowing individual countries to develop arrangements according to their specific economic and regulatory conditions**. The ultimate measure of progress would be whether an Indian exporter can receive payment from a buyer in another BRICS country **as quickly, cheaply and transparently as from a domestic customer**.

Question: BRICS is moving towards greater interoperability in cross-border payments without pursuing a common currency. Discuss the opportunities, challenges and the way forward for India.

Source: [Business Line](#)

UPI Fee: Small Price, Smart Call, Smooth Going

Source: The post “UPI Fee: Small Price, Smart Call, Smooth Going” has been created based on “UPI Fee: Small Price, Smart Call, Smooth Going” published in “Times of India” on 17th September 2026.

UPSC Syllabus: GS Paper 3- Indian Economy

Context: The Government has decided to allow a fee of up to **₹2 per UPI transaction above ₹2,000**, while transactions below ₹2,000 will remain exempt. The debate is not merely about who pays the fee, but about **who should bear the cost of maintaining and developing the UPI ecosystem**.

UPI and Financial Inclusion

1. **UPI has expanded digital payments to millions of small businesses and informal-sector vendors**, thereby reducing dependence on cash.
2. Digital payments create a **transaction record**, which can help individuals and businesses build a financial history.
3. Such records can make it easier for businesses to access **formal credit and financial services**.
4. UPI has therefore contributed to the broader objective of **financial inclusion and formalisation of economic activity**.
5. However, payments are only one component of financial inclusion, and the larger objective is to ensure that people can also access **affordable and reliable credit**.

Reason behind consideration of a UPI Fee

1. UPI transactions involve costs related to **cybersecurity, servers, connectivity, investment in infrastructure and continuous innovation**, which need a sustainable source of financing.

2. The existing model largely absorbs these costs without directly charging users for individual transactions.
3. Banks and payment service providers therefore need adequate revenue to **maintain records, develop technology and ensure reliable payment services**.
4. A small and predictable fee could provide a source of revenue without necessarily undermining the larger benefits of UPI.

Arguments in Favour of a Small Fee

1. A small fee can help ensure the **economic sustainability of the UPI ecosystem** by contributing towards its operational and technological costs.
2. If payment providers cannot recover their costs, they may eventually reduce investment in **technology, cybersecurity and innovation**.
3. A nominal charge on higher-value transactions can be designed so that **small-value everyday transactions remain largely unaffected**.
4. A fee can also ensure that the costs of payment services are not entirely borne by banks, fintech companies or other intermediaries.

Concerns Regarding the Fee

1. Merchants may ultimately transfer the **Merchant Discount Rate (MDR)** to consumers by increasing the prices of goods and services.
2. Small merchants may have less capacity to absorb additional costs and may therefore increase their prices.
3. If merchants start charging consumers for UPI payments, it could **discourage digital payment adoption**.
4. Charging users merely for using a digital payment system raises the question of whether frequent users should effectively subsidise those who make fewer transactions.
5. A fee could become particularly problematic if it is imposed without considering the **different capacities of large retailers and small merchants**.

Way Forward

1. The fee structure should be designed in a manner that **protects small-value transactions and does not discourage ordinary users from adopting UPI**.
2. The government and regulators should ensure that payment charges remain **transparent, predictable and proportionate to transaction value**.
3. The burden of payment costs should be distributed fairly among **banks, payment providers, merchants and users**, rather than being disproportionately transferred to consumers.
4. Any fee mechanism should preserve the affordability and accessibility that have made UPI an important instrument of **digital financial inclusion**.
5. Greater attention should also be given to converting digital transaction records into **responsible and affordable credit opportunities** for small businesses.

Conclusion: The objective should not simply be to make UPI free at any cost or to impose charges without safeguards, but to create a **financially sustainable payment ecosystem without weakening its wider social and economic benefits**. A carefully designed, transparent and proportionate fee structure can help maintain the infrastructure while preserving **UPI's role in digitalisation, formalisation and financial inclusion**.

Question: The proposed UPI transaction fee raises concerns about balancing the financial sustainability of digital payments with the objective of financial inclusion. Discuss.

Source: [Times of India](#)

Mining Amendment is Unfair to States

UPSC Syllabus: Gs Paper 2- Issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.

Introduction

Mining is concentrated in States such as Odisha, Jharkhand, Chhattisgarh and Karnataka, which bear both the benefits and costs of extraction. The **MMDR Amendment Act, 2026** seeks predictable taxation and greater mining investment by restricting State levies on mineral rights and mineral-bearing land. The central concern is whether investment certainty should reduce the fiscal space and constitutional powers of resource-rich States.

Why the Mining Amendment Was Introduced

1. **Predictable tax environment:** The Union government seeks a stable taxation framework because mining projects require huge investment and may operate for decades.
2. **Preventing excessive levies:** Multiple State levies, different rates and taxes introduced after operations begin can increase costs and create uncertainty for mining projects.
3. **Encouraging investment:** Greater tax certainty is intended to encourage long-term investment and prevent mining projects from becoming commercially unviable.
4. **Supporting mineral supply:** Stable mining investment can encourage exploration and domestic production and may reduce excessive dependence on imports.
5. **Long project life:** Mining deposits cannot be relocated when tax rules change, making stable financial conditions important for projects lasting decades.
6. **Industrial competitiveness:** The Union argues that fragmented State levies raise mineral costs and can weaken the competitiveness of Indian mining.
7. **Energy transition needs:** Renewable energy, electric mobility, battery storage and advanced manufacturing will require dependable mineral supplies for future development.

Key Changes Under the MMDR Amendment Act, 2026

1. **Mineral-bearing land under Union regulation:** Section 2 has been expanded to bring mineral-bearing land within the field of Union regulation, while Section 3 gives the term a statutory meaning.

2. **Restriction on State levies:** New **Section 9D** restricts State Governments from imposing taxes, cesses or other levies on mineral rights and mineral-bearing land except under conditions prescribed by the Centre.
3. **Central rule-making power:** **Section 13** has been amended to provide the necessary rule-making authority for implementing the new framework.
4. **Greater central regulation:** Taken together, these changes reduce the space available to States for exercising fiscal powers over mineral resources and move the law towards a more centrally regulated system.

Major Concerns Related to the MMDR Amendment Act, 2026

1. Constitutional Concerns

- **Entry 50 and mineral taxation:** States have constitutional power to tax mineral rights, subject to limitations imposed by Parliament.
- **Entry 49 and land taxation:** States separately possess the power to tax lands and buildings, raising questions about restrictions on mineral-bearing land.

2. Federal Concerns

- **Reduced fiscal autonomy:** Section 9D limits States' ability to create new taxes, cesses and levies related to minerals.
- **Mining-related expenditure:** Resource-rich States and mining districts bear costs such as displacement, environmental damage and infrastructure pressure.
- **Restricted future revenue options:** Existing royalties and other core revenues remain, but States may lose an important fiscal instrument for raising future resources from mineral wealth.
- **Centre-State balance:** The amendment raises a broader question about whether States can retain adequate financial capacity for responsibilities linked to mineral extraction.

3. Judicial Concerns

- **2024 Supreme Court judgment:** A nine-judge Bench held that royalty is not a tax and recognised State powers over mineral taxation and mineral-bearing land.
- **Possible tension with the judgment:** Section 9D's restriction on mineral-bearing land raises questions about the extent to which Parliament can restrict the State's separate land-taxation power.

4. Other Concerns

- **Past unpaid dues:** The amendment also extinguishes certain unpaid or unrecovered dues from earlier State levies, adding another concern for States over their revenue claims.
- **Balance between uniformity and autonomy:** Greater tax uniformity may improve predictability, but excessive central control can narrow the fiscal choices available to States.

Way Forward

1. **Balance investment with State autonomy:** Ensure greater tax predictability for long-term mining investment without unnecessarily removing the fiscal choices available to resource-rich States.

2. **Strengthen Centre-State consultation:** Make States part of policy design when changes affect natural resources, taxation powers and revenues, rather than limiting consultation to the implementation stage.
3. **Ensure regional development:** A meaningful share of the value generated from mining should support **infrastructure, education, livelihoods and stronger local communities** in mining regions.
4. **Promote sustainable extraction:** Mining policy should combine mineral production with **ecological restoration, environmental safety and responsible resource use**, since minerals are exhaustible.
5. **Support industrial development:** Greater certainty in mining should help secure minerals needed for **steel, manufacturing, infrastructure, renewable energy, electric mobility and battery storage**.
6. **Reduce import dependence:** Encourage exploration and domestic mineral production so that India can meet growing mineral requirements without excessive dependence on imports.
7. **Protect future generations:** The economic value created from exhaustible minerals should leave behind permanent development benefits rather than only short-term gains from extraction.

Conclusion

The MMDR Amendment, 2026 aims to improve tax predictability and attract mining investment, but it narrows the fiscal space of States. Since States bear costs of mineral extraction, their constitutional and financial interests require protection. A balanced framework should support mineral security and industrial growth while preserving State fiscal capacity and ensuring mining regions receive lasting benefits.

Question for practice:

Evaluate whether the MMDR Amendment Act, 2026 strikes a fair balance between mining investment and the fiscal autonomy of States.

Source: [The Hindu](#)

What Lies Beyond India's E20 Push

UPSC Syllabus: Gs Paper 3- Infrastructure

Introduction

India's E20 programme seeks to reduce **crude oil dependence, emissions and foreign exchange outgo** through greater ethanol use. However, lower fuel efficiency can increase consumer costs and emissions, while diverting sugarcane and maize towards ethanol can affect food security and agricultural trade. With the government now considering **blending beyond E20 through flexi-fuel vehicles**, the next phase must balance energy security with consumer, environmental and agricultural concerns.

E20 Petrol: Meaning and Rationale

1. **Composition:** E20 petrol contains **80% motor gasoline and 20% anhydrous ethanol**, making ethanol a significant part of transport fuel.
2. **Introduction:** India introduced E20 on **February 6, 2023**, when public sector oil marketing companies began selling it at selected outlets.
1. **Reason for Expansion:** The programme has been scaled up amid **rising crude prices and supply disruptions linked to the West Asia crisis**, increasing the focus on domestically available fuel alternatives.
2. **Policy Promise:** The government broadly links E20 with **consumer savings, lower carbon emissions and foreign exchange savings** through reduced crude oil use.

Potential Benefits of E20 Blending

1. **Lower Crude Dependence:** Replacing part of gasoline with ethanol reduces the amount of crude oil required for transport fuel and can lower import dependence.
2. **Foreign Exchange Savings:** Since oil forms a significant part of India's import bill, substituting domestically produced ethanol can potentially reduce foreign exchange outgo.
3. **Lower Carbon Content:** Ethanol contains **less embodied carbon per litre** than gasoline, creating potential for lower emissions when fuel efficiency does not fall significantly.
4. **Domestic Ethanol Use:** Higher blending creates greater demand for domestically produced ethanol, supporting the use of available agricultural feedstocks for fuel production.

Key Concerns Associated with E20

1. **Mileage Loss:** A joint **ARAI-SIAM-IOCL study** cited by the Road Transport and Highways Minister found that E20 can reduce fuel economy by **2%–6%**, depending on vehicle category and vintage.
2. **Higher Household Cost:** With E10 priced at ₹100 and mileage falling 6%, a car travelling 15 km would need **1.06 litres instead of one litre**, raising the effective cost to ₹106.
3. **Consumer Burden:** The Reporters' Collective estimated that consumers spent an additional **₹88,234 crore between April 2023 and March 2026** because of higher fuel consumption linked to the mileage penalty.
4. **Emission Trade-off:** E20 can reduce emissions per litre, but emissions for the same distance may rise when mileage falls; calculations show an increase with **4%–6% mileage loss**.
5. **Vehicle Vintage:** Newer E20-compatible vehicles may see lower emissions, while older vehicles may have higher emissions depending on their mileage loss.
6. **Food Security Pressure:** Ethanol production from **sugarcane and maize** diverts agricultural resources towards fuel, creating longer-term concerns for food availability.

7. **Agricultural Trade Impact:** Higher domestic demand contributed to restrictions on sugar exports, while rising maize use for ethanol coincided with sharply lower export earnings and India becoming a **net maize importer** last year.

Government Initiatives and the E20 Transition

1. **E20 Expansion:** Public sector oil marketing companies expanded E20 availability after its initial introduction at selected fuel outlets in 2023.
3. **Ethanol Capacity:** The government says India's **ethanol production capacity has surpassed current blending requirements**, creating a need for additional uses for the surplus capacity.
4. **Flexi-Fuel Vehicles:** The government is supporting **flexi-fuel vehicles** as part of its plan to enable higher ethanol blending beyond E20.
5. **Pure Ethanol Availability:** Higher blending will require greater availability of **pure ethanol at fuel outlets** alongside vehicles capable of using higher ethanol concentrations.
6. **Biofuel-Based Diesel Additives:** The government is exploring **biofuel-based additives for diesel**, with experiments involving isobutanol identified as a possible new avenue.
7. **GOBARdhan Scheme:** The **GOBARdhan scheme** brings together incentives from different ministries to promote **compressed biogas (CBG)**, although progress in this area has remained limited.

Beyond E20: India's Emerging Biofuel Strategy

1. **Higher Ethanol Blending:** India is preparing for blending percentages **higher than E20**, shifting the focus from the current blend towards a wider ethanol-based fuel system.
2. **Flexi-Fuel Transition:** Flexi-fuel vehicles can enable higher ethanol use, making vehicle compatibility an important part of the next stage of the programme.
3. **Utilising Surplus Capacity:** Since production capacity has exceeded current blending requirements, **new uses for ethanol** will be needed to absorb the surplus.
8. **Diversified Biofuels:** India is also looking beyond petrol ethanol blending through **isobutanol, biofuel-based diesel additives and compressed biogas**.
9. **Energy Security Focus:** The West Asia crisis and crude prices approaching **USD 100 per barrel** have increased the importance of using domestically available energy resources.

Way Forward

1. **E10-E20 Choice:** Consumers could be given a choice between **E10 and E20**, particularly while many existing cars and motorcycles are not ready for higher ethanol blends.
2. **Countercyclical Taxation:** The government could use **countercyclical indirect taxes** to reduce the impact of rising crude prices on consumers without relying only on higher ethanol blending.

3. **Vehicle Compatibility:** Expansion beyond E20 should be accompanied by wider availability of **flexi-fuel vehicles and compatible fuel infrastructure**.
4. **Food-Fuel Balance:** Ethanol expansion should account for the diversion of **sugarcane and maize** so that fuel production does not create wider food-security and trade pressures.
5. **Public Transport:** Reliable and subsidised public transport with **last-mile connectivity** can reduce dependence on cars and motorcycles.
6. **Clean Mobility:** Better facilities for **cycling and walking** can further reduce fuel demand, emissions and pollution.

Conclusion

India's E20 push can support **energy security and reduced crude dependence**, but its wider costs need equal attention. Mileage losses, consumer expenditure, emissions, food security and agricultural trade create important trade-offs. As India moves beyond E20, **flexi-fuel vehicles, diversified biofuels, consumer choice and stronger public transport** can help create a more balanced transition.

Question for practice:

Discuss the benefits, concerns and future prospects of India's E20 ethanol blending programme.

Source: [The Hindu](#)

Government health schemes at a crossroads

Source: The post "**Government health schemes at a crossroads**" has been created based on "**Government health schemes at a crossroads**" published in "**Business Line**" on 18th September 2026.

UPSC Syllabus: GS-2-Governance

Context: The **Central Government Health Scheme (CGHS)** has provided healthcare security to serving and retired government employees and their families for more than seven decades. However, rising healthcare costs, an increasing number of beneficiaries, inadequate budgets and fragmented purchasing arrangements are creating challenges for the long-term sustainability of government health schemes.

Major Challenges

1. Government health schemes such as **CGHS, ECHS, Railways and State employee schemes** face rapidly increasing healthcare expenditure.
2. The **fee-for-service system** encourages providers to conduct more consultations, investigations and procedures rather than focusing on efficient and outcome-based treatment.
3. Increasing expenditure on **medicines**, particularly through authorised local chemists, adds to the financial burden.
4. Weak **gatekeeping** allows patients to directly access expensive specialist and tertiary care without appropriate clinical referral.
5. Different government schemes often separately **empanel hospitals, negotiate prices, process claims and maintain IT systems**, resulting in duplication and fragmentation.

6. Delays in payments, claims processing and grievance resolution can reduce **providers' confidence in government health schemes**.

Key Reforms Needed

1. **Shift from fee-for-service to package-based payments**
 - a. The government should increasingly pay hospitals through **well-defined treatment packages** instead of paying separately for every investigation, procedure and consumable.
 - b. Over time, systems such as **Diagnosis-Related Groups (DRGs)** can be introduced to account for the complexity of patients while encouraging efficient treatment.
2. **Improve medicine procurement**
 - a. Government schemes should promote **quality-assured generic medicines** through strong formularies and bulk procurement.
 - b. Better inventory management and prescription audits can help reduce unnecessary expenditure without restricting access to medicines.
3. **Strengthen primary healthcare and gatekeeping**
 - a. CGHS wellness centres should function as **coordinators of care** by providing primary care, preventive screening and chronic disease management.
 - b. Patients should be referred to specialists and tertiary hospitals when clinically necessary.
 - c. Similar gatekeeping mechanisms should be strengthened in **ECHS, Railways and State employee schemes**.
4. **Consider carefully designed beneficiary contributions**
 - a. Modest **co-payments or deductibles** for selected services, particularly private-hospital treatment, may help reduce unnecessary utilisation.
 - b. Such contributions should be differentiated according to **income, age and type of service**, with exemptions for vulnerable groups and people with chronic conditions.
5. **Promote convergence among government health schemes**
 - a. Greater coordination among **CGHS, ECHS, ESI, Railways and other government schemes** can create larger risk pools and increase government's purchasing power.
 - b. Common provider networks, standard treatment packages, shared technology platforms and interoperable claims systems can reduce duplication.
6. **Improve claims and grievance management**
 - a. Payments to hospitals should be **timely and transparent**, with clear visibility of the claims process.
 - b. Grievances and disputes should be resolved within clearly defined timelines.
 - c. Digital platforms should simplify transactions, while strong anti-fraud measures should not cause unnecessary delays in legitimate payments.

Conclusion: The objective should not be to dismantle existing government health schemes but to **strengthen their foundations for the future**. The recent revision of CGHS reimbursement rates addresses an immediate concern, but long-term sustainability requires a shift from **simply paying healthcare bills to strategically purchasing healthcare**. Such reforms can make government health schemes **affordable, efficient, transparent and trusted**, while ensuring continued financial protection and quality healthcare for beneficiaries.

Question: Government health schemes such as CGHS face growing challenges of rising healthcare costs, increasing beneficiaries and inefficient purchasing mechanisms. Discuss the reforms needed to make these schemes financially sustainable and beneficiary-friendly.

Source: [Business Line](#)

Who has to pay MDR on UPI and who stands to gain the most?

Source: The post “Who has to pay MDR on UPI and who stands to gain the most?” has been created based on “Who has to pay MDR on UPI and who stands to gain the most?” published in “The Hindu” on 18th September 2026.

UPSC Syllabus: GS-3- Indian Economy

Context: Merchant Discount Rate (MDR) is a fee charged for processing digital payments, which is generally shared among banks, payment service providers and UPI application providers. Under the new arrangement, MDR will apply to certain Person-to-Merchant (P2M) UPI transactions above ₹2,000, while most UPI transactions will remain free.

Who will pay MDR

1. Merchants **receiving UPI payments above ₹2,000** will generally bear the MDR.
2. **Transactions of ₹75,000 and above** will have MDR capped at ₹300 per transaction.
3. **Essential and thin-margin sectors** such as railways, telecommunications, insurance, fuel and agricultural inputs will attract a flat MDR of ₹5 per transaction.
4. **Transactions involving mutual funds, stockbrokers, dealers and F&O** will attract 0.02% or ₹300 per transaction, whichever is lower.

Who will not pay MDR

1. P2P transactions will remain completely free.
2. Merchant payments up to ₹2,000 will remain free.
3. Small merchants receiving up to ₹1 lakh per month through UPI will be exempt.
4. P2PM transactions will also remain exempt.
5. Hence, around 97.5% of UPI transactions by volume will remain free.

Who stands to gain

1. MDR collections **will be shared among banks**, payment service providers and UPI application providers.
2. The **payer's bank gets about 40%, the merchant/receiving bank about 30%**, UPI applications/TPAPs about 20%, and PSPs about 10%.
3. A **dedicated fund equivalent to 5% of total MDR collections** will also be used to promote UPI adoption among small merchants.
4. Since **P2M transactions above ₹2,000 constitute** around 20% of UPI transactions by value, the new mechanism can generate significant revenue for the payment ecosystem.

Challenges

1. **Higher cost for merchants:** MDR may increase the cost of accepting digital payments, particularly for merchants with low profit margins.

2. **Risk of discouraging digital payments:** Some merchants may prefer cash or other payment modes if MDR makes UPI transactions costlier.
3. **Impact on small businesses:** Although small merchants are exempt up to ₹1 lakh monthly UPI receipts, businesses growing beyond this threshold may face additional costs.
4. **Complexity of the MDR structure:** Different rates, exemptions and transaction limits may make the system difficult for merchants to understand and comply with.
5. **Possibility of shifting the burden:** Merchants may indirectly pass the additional cost to consumers through higher prices.
6. **Revenue-sharing concerns:** The distribution of MDR among banks, TPAPs and PSPs could raise questions about whether the compensation adequately reflects the costs and responsibilities of each participant.

Way Forward

1. **Protect small and low-margin merchants:** MDR exemptions and concessional rates should continue for essential sectors and small businesses.
2. **Maintain transparency:** The applicable MDR, exemptions and caps should be clearly communicated to merchants.
3. **Monitor consumer impact:** Regulators should ensure that merchants do not impose inappropriate additional charges on consumers for using UPI.
4. **Periodic review:** MDR rates, exemptions and transaction limits should be periodically reviewed based on transaction costs and the development of the digital-payment ecosystem.
5. **Strengthen competition:** A competitive payment ecosystem can help keep transaction costs reasonable while ensuring adequate compensation to banks, PSPs and UPI applications.

Conclusion: MDR can provide a sustainable revenue mechanism for the UPI ecosystem while retaining free access for the overwhelming majority of transactions. The way forward should be to balance the financial sustainability of digital payments with affordability for merchants and consumers, especially small and low-margin businesses.

Question: What is Merchant Discount Rate (MDR) on UPI transactions? Discuss who will bear the MDR on UPI transactions above ₹2,000. Examine the challenges associated with MDR and suggest a way forward.

Source: [The Hindu](#)

A War Room for India in an Age of Sanctions

UPSC Syllabus: Gs Paper 2- International relations

Introduction: A War Room for India in an Age of Sanctions

Economic sanctions are no longer limited to foreign policy; they can affect **banks, shipping, energy supplies, trade and households**. The latest U.S. sanctions and tariff measures show how India's dependence on global financial and maritime networks can turn external pressure into domestic economic risks. India therefore needs a coordinated response that connects diplomacy, finance, trade, energy, shipping and law.

America's New Sanctions and Tariff Push

1. **100% tariff authority:** The U.S. House passed the **Lindsey O. Graham Sanctioning Russia and Iran Act of 2026** by **262–159**, sending it to President Trump.
2. **Targeting Russian energy buyers:** The Act gives the President power to impose **up to 100% tariffs** on countries buying Russian crude oil or natural gas.
3. **Wider sanctions framework:** The legislation also targets **Russian leadership, energy networks, banks and vessels** involved in sanctions evasion, while adding measures against Iran.
4. **Five-year tariff power:** The additional tariff authority against energy-importing countries would remain available for **five years**, increasing uncertainty for countries dependent on Russian energy.
5. **Iran-related pressure:** Washington has separately expanded sanctions across **digital assets, technology, gold, aviation and shipping**, widening pressure beyond direct oil transactions.
6. **Sanctions beyond sellers:** Modern U.S. restrictions increasingly target **tankers, insurers, ship managers, traders and financial institutions**, making entire transactions vulnerable to disruption.
7. **Indian companies already targeted:** Washington sanctioned **four India-based companies and three Indian nationals** over alleged trade in Iranian oil and petrochemicals.

Why India Is Directly Exposed

1. **Russian crude dependence:** India imported **\$40.8 billion of Russian crude in FY2026**, equal to **30.3% of total crude imports worth \$134.7 billion**.
2. **Rising dependence:** By **July 2026**, Russian crude accounted for **51% of India's imported crude**, increasing India's exposure to possible U.S. action.
3. **Export vulnerability:** Higher U.S. tariffs could affect Indian exporters because the **U.S. is an important destination for Indian goods**, creating risks for trade recovery.
4. **Energy-security pressure:** Reducing Russian oil purchases could create adjustment pressures because India must simultaneously protect **affordable energy supplies and stable domestic consumption**.
5. **Iran-linked exposure:** U.S. sanctions on Indian companies and nationals over alleged Iranian oil and petrochemical trade show that Indian businesses can also face direct sanctions risks.
6. **Shipping exposure:** Iran's Persian Gulf Strait Authority listed **45 vessels initially and 77 by September 14**, including vessels serving or registered in India.

How Sanctions Travel from Global Networks to Indian Households

1. **Weaponised interdependence:** Control over critical financial, insurance or transport networks allows one country to pressure businesses that depend on those networks.
2. **Dollar-payment chokepoint:** An Indian company may follow Indian law but still depend on an **American bank and dollar-payment system**, creating additional sanctions risks.

3. **Insurance chokepoint:** Foreign insurers can become another pressure point because Iran warned insurers against covering vessels on its non-compliant list.
4. **Hormuz chokepoint:** Restrictions around the **Strait of Hormuz** can affect shipping even when the original dispute concerns sanctions or trade.
5. **Domestic transmission:** Disruption can move from international transactions to **fuel supplies, LPG availability, farmers, seafarers and household kitchens**, linking foreign policy with daily economic life.
6. **Crisis coordination:** During the West Asia crisis, India coordinated Ministries, monitored vessels and supplies, increased LPG production and arranged alternative cargoes to keep supplies moving.

India's Strategic Choices in the Face of Sanctions

1. **Diversify energy sources:** India can reduce concentration risks by securing **alternative crude and LNG supplies**, including long-term LNG contracts outside Hormuz.
2. **Build LPG resilience:** Greater **LPG storage capacity** can provide more protection when external disruptions threaten regular supplies.
3. **Expand Indian shipping:** A larger **Indian-controlled tanker fleet** can reduce dependence on foreign shipping capacity during sanctions or maritime disruptions.
4. **Strengthen maritime insurance:** A stronger **Bharat Maritime Insurance Pool** can improve domestic capacity when foreign insurers become unwilling to cover vulnerable vessels.
5. **Use rupee settlement:** Rupee settlement can support lawful trade where sellers accept it, but it cannot protect transactions involving banks that still depend on New York.
6. **Protect lawful trade:** India needs to preserve **energy security, fertiliser supplies, seafarer interests and lawful trade** while maintaining relations with the U.S., Russia, Iran and Gulf countries.

Why India Cannot Simply Follow China's Approach

1. **China's legal position:** China has argued that American measures lack a basis in **international law or UNSC authorisation**.
2. **China's business instructions:** Beijing earlier directed Chinese businesses not to recognise, enforce or comply with American sanctions against five Chinese refining companies.
3. **India's position:** India recognises **UNSC-mandated sanctions** but does not accept unilateral sanctions, creating a position that differs from direct compliance with U.S. measures.
4. **Different economic capacity:** China has greater **market power, state-directed economic capacity and leverage over critical supply chains**, giving it more room to resist external pressure.
5. **India's U.S. dependence:** India's financial and commercial links with the U.S. make direct replication of China's approach more costly for Indian businesses.

6. **Legal objection is insufficient:** Rejecting unilateral sanctions legally does not remove the commercial costs faced by Indian firms through banks, insurers, payments or trade restrictions.
7. **Need for balance:** India must protect domestic interests while maintaining working relationships with **the U.S., Russia, Iran and Gulf countries.**

Way Forward

1. **Permanent coordination:** An **Economic Security and Sanctions Office under the Cabinet Secretariat** can provide a permanent mechanism for handling economic coercion.
2. **Whole-of-government structure:** It should bring together **foreign policy, finance, commerce, energy, shipping, law, defence, RBI and market regulators.**
3. **Track the full chain:** The office should identify where transactions can fail, covering **payment, insurance, shipping, ports and final delivery.**
4. **Support affected companies:** It should provide early warnings when a **payment route, insurer or port** becomes vulnerable to foreign action.
5. **Negotiate exemptions:** India should seek evidence behind foreign listings, support legitimate delisting requests and negotiate **written exemptions and transition periods.**
6. **Clear domestic guidance:** Banks should distinguish **legal prohibitions from commercial caution**, while companies should receive clear Indian guidance before sanctions disrupt legitimate transactions.

Conclusion

Sanctions now operate across **finance, trade, shipping and energy**, making fragmented responses inadequate. India cannot control every international chokepoint, but it can reduce its vulnerability through diversification, domestic capacity and coordination. A permanent **economic-security war room** can help India to assess the full transaction chain before taking decisions and protect energy security, lawful trade and national interests.

Question for practice:

Examine how the growing use of economic sanctions by the United States can affect India's economic security and strategic autonomy.

Source: [The Hindu](#)

Uniform Civil Code Debate

UPSC Syllabus: Gs Paper 2- Constitution of India

Introduction

The **Uniform Civil Code (UCC)** seeks common civil laws for citizens in matters such as marriage, divorce, inheritance and adoption. **Article 44 of the Constitution**, under the Directive Principles of State Policy, directs the State to endeavour to secure a common civil code for citizens throughout India. The issue has gained fresh attention after the Union Home Minister announced that **BJP-led NDA governments in 21 States aim to introduce UCC before 2029**.

Present Personal Law System

1. **Scope of Personal Laws:** Personal laws govern private matters such as marriage, divorce, inheritance, maintenance and adoption, unlike common public laws.
2. **Existing Uniform Laws:** India already follows uniform criminal laws and common civil laws covering areas such as taxation, contracts and negotiable instruments.
3. **Hindu Personal Laws:** Hindus are governed by laws including the Hindu Marriage Act, 1955 and Hindu Succession Act, 1956 for family matters.
4. **Other Hindu-law Communities:** Jains, Buddhists and Sikhs are covered by Hindu personal-law legislation, while Sikh marriages can be registered under the Anand Marriage Act, 1909, as amended in 2012.
5. **Christian and Parsi Laws:** Christians and Parsis have separate personal laws governing their family matters within the existing legal framework.
6. **Muslim and Tribal Practices:** Muslims are governed by the Muslim Personal Law (Shariat) Application Act, 1937, while some tribals follow customary family laws under constitutional exceptions.

2. Constitutional Foundation of Uniform Civil Code (UCC)

1. **Article 44:** Article 44 directs the State to endeavour to secure a UCC for citizens throughout India, but places it under non-justiciable Directive Principles.
2. **Constituent Assembly Debate:** Constitution makers differed on UCC, with some seeking uniform civil laws and women's equal rights, while others feared religious-rights violations.
3. **Fundamental Right to Religion:** Article 25 guarantees freedom to practise religion, creating constitutional concerns when common personal laws affect religiously based practices.
4. **Cultural Protection:** Article 29 protects the right of sections of citizens to conserve their distinct culture, including concerns about customary practices.
5. **Equality and Dignity:** UCC debates also involve Articles 14 and 21, particularly where personal laws affect equality, dignity and women's rights.

Arguments in Favour of Uniform Civil Code (UCC)

1. **Equal Civil Status:** A common personal law would subject citizens to the same civil rules, irrespective of their religion, caste or community.
2. **Gender Justice:** UCC is supported as a means to secure equal rights for women in marriage, divorce, maintenance and inheritance.
3. **Secular Civil Framework:** Uniform personal laws are seen as strengthening secularism by separating civil rights from differences based on religious personal laws.
4. **National Integration:** Common rules for personal matters are argued to promote greater national integration by creating a shared civil framework.
5. **Younger Generation:** Supporters argue that UCC can meet the expectations of a younger generation seeking equal and common civil rights.
6. **Avoiding Selective Reform:** A common framework could avoid repeatedly addressing individual discriminatory provisions within separate personal laws.

Concerns and Arguments Against Uniform Civil Code (UCC)

1. **Religious Freedom:** Critics argue that UCC provisions may conflict with religious scriptures and doctrines, raising concerns under Article 25.
2. **Cultural Diversity:** India's social and religious diversity makes a single personal-law framework a delicate and difficult task.
3. **State Intervention:** Opponents raise concerns that the State could intervene excessively in private and religious family matters.
4. **Minority Resistance:** There is resistance to UCC among minorities, particularly Muslims, because of concerns about religious and personal-law protections.
5. **Tribal Exemption:** State-level UCC frameworks have provided exemptions or special protection to tribal communities, reflecting constitutional safeguards and the need to protect tribal customs and culture.
6. **Question of Discrimination:** Exempting tribal groups while applying UCC to other communities, including minorities, raises concerns about equal treatment under the same framework.

Judicial Perspective

1. **Shah Bano Case, 1985:** The Supreme Court advocated the need for UCC while highlighting concerns about injustice, particularly affecting women.
2. **Sarla Mudgal Case, 1995:** The Court addressed conversion being used to circumvent monogamy laws, bringing personal-law conflicts into constitutional discussion.

3. **Constitutional Morality:** The Sabarimala judgment, 2018, strengthened the debate over equality, religious practices and constitutional morality, which also informs discussions on personal-law reform.
4. **Judicial Role:** The judiciary can protect constitutional rights through interpretation, but legislative action remains necessary for creating and implementing personal laws.
5. **Uneven Codification:** Hindu personal laws were substantially codified during the 1950s, whereas Muslim personal law remains largely uncoded.

Experience of Uniform Civil Code (UCC) in India

1. **Uttarakhand Model:** Uttarakhand has had a UCC in force since January 2025, covering areas including marriage, divorce and inheritance.
2. **State-Level Expansion:** Uttarakhand has implemented the UCC, while Gujarat, Assam and Madhya Pradesh await Presidential assent and notification; Maharashtra, West Bengal and Chhattisgarh have formed drafting committees. The Union Home Minister has also said that 21 NDA-ruled States are expected to introduce UCC before 2029.
3. **Uttarakhand's Coverage:** The Uttarakhand framework focuses on marriage, divorce, inheritance and cohabitation, while Scheduled Tribes remain outside its scope.
4. **Goa Model:** Goa's common civil-law framework is often cited as an existing example, but its historical and religious exceptions mean it cannot simply be replicated across India.

Way Forward

1. **Gender Justice as Priority:** Civil-law reform should primarily ensure equal rights for women in marriage, divorce, maintenance and inheritance.
2. **Equality Within Communities:** The 2018 Law Commission Consultation Paper preferred reforming discriminatory personal-law provisions over immediately imposing a blanket UCC.
3. **Targeted Legal Reform:** Reforms should address marriage, divorce, custody, adoption, maintenance, succession and inheritance to improve gender justice.
4. **Ambedkar's Voluntary Approach:** Dr. B.R. Ambedkar supported the idea of a UCC while recognising concerns about religious freedom and the need for legislative discretion in its implementation.
5. **Balancing Rights and Diversity:** Reforms should uphold equality and constitutional morality while considering religious practices, cultural diversity and constitutional protections.
6. **Consensus-Based Implementation:** A sustainable approach requires transparent consultation and broad consensus, rather than treating uniformity as the only measure of reform.

Conclusion: Balancing Equality and Diversity

The UCC debate requires a balance between **equal civil rights and India's plural social structure**. Reform should address discriminatory practices, particularly those affecting women, without weakening constitutional and cultural protections. **Targeted reforms, wider consultation and consensus-based implementation** can make civil-law reform more acceptable and effective. The goal should be substantive equality rather than uniformity for its own sake.

Question for practice:

Discuss the constitutional issues, arguments and challenges surrounding the implementation of the Uniform Civil Code (UCC) in India.

Source: [The Hindu](#)

U.S.A–Russia Sanctions Bill: Implications for India's Oil Imports and Trade

Source: The post "U.S.A–Russia Sanctions Bill: Implications for India's Oil Imports and Trade" has been created based on "U.S.A–Russia Sanctions Bill: Implications for India's Oil Imports and Trade" published in "Indian Express" on 19th September 2026.

UPSC Syllabus: GS-2-International Relations

Context: The U.S.A House of Representatives has passed a Bill proposing tariffs of up to **100% on the top five buyers of Russian energy**, with India being the second-largest export market for Russian crude. The Bill still requires the U.S.A President's approval and provides scope for waivers.

India's energy dependence

1. India imports **over 88% of its crude oil requirements**, making it highly dependent on global energy markets.
2. Russia currently accounts for **nearly half of India's crude oil imports**.
3. In August 2026, India imported **2.08 million barrels per day of Russian oil**, accounting for about **45% of total oil imports**.
4. Russian crude became important after Western countries reduced purchases from Russia, as Russian suppliers offered **discounted oil** to countries such as India.

Implications for India

1. Energy security concerns

- a. A sharp reduction in Russian oil imports would be difficult because global energy supplies are already constrained amid the West Asia crisis.
- b. Russian crude is currently considered a practical and competitive source for Indian refiners.

2. Risk of higher oil and fuel prices

- a. Removing large quantities of Russian oil from global markets could further tighten supplies.
- b. This may increase international crude prices and consequently raise India's import bill and domestic fuel costs.

3. Pressure on the India-U.S.A trade relationship: The proposed legislation could provide the U.S.A administration with an additional instrument to exert pressure on India during India-U.S.A trade negotiations.

4. Limited scope for immediate substitution: Replacing nearly half of India's crude imports from Russia overnight is difficult because alternative sources may not provide comparable volumes and prices.

5. Increased policy uncertainty: The final impact will depend on how aggressively the U.S.A implements the legislation and whether exemptions or waivers are granted.

Way Forward

1. **Pursue diplomatic engagement:** Continue discussions with the U.S.A to communicate the implications for India's energy security and the global energy market.
2. **Seek waivers and exemptions:** Utilise the discretionary powers provided to the U.S.A President to protect India's legitimate energy interests.
3. **Diversify energy sources:** Reduce excessive dependence on any single supplier while maintaining access to competitively priced crude.
4. **Strengthen strategic reserves:** Expand the ability to withstand temporary disruptions in international oil supplies.
5. **Promote domestic alternatives:** Accelerate renewable energy, electric mobility, biofuels and other alternatives to reduce long-term dependence on imported crude.
6. **Protect trade interests:** Work closely with Indian industry and trade bodies to manage the economic consequences of the proposed measures.
7. **Maintain strategic autonomy:** India should pursue its energy requirements through **diversified sourcing and evolving market dynamics**, as stated by the MEA.

Conclusion: The proposed sanctions create a difficult balance between **energy security, affordable crude supplies and India-U.S.A relations**. India's approach should therefore combine diplomatic engagement and pursuit of exemptions with long-term diversification of energy sources, thereby protecting both its economic interests and strategic autonomy.

Question: The proposed U.S.A sanctions on buyers of Russian energy could have significant implications for India's energy security and strategic autonomy. Discuss the challenges for India and suggest a suitable way forward.

Source: [Indian Express](#)

Orangutans in Odisha: Does India have to repatriate the primates? What law says

Source: The post "Orangutans in Odisha: Does India have to repatriate the primates? What law says" has been created based on "Orangutans in Odisha: Does India have to repatriate the primates? What law says" published in "**Indian Express**" on 19th September 2026.

UPSC Syllabus: GS-3-Environment

Context: The rescue of five baby orangutans from a forest in Balasore, Odisha, has highlighted concerns regarding illegal exotic pet trade in India. Orangutans are native to Indonesia and Malaysia and are critically endangered.

Legal framework governing wildlife trade

1. **CITES framework:** International wildlife trade is not completely prohibited but is strictly regulated under the **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**. India became a party to CITES in **1976**.
2. **CITES Appendices:** CITES classifies species into three Appendices according to their level of protection.
3. **Appendix-I:** It covers species facing the threat of extinction, for which commercial trade is generally prohibited and trade is allowed only in exceptional, non-commercial circumstances.
4. **Indian law:** The **Wild Life (Protection) Act, 1972**, was amended in **2022** to harmonise India's legal framework with CITES and added a Schedule covering CITES-listed species.
5. **Orangutans:** The Bornean, Sumatran and Tapanuli orangutans are listed under **CITES Appendix-I**, restricting their trade to purposes such as research, recognised zoos and breeding projects.

What happens to illegally traded animals?

1. Where an animal has been illegally traded, the authorities have to consider its **welfare, legal status and country of origin**.
2. CITES recommends consultation with the scientific authorities and, where possible, the state of export or origin before deciding on repatriation.
3. If repatriation is feasible, the **state of origin bears the expense**.
4. If repatriation is not feasible, the animal may be sent to a **rescue centre or another appropriate facility**.
5. Importantly, CITES does **not make returning animals to the wild compulsory**.

Challenges in repatriation

1. Establishing the country of origin: Trafficked animals may pass through several countries and intermediaries, making it difficult to establish their exact geographical origin.

2. Animal health and welfare

- a. The immediate challenge for enforcement agencies is to ensure the survival and welfare of rescued animals.
- b. Repatriation must consider the physical and psychological condition of the animals.

3. Difficulty in returning animals to the wild

- a. Animals involved in the exotic pet trade may have changed multiple hands and may have been captive-bred, with no known geographical origin.
- b. Therefore, returning them to their natural habitat may not always be feasible.

4. Legal and administrative complexities

- a. Repatriation requires coordination between Indian authorities, the country of origin and scientific authorities.
- b. Agencies also require competent personnel and specialised training to handle such cases.

Growing exotic pet trade in India

1. India is increasingly becoming a **destination for exotic pets**, rather than merely a transit route.
2. The trade creates risks of **zoonotic diseases**, as stressed and illegally trafficked animals can facilitate disease transmission to humans through intermediary hosts.
3. Wildlife trafficking can also have links with organised criminal networks involved in other illegal activities.
4. Major trafficking routes include **land routes through India's borders with Bangladesh and Myanmar and air routes through major international airports**.
5. India's 2021 voluntary disclosure scheme for exotic live animals received **43,693 applications from 30 States and Union Territories**, indicating the significant presence of exotic species in private possession.

Way Forward

1. **Strengthen enforcement** at airports, seaports and land borders to prevent illegal wildlife trafficking.
2. **Improve inter-agency coordination** among forest departments, customs, wildlife authorities and international counterparts.
3. **Develop specialised capacity** for identification, quarantine, veterinary care and repatriation of exotic species.
4. **Strengthen monitoring of the exotic pet trade**, including online and social-media-based transactions.
5. **Ensure strict CITES compliance** and prevent illegally sourced animals from being passed off as legally captive-bred animals.
6. **Prioritise animal welfare** while deciding between repatriation, rescue centres and recognised zoological facilities.
7. **Create better inventories and data** on exotic species in private possession to improve regulation and enforcement.

Conclusion: The orangutan case demonstrates that wildlife trafficking is not merely a conservation issue but also involves **animal welfare, public health, organised crime and international cooperation**. India needs to combine effective enforcement with CITES-compliant procedures and scientifically informed decisions on repatriation to address the growing exotic pet trade.

Question: India's growing demand for exotic wildlife has created challenges related to wildlife conservation, international obligations and animal welfare. In this context, discuss the legal framework governing exotic wildlife trade and the challenges associated with repatriation of rescued animals.

Source: [Indian Express](#)

A Homegrown Innovation Ecosystem is Taking Root

UPSC Syllabus: Gs Paper 3- Science and Technology- developments and their applications and effects in everyday life.

Introduction

India is gradually moving from importing technology to developing it through **public research institutions, corporate R&D and deep-tech startups**. Rising patent activity, indigenous technologies in semiconductors, communications, space and healthcare, and growing private R&D show this shift. However, low R&D spending,

weak commercialisation and limited research capacity still prevent India from becoming a fully technology-driven innovation economy.

India's Innovation Landscape: Progress with Persistent Gaps

1. **Rising patent activity:** Patent filings increased from over 1,10,000 in 2024–25 to more than 1,43,000 in 2025–26, a 30.2% rise.
2. **Growing domestic participation:** Domestic applicants now account for almost seven in ten patent filings, showing greater participation by Indian innovators.
3. **Limited patents in force:** India had just over 2,40,000 patents in force in 2025, far below China, the U.S. and Japan, indicating weaker conversion of applications into active patents.
4. **Low R&D spending:** India spends just under 1% of GDP on R&D, compared with about 2.4% in China and 3.5% in the U.S.
5. **Weak commercialisation:** Limited movement from research outputs to marketable products reduces the economic impact of India's growing patent activity.
6. **Improving global position:** India ranked 38th among 139 economies in the Global Innovation Index 2025, while its innovation output rank was 32nd.

Three Emerging Pillars of India's Innovation Ecosystem

A. Public Research and Government Institutions

- **Long-gestation research:** Public institutions, with government support, are developing **foundational technologies** that require long-term research and investment.
- **Indigenous GaN capability:** The DRDO, through its **Solid State Physics Laboratory (SSPL)** and **Gallium Arsenide Enabling Technology Centre (GAETEC)**, developed **Gallium Nitride (GaN)-based Monolithic Microwave Integrated Circuits (MMICs)** critical for military and defence applications.
- **Technology transfer:** DRDO is transferring **Gallium Nitride High Electron Mobility Transistor (GaN HEMT)-based** technology for **5G/6G infrastructure, electric-vehicle chargers and renewable-energy inverters**.
- **Research-to-market pipeline:** The GaN ecosystem shows how **government laboratories develop foundational technology, academic institutions build research capacity, and startups move it towards commercial markets**.

B. Corporate R&D and Industry-Led Innovation

- **Rising private R&D:** Private-sector **Research and Development (R&D)** spending exceeded the combined spending of all government levels for the first time in **2024** and is expected to account for **55% in 2025–26**.

- **6G technology development:** Members of the **Bharat 6G Alliance (B6GA)** have made over **7,700 patent filings** across 5G and 6G technologies, including more than **4,400 foreign filings**.
- **Greater standards participation:** Indian entities made almost **3,000 technical contributions to the 3rd Generation Partnership Project (3GPP)**, a 15-fold increase from 2020, strengthening India's participation in global communication standards.
- **Intellectual property ownership:** **Jio Platforms Limited** entered the **top 20 international patent filers in 2025**, ranking 19th and showing greater participation in global technology creation.

C. Deep-Tech Startups and Commercialisation

- **Shift towards deep technology:** Indian startups are moving beyond service-based platforms towards **deep-tech and complex manufacturing**, supported by government initiatives and private capital.
- **Space technology:** **Pixxel, Skyroot Aerospace and Agnikul Cosmos** are developing capabilities in **hyperspectral imaging, launch vehicles and reusable space technology**.
- **Affordable healthcare innovation:** **ImmunoACT** developed **NexCAR19**, India's first indigenous **Chimeric Antigen Receptor T-cell (CAR-T) therapy**, at around **one-tenth of typical treatment costs**.
- **AI-enabled medical technology:** **Remidio Innovative Solutions** uses **smartphone-based retinal imaging and Artificial Intelligence (AI)** to address preventable blindness, including diabetic retinopathy and glaucoma.

From Technology Importer to Technology Creator

1. **From implementation to standard-setting:** Growing participation in international standards and intellectual-property ownership is shifting India from a technology implementer towards a standard-setting innovator.
2. **Ownership of critical technologies:** Indigenous capabilities in **GaN semiconductors and 5G/6G technologies** show increasing domestic ownership of technologies earlier dependent on external sources.
3. **Research-to-market transition:** The emerging innovation pipeline increasingly connects **government laboratories, academic institutions and startups**, allowing research capabilities to move towards commercial applications.
4. **Broader technological entrepreneurship:** Growth in **space, healthcare and deep-tech startups** shows that domestic innovation is expanding beyond traditional service-based platforms.

Key Challenges in Building an Innovation-Led Economy

1. **Low global patent scale:** India's patent applications remain far below **China's 1.8 million and the U.S.'s nearly 6 lakh**, showing a large gap in technological scale.

2. **Low international patenting:** India filed **4,547 Patent Cooperation Treaty (PCT) applications in 2024**, compared with over **70,000 from China and 54,000 from the U.S.**
3. **Weak research workforce:** India ranks **80th in full-time-equivalent researchers** and **95th in knowledge-intensive employment**, showing a limited research talent base.
4. **Gender gap in advanced research:** India ranks **101st among 119 economies** in employment of women with advanced degrees, indicating limited participation of women in high-level research.
5. **Weak university-industry linkages:** **Technology transfer, venture creation and financial connections** between universities and industry remain underdeveloped, slowing the movement of research into markets.
6. **Limited deep-tech financing:** Deep-tech ventures need **patient capital, strong intellectual-property protection and tolerance for failure**, but these conditions remain limited in India.

Government Policy Push for Innovation

1. **Large RDI funding:** The government announced a ₹1 lakh crore Research, Development and Innovation (RDI) Scheme and support for deep-tech innovation to strengthen long-term research and private-sector participation.
2. **School-level innovation:** In Budget 2025–26, 50,000 Atal Tinkering Labs were proposed in government schools, while funding for the programme increased from ₹500 crore to ₹3,200 crore in Budget 2026–27.
3. **Regulatory support for deep-tech:** Removing the three-year existence requirement can make deep-tech startups eligible for schemes under the Industrial R&D Promotion Programme.
4. **Opening nuclear innovation:** The SHANTI Act, 2025 permits research, development, design and innovation in peaceful nuclear-energy and radiation applications, subject to the legal framework.
5. **Inclusion in science:** Programmes such as **Women's Instinct for Developing and Ushering in Scientific Heights and Innovations (WIDUSHI)** and **Women in Science and Engineering – KIRAN (WISE-KIRAN)** aim to increase women's participation in scientific research and engineering fields.

Way Forward

1. **Increase private-sector R&D:** Industry should invest more in **long-term and high-risk research** to strengthen private-sector leadership in India's innovation ecosystem.
2. **Strengthen research-industry-finance links:** Stronger connections between **academia, industry and financial capital** can help move research from laboratories towards commercial applications.
3. **Improve technology transfer:** **Standardising technology-transfer terms for publicly funded intellectual property** can make it easier for research institutions to transfer innovations to industry.
4. **Bridge the commercialisation gap:** Greater funding is needed between a **granted patent and the**

first paying customer to help promising technologies reach the market.

5. **Strengthen the patent system:** Expanding **patent-examiner capacity** can support more efficient processing of India's growing patent activity.
6. **Support deep-tech and frontier technologies:** Greater support for **deep-tech sectors and emerging technologies** can help Indian startups develop globally relevant technological capabilities.
7. **Build global technology standards:** Continued participation in **6G standards and standard-essential patents (SEPs)** can strengthen India's role in developing future communication technologies.

Conclusion

India's innovation ecosystem is taking shape as public research, corporate R&D and deep-tech entrepreneurship increasingly reinforce one another. Indigenous capabilities in semiconductors, communications, space and healthcare show technological capacity. However, low R&D investment, limited patenting scale, weak commercialisation and talent gaps remain. Sustained investment, stronger research-industry links, better technology transfer and support for frontier technologies can help India build a technology-driven innovation economy.

Question for practice:

Examine the emerging homegrown innovation ecosystem in India, its key pillars, major challenges, and the measures needed to strengthen it.

Source: [The Hindu](#)

Balancing Deep-Sea Discovery with Environmental Stewardship

UPSC Syllabus- GS 2/GS 3- Government policies and interventions for development in various sectors/ Achievements of Indians in science & technology

Introduction

India's expanding deep-sea capabilities are opening opportunities in critical minerals, climate research, food security and the Blue Economy. India is developing technologies for deep-sea mining, underwater robotics and human submersibles. However, the deep ocean remains poorly understood, and seabed mining could disturb fragile ecosystems. The key challenge is to balance scientific and technological progress with ecological protection, while ensuring that the ability to exploit deep-sea resources does not automatically become a reason to exploit them at scale.

India's Growing Deep-Sea Footprint

1. **ISA Exploration Contracts:** India holds **three ISA (International Seabed Authority) exploration contracts covering about 95,000 sq km** across the Central Indian Ocean Basin, Central Indian Ridge and Carlsberg Ridge.
2. **Mineral Resources:** Exploration has identified an estimated **366 million tonnes of polymetallic**

nodules containing nickel, copper, cobalt and manganese.

3. **Deep-Sea Technology:** India is developing **deep-sea mining technology and underwater robotics** under the Deep Ocean Mission, expanding its capacity for ocean exploration.
4. **Mining Capability:** The National Institute of Ocean Technology has tested a mining machine at depths of about **5,270 metres**, showing progress in deep-sea technology.
5. **Biodiversity Research:** Surveys across **19 seamounts** have studied around **1,300 organisms**, including nearly **23 species reported as new to science**.
6. **Environmental Studies:** Mineral exploration has also involved environmental and biodiversity studies, building knowledge before any possible commercial exploitation.

Deep-Sea Exploration and India's Development Needs

1. **Critical Mineral Security:** Deep-sea minerals such as **cobalt, nickel, copper and manganese** can support India's renewable-energy, electric-mobility and advanced-manufacturing ambitions.
2. **Climate Resilience:** Understanding ocean processes can improve **monsoon, cyclone and long-term climate predictions**, supporting disaster preparedness and climate-resilient planning.
3. **Food Security:** Capture fisheries remain within **2.7–3.8 MMT** (Million Metric Tonnes) against an estimated potential of **5.3 MMT**, while deep-sea fishing and mariculture could raise marine fish production to nearly **10 MMT**.
4. **Scientific Capability:** Indigenous submersibles, mining systems, robotics and seabed mapping can strengthen India's scientific and technological capabilities in ocean exploration.
5. **Strategic Autonomy:** India's location along major maritime routes makes ocean exploration and protection important for **economic resilience and strategic autonomy**.
6. **Blue Economy:** India has a coastline exceeding 11,000 km, 1,382 islands and an EEZ (Exclusive Economic Zone) of about 2.37 million sq km, while the Blue Economy currently contributes around 4% of GDP.
7. **Climate and National Goals:** Deep-ocean technologies and data can support India's climate commitments, reduce dependence on imported critical minerals and create opportunities for coastal communities.

India's Initiatives for Ocean Science and Sustainable Development

1. **Deep Ocean Mission:** The mission integrates deep-sea technology, ocean observation, biodiversity research, seabed exploration, ocean energy and marine biotechnology under one framework.
2. **MATSYA-6000:** The indigenous submersible is designed to descend to **6,000 metres** and carry three people for direct observation and sampling.
3. **Ocean Observation Network:** More than **50 Argo floats, 57 wave drifters and 11 glider missions**

have been deployed in the Bay of Bengal and Arabian Sea.

4. **Climate Advisory Services:** Ocean observations and high-resolution climate models will provide seasonal-to-decadal projections of **waves, sea level, cyclones and storm surges**.
5. **Biodiversity Conservation:** Inventories, genomic characterisation, biodiversity grids and microbial bioprospecting will expand knowledge of deep-sea life while supporting conservation.
6. **Ocean Energy and Freshwater:** Ocean Thermal Energy Conversion (OTEC), wave energy and Low-Temperature Thermal Desalination (LTTD) are being developed, including a Kavaratti pilot designed to produce **0.1 million litres of freshwater daily**.
7. **Marine Research Infrastructure:** Seabed mapping, autonomous vehicles and an indigenous multi-purpose research vessel will strengthen long-duration ocean exploration.
8. **Marine Innovation:** Advanced Marine Station for Ocean Biology (**AMSOB**) at **Nemmeli, Tamil Nadu**, will connect marine research with biotechnology, mariculture, entrepreneurship and blue-economy activities.

Environmental Challenges of Deep-Sea Exploitation

1. **Limited Ecological Knowledge:** Deep-sea ecosystems remain poorly understood, while biodiversity research continues to reveal previously unknown organisms and biological communities.
2. **Seabed Disturbance:** Commercial mining would physically disturb the seabed and could affect fragile ecosystems associated with mineral-rich areas.
3. **Uncertain Consequences:** Large-scale seabed disturbance may produce impacts that cannot be confidently predicted while scientific understanding remains incomplete.
4. **Potential Irreversibility:** Intervention in poorly understood ecosystems may create ecological effects that are difficult or impossible to reverse.
5. **Mineral Need versus Ecological Cost:** The strategic importance of deep-sea minerals cannot automatically become ecological permission for large-scale extraction.
6. **Exploration versus Exploitation:** Scientific exploration can improve knowledge, biodiversity assessment and environmental baselines without requiring commercial mining.
7. **Limits of Adaptive Management:** Adaptive management alone cannot guarantee ecological protection when mining itself physically alters the seabed.

Way Forward

1. **Establish Necessity:** Before extraction, India should determine whether deep-sea minerals are genuinely required at the proposed scale and whether alternatives exist.
2. **Reduce Resource Demand: Recycling, resource efficiency, substitution and circular consumption** can reduce dependence on new mineral extraction.

3. **Strengthen Scientific Evidence:** Continued biodiversity studies, environmental baselines, monitoring and ocean observations should guide decisions on future intervention.
4. **Apply a High Ecological Threshold:** Since India's ISA activities remain at the exploration stage, stronger ecological conditions can be established before commercial exploitation.
5. **Keep Exploration Separate:** India can continue scientific research and technological development without treating commercial mining as an inevitable outcome.
6. **Use Science to Set Limits:** Scientific progress should determine not only **how resources can be extracted**, but also whether extraction is necessary and which ecosystems should remain undisturbed.
7. **Protect Natural Capital:** Ocean governance should recognise ecosystems as the natural capital supporting climate stability, biodiversity and long-term economic development.
8. **Align Development with Sustainability:** India's Blue Economy should follow the principles of **Mission LiFE, Circular Economy, Nature-based Solutions and the SDGs**, while keeping ecological integrity central to development.

Conclusion

India's deep-sea ambitions can strengthen resource security, scientific capability, climate resilience and the Blue Economy. However, sustainable development requires necessity before extraction, stronger science before intervention and conservation alongside development. India can pursue exploration and innovation while setting clear ecological limits, reducing dependence on extraction and protecting natural capital. Scientific progress should include discovering new frontiers and deciding which ecosystems should remain undisturbed.

Question for practice:

Discuss the need to balance India's deep-sea exploration and resource development with environmental stewardship.

Source: [The Hindu](#)

India urgently needs a National Chemicals Code

Source: The post "**India urgently needs a National Chemicals Code**" has been created based on "**India urgently needs a National Chemicals Code**" published in "**Hindustan Times**" on 21st September 2026.

UPSC Syllabus: GS-2-Governance

Context: India's chemical sector is expanding rapidly, but its regulatory framework remains fragmented across different ministries and laws. Recent industrial accidents in **Tiruvallur, Surat and Visakhapatnam** have exposed gaps in coordination, maintenance, emergency preparedness and chemical regulation.

Major Challenges

1. **Fragmented regulatory structure**
 - a. Industrial safety is handled by the **Ministry of Labour and state factory inspectorates**.
 - b. Hazardous substances come under **MoEF&CC**.
 - c. Chemicals and fertilisers are handled by the **Ministry of Chemicals and Fertilisers**.
 - d. Transport safety falls under the **Ministry of Road Transport and Highways**.
 - e. Chemical weapons compliance is handled by the **National Authority for the Chemical Weapons Convention**.
 - f. This creates multiple authorities with different rules, lists and enforcement mechanisms.
2. **Different definitions of hazardous chemicals**
 - a. Different laws classify chemicals according to different criteria such as **industrial accident potential, toxicity, dual-use potential and waste-disposal risk**.
 - b. Consequently, the same chemical may be regulated under one framework but remain outside another.
3. **Weak emergency preparedness**
 - a. Emergency responders may not have access to **real-time chemical inventories**.
 - b. Lack of standardised emergency protocols can delay coordinated action.
 - c. In Tiruvallur, authorities had to coordinate among several agencies during emergencies.
4. **Ageing industrial infrastructure**
 - a. **Ageing machinery, inadequate maintenance and insufficient training** increase the possibility of industrial accidents.
5. **Risks during transportation**
 - a. Nearly **60% of India's chemical cargo moves by road**.
 - b. Poor labelling, inadequate driver training and absence of effective tracking increase transportation risks.
 - c. Between 2018 and 2022, hazardous-goods vehicles were involved in more than **4,000 road accidents**.
6. **Chemical safety and security overlap**
 - a. Certain sensitive chemicals are governed separately under frameworks dealing with **chemical weapons, narcotic precursors, industrial safety and hazardous substances**.
 - b. Lack of coordination can create security and regulatory grey areas.

Need for a Unified Framework

1. **National Chemicals Code:** A unified code can harmonise **definitions, reporting thresholds, safety standards and enforcement mechanisms** across ministries.
2. **National Chemical Authority:** A dedicated authority can provide **single-point coordination** for chemical safety and security.
3. **Integrated emergency response**
 - a. Chemical inventories should be digitally available to district authorities and first responders.
 - b. Emergency planning should involve all relevant agencies through common protocols.
4. **Safer chemical transportation:** Mandatory **GPS tracking, driver certification and strict penalties** can improve monitoring of hazardous cargo.
5. **Technology-based regulation:** **Digital inventories, digital twins and real-time tracking** can improve monitoring and preparedness.
6. **Risk-based inspections:** Industrial facilities should move towards **risk-based digital inspections** rather than fragmented regulatory compliance.

Conclusion: India needs to move from **fragmented chemical regulation to an integrated safety and security framework**. A National Chemicals Code, coordinated institutional mechanism, technology-based monitoring and integrated emergency planning can help protect workers, communities, the environment and national security.

Question: India's fragmented chemical governance framework poses serious challenges to industrial safety, emergency response and national security. Discuss the need for a unified chemical governance architecture in India.

Source: [Hindustan Times](#)

The copyright stakes in the EU FTA

Source: The post "The copyright stakes in the EU FTA" has been created based on "The copyright stakes in the EU FTA" published in "The Hindu" on 21st September 2026.

UPSC Syllabus: GS-2-International Relations

Context: The proposed **India–EU Free Trade Agreement (FTA)** contains intellectual property provisions that may require changes to India's **Copyright Act, 1957**. While stronger copyright protection can promote innovation, some provisions may affect India's existing safeguards for education, research, libraries and digital services.

Key Concerns

1. **Departure from the WIPO Copyright Treaty (WCT):**
 - a. The draft reportedly omits the **National Treatment clause** of the WCT while retaining stronger enforcement obligations.
 - b. This could reduce India's flexibility in framing copyright exceptions suited to its domestic needs.
2. **Impact on educational and research exceptions:**
 - a. India's Copyright Act provides exceptions for **education, research and related activities**.
 - b. A strict anti-circumvention regime could make it difficult for students and security researchers to bypass digital locks for legitimate purposes.
3. **Threat to libraries and archives:**
 - a. Libraries and academic archives increasingly use **format-shifting** to preserve digital and printed material.
 - b. Strong technological protection measures could restrict such preservation activities.
4. **Impact on Internet Service Providers (ISPs):**
 - a. Existing Indian rules provide **safe-harbour protection** to ISPs for certain temporary or incidental copies created during data transmission and caching.
 - b. The proposed provisions could expose intermediaries to greater copyright liability.
5. **Possible changes to Section 65A:**
 - a. Section 65A of the Copyright Act provides exceptions where technological protection measures are circumvented for permitted purposes.
 - b. The draft provisions could narrow the practical scope of such exceptions.

6. **Chilling effect on education and research:** Students, researchers, libraries and educational institutions could face greater legal uncertainty while accessing or preserving digital material.

Way Forward

1. India should seek to **retain the National Treatment principle under the WCT** in the final agreement.
2. Existing **copyright exceptions for education, research, libraries and archives** should be preserved.
3. Anti-circumvention provisions should contain **clear exceptions for legitimate activities**, including security research and interoperability.
4. The existing **safe-harbour framework for Internet intermediaries** should not be unnecessarily weakened.
5. India should ensure that FTA commitments do not restrict Parliament's ability to maintain **digital copyright flexibility**.

Conclusion: India needs to balance **effective copyright protection with access to knowledge, education, research and digital innovation**. The India-EU FTA should therefore protect intellectual property while preserving the flexibility available under India's domestic copyright framework.

Question: The proposed copyright provisions in the India-EU Free Trade Agreement may affect India's digital policy flexibility and existing copyright exceptions. Discuss the concerns and suggest a balanced way forward.

Source: [The Hindu](#)

India's Real Rate Moment, the Cost of Delay

UPSC Syllabus: Gs Paper 2- Constitution of India

Introduction

India is facing a monetary-policy challenge as inflation rises while the **Reserve Bank of India (RBI)** keeps the repo rate at **5.25%**. The real policy rate is losing its cushion as inflation and inflation expectations move closer to the policy rate. At the same time, economic growth and bank credit remain strong. This raises an important policy issue: whether delayed action could make a later adjustment larger and more difficult.

Current Status of Indian Economy

1. **Repo rate remains unchanged:** The RBI kept the **repo rate at 5.25%** and retained its **neutral policy stance**, while waiting for clearer evidence on inflation.
2. **Retail inflation is rising:** Consumer price inflation increased from **4.45% in July to 4.82% in August**, marking the third consecutive month above the 4% target.
3. **Food inflation remains elevated:** Food inflation reached **5.95% in August**, keeping food prices as an important source of overall inflationary pressure.
4. **Core inflation is broadening:** Core inflation rose to around **4.2%**, showing that price pressures are spreading beyond food and fuel.

5. **Growth remains resilient:** GDP growth is running at **7.8%**, while the RBI raised its growth forecast to **6.7% from 6.6%**, reflecting confidence in economic resilience..
6. **Credit demand remains strong:** Bank credit grew **19.1% year-on-year** at the end of August, showing strong borrowing demand despite the existing policy rate.
7. **Real-rate cushion is narrowing:** If inflation expectations move towards the **5.25% repo rate**, the ex-ante real policy rate could approach zero, reducing monetary restraint.

Cause of Inflationary Pressure

1. **Higher crude oil prices:** Brent crude moved above **\$100 a barrel**, approaching **\$110**, creating a significant external inflationary pressure for India.
2. **West Asia conflict:** Renewed conflict disrupted shipping through the **Strait of Hormuz**, increasing risks to oil supplies and global energy prices.
3. **Weaker rupee:** A weaker rupee raises the domestic cost of imported crude and other commodities, adding to inflationary pressure.
4. **Monsoon uncertainty:** Uncertain monsoon conditions can affect food supplies and increase pressure on food prices.
5. **Global commodity pressures:** Elevated global commodity prices can raise domestic production and transportation costs, making inflation harder to contain.
6. **Inflation is broadening:** Price pressures are spreading beyond food and fuel, with increases also seen in areas such as clothing, household goods and education.
7. **Inflation expectations pose a risk:** Persistent inflation can influence wages, prices and credit decisions, increasing the risk that temporary inflation becomes more lasting.

Strong Demand and Credit Limit the Case for Monetary Easing

1. **Lower real rates can increase demand:** When real interest rates fall, borrowing and spending can increase, which may add inflationary pressure when demand is already healthy.
2. **Supply shock meets strong demand:** Monetary policy becomes difficult when inflation comes from supply pressures while domestic demand remains resilient.
3. **Credit remains an important transmission channel:** Strong credit demand means easier real financial conditions can continue supporting borrowing and spending rather than simply helping a weak economy recover.
4. **Manufacturing activity has softened:** The purchasing managers' index fell to a **five-year low**, showing some weakness despite continued strength in credit demand.
5. **Monetary easing has limited space:** Rising inflation alongside resilient demand and strong credit reduces the scope for further easing without adding demand-side pressure.

6. **Timing matters:** If inflationary pressures persist, a timely **25-basis-point adjustment** could potentially reduce the need for a larger correction later.

Impact on Banks, Depositors and Household Savings

1. **Deposit growth is strong:** Bank deposits grew **17.8% by August**, the fastest pace in a decade, partly due to the special FCNR(B) mobilisation scheme.
2. **Foreign inflows affect deposit growth:** The rise in deposits does not necessarily show a sudden increase in domestic household preference for conventional bank deposits because foreign-currency inflows contributed to the increase.
3. **Credit-deposit ratio remains high:** The credit-deposit ratio stood at around **80.3%**, reflecting strong credit demand alongside the need for stable bank funding.
4. **Banks face deposit competition:** Strong lending demand requires banks to attract stable deposits while households have more investment alternatives.
5. **Real returns on deposits weaken:** Rising inflation reduces the real return from conventional deposits, making them less attractive to savers.
6. **Households have alternative assets:** Mutual funds, equities, gold and other market-linked assets can become more attractive when inflation reduces the real return on traditional savings.
7. **Past inflation shows the risk:** RBI research found that during **2010–2013**, real returns on savings instruments became negative, household financial savings weakened and gold demand increased.
8. **Gold demand reflected inflation expectations:** The correlation between **gold imports and household inflation expectations was estimated at 0.83** during the period studied, showing the importance of inflation expectations for saving behaviour.

Initiatives Taken

1. **Repo rate held at 5.25%:** The RBI kept the benchmark rate unchanged and retained a **neutral stance**, reflecting its data-dependent approach to inflation.
2. **Inflation forecast set at 5%:** The RBI projected average inflation at **5%** for the current financial year, lower than its earlier 5.1% projection.
3. **Core inflation forecast revised:** The RBI lowered its core inflation forecast to **4.3% from 4.7%**, indicating a more moderate expected underlying inflation path.
4. **Growth forecast increased:** The RBI raised its growth forecast to **6.7% from 6.6%**, reflecting confidence in the economy's resilience.
5. **FCNR(B) mobilisation scheme:** The RBI's special **Foreign Currency Non-Resident (Bank) [FCNR(B)] mobilisation scheme** helped attract foreign-currency inflows and contributed to the sharp rise in bank deposits.

6. **Foreign inflows increased:** These measures attracted **more than \$41 billion** in inflows, strengthening the external balance and supporting sentiment towards the rupee.
7. **Exchange-rate volatility is being managed:** The RBI continues to allow the rupee to be market-determined while seeking to limit excessive volatility, speculative behaviour and disorderly movements.

Way Forward

1. **Track inflation expectations closely:** The RBI needs to assess whether current price pressures remain temporary or become embedded in wages, prices and credit decisions.
2. **Monitor core inflation:** Core inflation needs close monitoring because its rise indicates that price pressures are spreading beyond food and fuel.
3. **Assess oil-price persistence:** Policymakers need to distinguish a temporary crude-price shock from a sustained increase that could affect wider domestic inflation.
4. **Watch the rupee:** Currency movements need attention because a weaker rupee can increase the domestic cost of imported crude and other commodities.
5. **Balance inflation and growth:** Monetary policy needs to consider strong economic growth while preventing persistent inflation from weakening price stability.
6. **Use timely policy action:** If inflationary pressures continue to strengthen, a smaller and timely adjustment may reduce the need for a larger correction later.
7. **Keep policy data-dependent:** Future decisions should consider inflation, growth, credit, commodity prices, capital flows and external risks together.

Conclusion

India's real-rate challenge is becoming sharper as inflation moves closer to the **5.25% repo rate**, while growth and credit remain strong. **Higher oil prices, a weaker rupee and rising core inflation add further risks.** The RBI therefore **needs to closely track inflation expectations and demand conditions. The key issue is not only the rate level, but the timing of policy action to maintain price stability without unnecessarily weakening growth.**

Question for practice:

Examine the challenges facing India's monetary policy as rising inflation narrows the real interest rate cushion despite strong economic growth and credit demand.

Source: [The Hindu](#)

Missing Measure in India's Magnet Mission

UPSC Syllabus: Gs Paper 3- Indian economy

Introduction

India's advanced manufacturing and energy-transition goals increasingly depend on high-performance permanent magnets, especially Neodymium-Iron-Boron (NdFeB) magnets. These magnets are used in EV motors, wind turbine generators, semiconductor facilities and precision manufacturing machinery. Yet India's vulnerability is not limited to access to rare-earth minerals. The larger concern is the limited understanding of dependence across the permanent-magnet value chain, from mineral processing and separation to metals, alloys and finished magnets, as clearly exposed by China's April 2025 export controls.

What is the Permanent-Magnet Value Chain?

1. **NdFeB Magnets: Neodymium-Iron-Boron (NdFeB)** magnets combine very high magnetic strength with a high power-to-weight ratio, making them important for advanced industrial applications.
2. **Production Stages:** The value chain moves from **geological exploration and mining to mineral processing, chemical separation, oxides, metals, alloys, magnetic materials and finished magnets**.
3. **Stage-Specific Capabilities:** Each stage needs different scientific knowledge, industrial capability and technological maturity, so mineral ownership alone cannot ensure complete manufacturing capability.
4. **Midstream Importance:** The stages between raw materials and finished magnets, especially metal, alloy and magnet production, determine whether mineral resources become usable industrial capacity.

India's Current Position and Need for a Domestic Magnet Ecosystem

1. **Existing Capabilities:** India has capabilities across several stages of permanent-magnet manufacturing, but their global competitiveness and critical gaps are not systematically identified.
2. **Industrial Applications:** Permanent magnets are used in **EV motors, wind turbine generators, semiconductor facilities and precision manufacturing machinery**.
3. **Clean-Energy Relevance:** Their use in EVs and wind turbines makes reliable magnet supply important for India's wider **energy-transition goals**.
4. **Clean-Tech Dependence:** NITI Aayog's assessment shows near **100% import dependence for lithium, nickel, cobalt and rare-earth elements**.
5. **Strategic Supply Exposure:** China's **April 2025 export controls** on rare-earth magnets and materials exposed vulnerabilities created by concentrated global supply chains.
6. **Domestic Manufacturing Need:** India needs capabilities across the complete value chain because securing mineral resources alone cannot ensure access to finished permanent magnets.

Key Gaps in India's Permanent-Magnet Ecosystem

1. **Mismatch in Market Data:** The Annual Survey of Industries estimates the domestic permanent-magnet market at around ₹750 crore, while international trade data shows import values several times higher.
2. **Lack of Value-Chain Mapping:** India lacks an Integrated Techno-Economic Mapping (ITEM) framework to identify where magnets enter the economy, where technological dependence develops and where domestic capability should be built.
3. **Lack of Midstream Capacity:** India imports **all its sintered NdFeB magnets** because oxide-to-metal, metal-to-alloy and alloy-to-magnet production remains inadequate.
4. **High Import Dependence:** Permanent-magnet import dependence reached **90.4% in 2024–25**, leaving domestic industries highly dependent on external supplies.
5. **Insufficient NdPr Supply:** India has **400 MTPA NdPr oxide capacity and 500 MT stock**, supporting only about **1,500 MTPA magnets** against the proposed 6,000 MTPA capacity.
6. **High NdPr Price Volatility:** NdPr prices fell from triple-digit levels to around **\$60/kg in 2023**, reached the low-\$50s in mid-2024, and increased again in 2026.
7. **Battery PLI Lesson:** The Battery PLI experience showed that production incentives alone may not ensure capacity creation when **technology, skilled manpower, equipment and upstream materials** remain constrained.

Government Measures to Build a Domestic Magnet Ecosystem

1. **National Critical Mineral Mission:** India has strengthened its critical-mineral strategy through the **National Critical Mineral Mission**, covering the broader critical-mineral value chain.
2. **Resource Development:** India is pursuing **overseas mineral acquisitions and expanded geological exploration** to strengthen access to critical minerals and rare-earth resources.
3. **Rare-Earth Permanent Magnet PLI:** The **Rare Earth Permanent Magnet Production Linked Incentive (REPM PLI) Scheme** aims to establish **6,000 MTPA integrated permanent-magnet capacity** and develop missing midstream production stages.
4. **Rare-Earth Corridors:** Newly announced **Rare Earth Element (REE) corridors** aim to create integrated mining-to-processing ecosystems with supporting infrastructure and streamlined development.
5. **Whole-of-Government Approach:** The Critical Minerals Mission and REE corridors involve multiple ministries covering **mines, atomic energy, industry, finance, transport, environment and other sectors..**

Way Forward

1. **Secure Feedstock:** NdPr allocation under the REPM PLI needs a **time-bound plan** to expand domestic availability and create a predictable oxide-to-alloy pathway.

2. **Accelerate REE Corridors:** Rare Earth Element (REE) corridors should receive **plug-and-play infrastructure, streamlined approvals and clear execution timelines** to connect mining with processing.
3. **Promote Recycling:** Producer responsibility, incentives and penalties should support **rare-earth recovery from end-of-life products** and increase secondary feedstock.
4. **Create Assured Offtake:** Government procurement in **defence, public transport and renewables** can anchor demand and improve the bankability of domestic magnet capacity.
5. **Standardise Contracts:** Demand aggregation and standardised long-term contracts can provide revenue certainty needed to finance new critical-mineral capacity.
6. **Manage Price Risks:** **Price floors and stockpile-linked stabilisation** can reduce NdPr price uncertainty and make new investments more financially viable.
7. **Build Skills and Testing:** India needs specialised training, government-backed testing and certification, with skilling treated as **essential industrial infrastructure**.
8. **Strengthen Governance:** Magnets and batteries should be nested within the Critical Minerals Mission through **one dashboard, one escalation channel and common milestones**, with clear responsibilities for government and industry.

Conclusion

India's magnet strategy must move beyond production incentives and build an integrated ecosystem covering resources, processing, manufacturing, demand, technology and infrastructure. Coordinated action between government and industry is needed to turn critical-mineral ambitions into durable industrial capability. Success depends on reliable feedstock, assured markets, manageable price risks, skilled manpower, common infrastructure and credible governance across the value chain.

Question for practice:

Discuss the key gaps in India's permanent-magnet ecosystem and the measures needed to build a resilient domestic value chain.

Source: [The Hindu](#) ; [newindianexpress](#)

Student Well-being and Institutional Reform in Higher Education

Source: The post "Student Well-being and Institutional Reform in Higher Education" has been created based on "Student Well-being and Institutional Reform in Higher Education" published in "Indian Express" on 22nd September 2026.

UPSC Syllabus: GS-2-Governance

Context: Recent student deaths at IIT Delhi and IIT Bombay have renewed concerns about **student well-being in higher educational institutions**. Student well-being extends beyond mental-health counselling and requires an educational environment based on **freedom, equity, trust, empathy, dignity and due process**.

Student Well-being Requires an Institutional Approach

1. **Well-being extends beyond mental-health treatment:** Counselling and therapy are important during a crisis, but they cannot by themselves address the institutional conditions that generate distress.
2. **Academic pressure affects well-being:** Excessive workload, examination pressure, grading practices and career anxiety can significantly influence students' well-being. Time management and resilience cannot solve an inherently unmanageable workload.
3. **Institutional culture matters:** Hierarchies, rigid disciplinary practices, poor communication and an excessive emphasis on obedience can create fear, humiliation and loss of agency.
4. **Need for autonomy and voice:** Students should be treated as **rights-bearing adults**, with the freedom to question grades, disagree with supervisors, express dissent and participate in institutional decision-making.
5. **Due process and fairness are essential:** Students should be able to report unfair treatment and seek reasons for institutional decisions without fear of retaliation.
6. **Everyday campus conditions matter:** Hostels, infrastructure, discrimination, financial hardship, administration and grievance-redressal mechanisms directly influence student well-being.
7. **Well-being is a shared responsibility:** It should not be outsourced exclusively to counsellors and therapists. Faculty, administrators, student-affairs teams and institutional leadership must share responsibility.
8. **WHO and national approach:** Mental health is influenced by social, economic and physical environments. The **2026 interim report of India's National Task Force on Student Mental Health and Suicide Prevention** similarly links student well-being with academic pressure, discrimination, financial hardship, institutional culture, distrust and faculty preparedness.
9. **Teaching and evaluation are part of well-being:** A classroom should be considered supportive when students can make mistakes, admit uncertainty, disagree with teachers and express criticism without humiliation or retaliation.

Challenges

1. **Paternalistic institutional culture:** Students may be treated as adults when responsibility, fees and performance are demanded but as children when autonomy and dissent are exercised.
2. **Confusing discipline with obedience:** Harshness may be justified as character-building, while obedience may be equated with respect.
3. **Weak student participation:** Students often have limited meaningful representation in institutional governance and decision-making.
4. **Fear of retaliation:** Students may hesitate to question grades, challenge supervisors, report unfair treatment or protest institutional decisions.
5. **Over-reliance on counselling:** Institutions may locate distress within the individual instead of examining academic, administrative and social conditions.
6. **Inadequate faculty preparedness:** Faculty and student-affairs personnel may lack adequate training to recognise distress, understand bias, maintain confidentiality and respond appropriately to crises.
7. **Poor grievance mechanisms:** Opaque or unresponsive grievance systems can increase uncertainty and distrust.
8. **Discrimination and inequality:** Discrimination, financial hardship and unequal access to institutional support can adversely affect well-being.
9. **Hostile disciplinary practices:** Public shaming, arbitrary penalties, exclusion from opportunities or hostile communication can make the educational environment distressing.

10. **Implementation gap:** India already has several guidelines concerning student mental health, but translating these principles into everyday institutional practices remains difficult.

Way Forward

1. **Treat students as rights-bearing adults:** Institutions should recognise student autonomy, voice, dignity and due process as integral components of education.
2. **Institutionalise student participation:** Students and alumni should have meaningful representation in institutional governance, including appropriate representation on governing boards.
3. **Create trustworthy grievance mechanisms:** Students should have accessible, transparent and time-bound mechanisms to question decisions, report unfair treatment and seek remedies without fear of retaliation.
4. **Train faculty and administrators:** Faculty and student-affairs teams should receive role-specific training to recognise distress, protect confidentiality, understand bias, communicate without humiliation and follow crisis protocols.
5. **Adopt humane disciplinary procedures:** High-stress disciplinary encounters should begin with a humane conversation, clearly explain available institutional support and be followed by appropriate follow-up.
6. **Strengthen preventive support:** Institutions should address academic overload, discrimination, financial hardship, hostel conditions, career anxiety and administrative unresponsiveness instead of focusing only on crisis intervention.
7. **Conduct annual student well-being audits:** Institutions should periodically examine whether their academic, administrative and disciplinary practices actually promote a safe and supportive environment.
8. **Make classrooms part of the well-being framework:** Teaching and evaluation practices should allow students to ask questions, make mistakes, disagree and express legitimate criticism without fear.
9. **Maintain academic standards with empathy:** Well-being should not mean abandoning academic standards. Students can be wrong and faculty can be right; however, disagreement should be handled through **fairness, transparency, dignity and due process.**

Conclusion: Student well-being is not merely a counselling-room issue; it is a question of how universities teach, evaluate, govern and exercise authority. A genuinely supportive institution must combine professional mental-health care with **autonomy, equity, trust, empathy, participation and accountable institutional practices.**

Question: “Student well-being in higher educational institutions cannot be ensured merely through counselling and mental-health services.” Discuss the institutional and governance reforms required to create a safe, inclusive and empowering educational environment.

Source: [Indian Express](#)

Unsafe space: On the U.S. and 'on-orbit space control weapons

Source: The post “Unsafe space: On the U.S. and on-orbit space control weapons” has been created based on “Unsafe space: On the U.S. and on-orbit space control weapons” published in “The Hindu” on 22nd September 2026.

UPSC Syllabus: GS-3-Science and Technology

Context: The U.S.A military's move towards offensive and defensive space-control capabilities has raised concerns. On September 14, U.S.A Air Force Secretary Troy Meink, confirmed by Space Force Chief Gen. Douglas Schiess, acknowledged the deployment of "on-orbit space control weapons" to defend against hostile actions. This development highlights the growing militarisation of outer space and the need for greater international regulation.

Need of Multilateral Governance in Space

1. **Growing militarisation of space:** Major powers are developing counter-space capabilities, making Earth's orbit a potential future battlefield.
2. **Dual-use nature of satellites:** The same satellite systems may serve both civilian and military purposes, making it difficult to distinguish peaceful activities from military operations.
3. **Risk of miscalculation:** When two steerable or autonomous satellites approach each other without understanding the other's intentions, ambiguity can result in unintended escalation.
4. **Unclear definition of hostile action:** Existing international rules do not clearly define what constitutes a "hostile action" in outer space.
5. **Gaps in the Outer Space Treaty:** The treaty prohibits nuclear weapons and weapons of mass destruction in orbit, but does not comprehensively prohibit conventional weapons or all forms of destructive counter-space activities.
6. **Ambiguous military doctrines:** When a country describes a space capability as defensive while its military doctrine permits both offensive and defensive space operations, it can create uncertainty about its actual intentions.
7. **Inadequate existing legal framework:** Existing rules, including the **Liability Convention**, were developed when space technology was less complex and are not always adequate for today's highly interconnected and dual-use space systems.
8. **Commercialisation of space:** Commercial satellites increasingly perform functions critical to national security and civilian life, making attacks on such systems capable of causing widespread disruption.
9. **Emergence of autonomous systems:** Future satellites may operate with considerable autonomy and even run artificial intelligence models onboard, creating additional challenges for attribution and accountability.
10. **Difficulty in determining accountability:** Existing rules are too broad to clearly determine responsibility when autonomous or commercially operated space assets cause damage.

Major Challenges

1. **Lack of precise international definitions** of hostile acts and acceptable military activities in space.
2. **Weak regulation of conventional space weapons** compared with the restrictions on nuclear weapons and weapons of mass destruction.
3. **Rapid technological change** is outpacing existing international law.
4. **Increasing involvement of private companies** makes attribution and state responsibility more complicated.
5. **Strategic mistrust among major powers** can encourage counter-space capability development.
6. **Absence of clear rules for autonomous and AI-enabled satellites** creates uncertainty regarding human control and accountability.
7. **Risk to civilian infrastructure:** Since satellite-based networks underpin contemporary societies, attacks on space assets can have consequences far beyond the military domain.

Way Forward

1. **Strengthen multilateral space governance** through negotiations involving major space powers and other stakeholders.
2. **Clarify what constitutes hostile action** and establish internationally accepted thresholds for military action and escalation.
3. **Develop rules for responsible behaviour in space**, particularly regarding proximity operations, autonomous satellites and potentially harmful interference.
4. **Strengthen transparency and confidence-building measures** through notification, information-sharing and communication mechanisms between space powers.
5. **Address conventional weapons:** International discussions should move beyond the existing focus on nuclear weapons and WMDs to address conventional counter-space capabilities.
6. **Establish accountability for autonomous systems:** Rules should clearly determine responsibility for actions of autonomous and AI-enabled space assets.
7. **Regulate commercial and dual-use satellites:** Private space companies operating strategically important assets should be incorporated into the international governance framework.
8. **Use existing UN mechanisms:** The **UN Open-Ended Working Group on Prevention of an Arms Race in Outer Space (PAROS)** provides an avenue for governments to address emerging security concerns.
9. **Promote multilateral space arrangements:** Countries should work towards agreements that establish clear **thresholds of action and escalation** and **reduce the possibility of miscalculation**.

Conclusion: Outer space is no longer a purely scientific or civilian domain. Its growing military, commercial and dual-use character requires rules that keep pace with technological change. A **rules-based, transparent and multilateral governance framework** is essential to prevent miscalculation, protect civilian space infrastructure and ensure that outer space remains peaceful and secure.

Question: The increasing militarisation and commercialisation of outer space has created new challenges for international peace and security. Discuss the need for multilateral governance of space activities.

Source: [The Hindu](#)

A Malacca-Singapore Model for Resolving Hormuz

UPSC Syllabus: Gs Paper 2- International relations

Introduction

The Strait of Hormuz is a vital maritime chokepoint where regional tensions can disrupt international navigation and affect wider security. The Malacca-Singapore Straits provide a useful precedent of cooperation among littoral states, supported by international users and maritime institutions. Their experience shows how territorial interests can coexist with safe and continuous navigation. However, applying this model to Hormuz is difficult because of differences in maritime disputes, legal positions, regional security structures and the role of major powers.

Evolution of the Malacca-Singapore Cooperative Maritime Model

1. **Strategic geography:** The **800-km Malacca Strait** connects the Andaman Sea with the Singapore Strait, which extends about **105 km** towards the South China Sea.
2. **Territorial assertion:** Indonesia declared surrounding and connecting waters as its territory in **1957**, mainly to strengthen the security of its dispersed islands.
3. **Joint territorial approach:** Indonesia and Malaysia adopted **12-nautical-mile territorial seas**, causing their maritime zones to meet because the Straits are narrower than 24 nautical miles.
4. **Initial passage regime:** The territorial arrangement initially provided foreign vessels only **innocent passage**, which could be suspended by the coastal states on security grounds.
5. **Three-state coordination:** In **1971**, Indonesia, Malaysia and Singapore proposed a coordinating body, while Singapore strongly supported cooperation to maintain safe navigation.
6. **International support:** Japan supported the three states through the **Malacca Strait Council**, while the United States and Soviet Union supported continued international transit through the Straits.
7. **UNCLOS transition:** The introduction of **transit passage** allowed continuous and expeditious movement through qualifying straits, including passage by warships.
8. **2007 Cooperative Mechanism:** The three states established a permanent mechanism with user states and industry to support **navigation aids, hydrographic surveys and maritime safety projects**.

Relevance of the Model to Hormuz

1. **Similar territorial setting:** Both waterways contain sections where the **territorial waters of neighbouring littoral states intersect**, creating a need for coordinated maritime management.
2. **Shared navigation responsibility:** The Malacca experience shows that coastal states can retain territorial responsibilities while cooperating with international users to ensure safe navigation.
3. **International participation:** Major maritime users can support maritime safety without seeking direct control over the waterway or establishing permanent naval alliances.
4. **Voluntary funding:** The Malacca model uses **voluntary contributions** from states, industry and organisations for navigation and safety rather than compulsory tolls.
5. **Navigation technology:** Real-time navigational data, hydrographic surveys and related technology can improve the safety and efficiency of vessel movement.
6. **Joint security measures:** Joint patrols established in **2004** demonstrate how littoral states can coordinate against maritime threats affecting navigation.
7. **Shared responsibility:** The model treats safe navigation as both a **regional and international responsibility**, involving coastal states, users and industry.

Why the Model Is Difficult to Replicate in Hormuz

1. **Unresolved maritime disputes:** Malaysia and Indonesia resolved their maritime boundary disputes in **2023**, while Hormuz remains affected by Iran's territorial claims involving the three Emirati islands.
2. **Different legal position:** The Malacca states operate within the **1982 United Nations Convention on the Law of the Sea (UNCLOS)** framework, while Iran has signed but not ratified the Convention.
3. **Warship passage dispute:** Iran's **1993 law** requires foreign warships to obtain its authorisation before passing through the Strait, creating a major difference from the Malacca transit framework.
4. **Power asymmetry:** Indonesia, Malaysia and Singapore managed their differences without allowing the larger state to dominate the cooperative arrangement, while Iran has greater strategic weight in Hormuz.
5. **Lack of common regional framework:** The Malacca states are all members of **ASEAN**, which provides a regional platform for coordination, while the Gulf lacks a comparable framework accepted by both Iran and the GCC.
6. **Competing security visions:** The **Gulf Cooperation Council (GCC)** and Iran follow different approaches to regional security, especially regarding the presence of foreign powers.
7. **Different nature of threats:** Malacca cooperation developed mainly around **piracy, navigation and environmental safety**, whereas Hormuz is closely linked to state-level geopolitical tensions involving Iran.
8. **Major-power disagreement:** Even if regional states reach an arrangement, implementation may remain difficult because the **United States has not accepted the reported Hormuz framework**.

Prospects for a Hormuz Mechanism

1. **Emerging Iran–Oman framework:** Iran and Oman have reportedly agreed on a framework for reopening the Strait, although **the Strait has not yet reopened**.
2. **Proposed funding mechanism:** The reported Omani proposal envisages **voluntary user fees** for navigation services, environmental protection and search-and-rescue operations.
3. **Reduced unilateral control:** The proposed arrangement could provide for **joint regional management**, rather than leaving the Strait solely under Iranian control.
4. **Wider strategic significance:** A permanent mechanism could affect the **security architecture of the Gulf**, given the Strait's importance to both regional and global maritime security.

Way Forward

1. **Resolve maritime differences:** Regional states need greater progress on **maritime boundaries and territorial disputes** before a stable cooperative framework can emerge.
2. **Build regional consensus:** Iran, Oman and other Gulf states need agreement on the basic principles governing maritime navigation and security.

3. **Create clear mechanisms:** Broad principles should be translated into **specific rules, responsibilities and implementation procedures.**
4. **Secure international acceptance:** Major international users, particularly the United States, need to be accommodated because Hormuz connects **regional security with global maritime interests.**
5. **Institutionalise cooperation:** A permanent mechanism should provide continuity beyond individual negotiations and temporary responses to crises.

Conclusion

The Malacca–Singapore experience offers useful institutional lessons, but not a ready-made solution for Hormuz. Its framework emerged from specific legal and regional conditions that differ from the Gulf. A workable Hormuz mechanism therefore requires regional consensus, clear navigation rules, concrete commitments and international acceptance. Such cooperation could improve maritime safety while strengthening the wider **security architecture of the Gulf.**

Question for practice:

Discuss the relevance and challenges of applying the Malacca–Singapore model to ensure safe and cooperative navigation in the Strait of Hormuz.

Source: [The Hindu](#)

When the House Ceases to Hold Power to Account

UPSC Syllabus: Gs Paper 2- Parliament and State legislatures

Introduction

India's Parliament and State Legislatures are central to representation, law-making and executive accountability, but their effectiveness has declined sharply. Falling sitting days, frequent disruptions, weak committee scrutiny and hurried law-making have reduced meaningful legislative oversight. As legislatures lose time and capacity to question governments, the democratic link between citizens, elected representatives and the executive becomes weaker. The issue therefore concerns not merely legislative productivity, but the quality of democracy between elections.

Declining Legislative Effectiveness in India

1. **Falling Parliamentary Sittings:** Parliament met for **127 days in the 1950s and 138 days in the 1960s**, but the average fell to just **55 days during the 17th Lok Sabha.**
2. **Rising Disruptions:** More than **25% of parliamentary time** can be lost to disruptions, sharply reducing the time available for meaningful legislative and oversight work.
3. **Declining State Assembly Sittings:** State legislatures have fallen from around **80 days annually in the 1950s and 1960s to about 25 days today.**

4. **Regional Spread of Decline:** Uttar Pradesh, Karnataka, Kerala, Tamil Nadu, Punjab, Haryana, Bihar and Tripura have all experienced substantial reductions in annual sittings.
5. **Weakening of Question Hour:** Disruptions and inadequate preparation have reduced the effectiveness of **Question Hour**, limiting MPs' ability to question ministers and demand explanations.
6. **Reduced Legislative Discussion:** Fewer sitting days leave less time for **Call Attention Motions, Demands for Grants, debates and other legislative business.**
7. **Weak Representative Role:** When legislatures rarely meet, MPs and MLAs get fewer opportunities to raise **constituency concerns and public issues** before the government.

Causes of Declining Legislative Effectiveness

1. **Government–Opposition Confrontation:** Limited consultation and disagreements over the legislative agenda often create confrontation, reducing opportunities for structured discussion inside the House.
2. **Disruption as Political Strategy:** Opposition parties may use **slogan-shouting, placards and adjournments** to highlight issues when they believe normal parliamentary avenues are inadequate.
3. **Majoritarian Functioning:** Strong government majorities can reduce incentives for wider consultation, creating concerns that legislative numbers may override detailed parliamentary scrutiny.
4. **Erosion of Political Trust:** Earlier practices such as **all-party meetings, back-channel consultations and floor coordination** helped manage disagreements but have weakened over time.
5. **Growing Political Polarisation:** Increasingly adversarial politics and personalised attacks have reduced the mutual trust needed for compromise and constructive legislative work.
6. **Media and Political Optics:** Disruptions create highly visible moments for television and social media, giving political actors incentives to prioritise public optics.
7. **Weak Enforcement of Rules:** Presiding officers may hesitate to use suspension and other disciplinary powers consistently, especially without wider political agreement.

Impacts of Dysfunctional Legislatures

1. **Weak Executive Accountability:** Loss of Question Hour and debates reduces opportunities for legislators to question ministers, weakening an important check on executive power.
2. **Poor Legislative Scrutiny:** Bills passed with limited debate or committee examination may receive inadequate attention to **drafting, rights, financial and federal concerns.**
3. **Declining Quality of Law-Making:** Some Bills have been passed within only **two to five minutes**, leaving little time for serious discussion of their provisions.

4. **Marginalisation of Smaller Voices:** Continuous disruption can reduce speaking opportunities for smaller parties, regional interests and individual legislators, narrowing legislative representation.
5. **Erosion of Deliberative Democracy:** Legislatures increasingly struggle to function as forums for reasoned debate, reducing the role of discussion in shaping public policy.
6. **Weakening of Separation of Powers:** When legislative scrutiny declines, the executive faces fewer institutional checks, increasing the imbalance between the legislature and government.
7. **Judicialisation of Policy Disputes:** When legislative deliberation is inadequate, policy conflicts may increasingly reach courts, placing greater pressure on the judiciary.

Institutional Weaknesses and Accountability Costs

1. **Declining Committee Participation:** Departmentally-Related Standing Committees have faced around 50% attendance in many cases, despite allowances provided to MPs for participation.
2. **Reduced Committee Scrutiny:** Bills referred to parliamentary committees fell from 60% in the 15th Lok Sabha to 13% in the 17th Lok Sabha, reducing expert examination.
3. **Party Control Over MPs:** Parliamentary parties often prioritise compliance with the party whip and leadership directions, leaving limited space for independent legislative engagement.
4. **Rising Cost of Parliament:** The estimated daily cost rose from ₹36,000 in the 1950s to ₹1.23 crore in 2004, ₹2 crore in 2012 and about ₹9 crore today, even as legislative productivity declined.
5. **Perquisites Amid Declining Duties:** High salaries, allowances and other privileges raise concerns when legislative participation and accountability remain weak.
6. **Constitutional Minimum for States: Article 174(1)** requires that not more than six months should intervene between two sessions of a State Legislature, but this does not ensure adequate legislative work.
7. **Accountability Gap:** Low sitting days, weak scrutiny and disruptions together create a gap between the resources provided to legislators and their actual legislative performance.

Existing Institutional Initiatives

1. **Standing Committee System:** The Departmentally-Related Standing Committee system was introduced in 1993 to allow MPs to examine public policy and legislation in greater detail.
2. **Presiding Officers' Powers:** Parliamentary rules provide presiding officers with disciplinary powers, including action against members who repeatedly disrupt proceedings.
3. **All-Party Consultations:** Meetings among political parties and floor coordination provide existing mechanisms for resolving disagreements and facilitating smoother legislative functioning.

4. **Pre-Legislative Consultation:** Consultation before introducing major Bills can provide stakeholders and political parties greater opportunity to examine proposals and reduce legislative surprises.
5. **Constitutional Session Requirement: Article 174** provides a constitutional limit between State Legislature sessions, ensuring that governments cannot indefinitely avoid summoning their legislatures.
6. **NCRWC Recommendation:** The National Commission to Review the Working of the Constitution recommended **120 sitting days for Parliament and 60 days for State Legislatures.**
7. **Unimplemented Sitting-Day Proposal:** In 2012, Sitaram Yechury proposed making at least **100 annual sitting days mandatory for Parliament**, but the proposal was not implemented.
8. **Parliamentary Accountability Mechanisms:** Question Hour, debates, committee scrutiny and discussions on government expenditure already provide institutional tools for holding the executive accountable.

Way Forward

1. **Minimum Sitting Days:** Parliament and State Legislatures should follow a clear annual calendar with adequate sitting days, ensuring sufficient time for legislation and executive scrutiny.
2. **Mandatory Committee Scrutiny:** Important, complex and rights-sensitive Bills should normally undergo detailed examination by standing or select committees before final passage.
3. **Protect Question Hour:** Question Hour should be protected from routine disruption so ministers remain answerable and legislators can raise issues affecting citizens.
4. **Guaranteed Opposition Space:** Fixed time or sessions for Opposition-led issues can provide political space for scrutiny while reducing incentives to disrupt other legislative business.
5. **All-Party Code of Conduct:** A written code should clearly regulate **entry into the Well, slogan-shouting and repeated adjournment tactics**, with predictable penalties.
6. **Strengthen Committee Functioning:** Better attendance, stronger research support and greater party discipline can improve the quality and seriousness of parliamentary committee work.
7. **Restore Parliamentary Conventions:** Regular all-party consultations, pre-legislative briefings and cooperative floor management can rebuild trust and reduce avoidable confrontation.

Conclusion

Democracy requires effective legislatures between elections, not merely regular elections. Parliament and State Assemblies must regain adequate sitting time, meaningful debate, committee scrutiny and Opposition participation. Strengthening these institutions is essential for executive accountability, quality law-making, representation and separation of powers. A functioning legislature is therefore vital to preserve public trust and ensure that government remains answerable to citizens.

Question for practice:

Examine the declining effectiveness of Parliament and State Legislatures in ensuring executive accountability and suggest measures to strengthen their functioning.

Source: [Indian Express](#)

Easing funding for coops

Source: The post “Easing funding for coops” has been created based on “Easing funding for coops” published in “Business Line” on 23rd September 2026.

UPSC Syllabus: GS-3- Economy

Context: The **NCDC Amendment Bill, 2026** seeks to update the institutional and financial framework of the **National Cooperative Development Corporation (NCDC)** in accordance with the changing needs of India's cooperative sector. The Bill proposes to **broaden NCDC's financing channels and instruments** to support cooperative development.

Key Provisions of the Bill

1. The Bill proposes to enable NCDC to **finance any entity engaged in cooperative development**, subject to prescribed conditions, even if such an entity is not itself registered as a cooperative society.
2. NCDC would be able to provide **loans and grants directly to eligible entities**, which could reduce procedural delays in financing cooperative-development projects.
3. With the approval of the **Central Government**, NCDC would be permitted to **participate in the share capital of cooperative societies or entities engaged in cooperative development**.
4. The Bill proposes to expand the scope of “**foodstuffs**” to include other food items notified by the Central Government.
5. It also proposes to **remove the geographical restriction relating to industrial goods**, thereby facilitating greater diversification and value addition.
6. NCDC would be empowered to **collect and share credit information with the RBI and other notified financial institutions**, strengthening credit appraisal and risk management.

Significance

1. Wider institutional ecosystem: The proposed provision can enable NCDC to support **infrastructure providers, technology institutions, processing organisations, marketing agencies and other specialised entities** that contribute to cooperative development.

2. Faster availability of finance: Direct loans and grants can reduce procedural delays and support **technology, infrastructure, processing, storage, market linkages and value-chain development**.

3. Support for modernisation

- a. Cooperatives are increasingly diversifying into **processing, branding, logistics, digital services and marketing**.
- b. Flexible financing can help cooperatives adapt to these emerging activities.

4. Strengthening of capital base: NCDC's participation in share capital can provide **long-term financial support** to institutions that may require capital beyond conventional borrowing.

5. Improved credit assessment: Sharing credit information with the RBI and other financial institutions can reduce information asymmetry and promote responsible lending and better risk management.

6. Benefits across the cooperative value chain

- a. The provisions can support activities ranging from **production and processing to storage, marketing and supporting infrastructure.**
- b. This can benefit **PACS, cooperative marketing societies, processing cooperatives and other grassroots institutions.**

Concerns

1. Risk of diversion of resources: Expanding beneficiaries beyond cooperative societies may lead to disproportionate allocation of NCDC resources to non-cooperative entities.

2. Need to protect grassroots cooperatives: PACS and other grassroots cooperatives may face capacity and financial constraints and therefore require adequate access and priority.

3. Risks from equity participation: NCDC's participation in share capital exposes **public funds to investment and business risks.** Therefore, due diligence, valuation, investment limits and performance monitoring are necessary.

4. Accountability and transparency: The expanded mandate requires **transparent reporting of beneficiaries, financial assistance and outcomes.**

5. Risk of implementation gaps: Coordination will be required among **State cooperative departments, cooperative banks and other institutions** to ensure effective implementation.

Way Forward

1. The Government should **clearly define an "entity engaged in cooperative development" and establish objective eligibility criteria.**
2. The framework should **ensure that cooperative societies remain the primary beneficiaries of NCDC assistance.**
3. **Grassroots institutions such as PACS should receive appropriate priority** so that smaller cooperatives are not disadvantaged.
4. A clear **"cooperative-benefit test"** should be introduced, under which financing to a non-cooperative entity should be justified by identifiable and measurable benefits to cooperative societies and their members.
5. NCDC should establish **strong due-diligence, risk-assessment, monitoring and exit mechanisms** before participating in the share capital of entities.
6. The Government should ensure **transparent reporting and outcome-based assessment** of NCDC's financial assistance.

Conclusion: The proposed amendments can provide NCDC with **greater flexibility to finance India's expanding and diversifying cooperative ecosystem.** However, the expansion of NCDC's mandate should be accompanied by **strong eligibility criteria, accountability and safeguards.** The central principle should be

to expand NCDC's financing capacity while ensuring that cooperative societies and their members remain the primary beneficiaries.

Question: The NCDC Amendment Bill, 2026 seeks to expand the financing role of the National Cooperative Development Corporation (NCDC). Discuss its significance and the concerns associated with the proposed expansion.

Source: [Business Line](#)

Why it's time to scrap dollar billing for local SEZ deals

Source: The post "Why it's time to scrap dollar billing for local SEZ deals" has been created based on "Why it's time to scrap dollar billing for local SEZ deals" published in "Business Line" on 23rd September 2026.

UPSC Syllabus: GS-3- Economy

Context: **Special Economic Zones (SEZs)** were created primarily to promote exports and earn foreign exchange. At present, SEZ units providing services to **Domestic Tariff Area (DTA) customers** are generally required to receive payment in foreign currency. The proposed amendment to **Section 2(z) of the SEZ Act, 2005** seeks to permit **rupee payments** for such services.

Key features of the proposed change

1. The **Commerce Department** has circulated a draft **Cabinet note** proposing amendment of Section 2(z) of the SEZ Act.
2. SEZ units would be allowed to receive **rupee payments from DTA customers for services**.
3. This would bring services broadly in line with the treatment already available to **goods**.
4. The Government is also working to **harmonise the definition of services under the SEZ Act with the GST law**.
5. The proposal is under **inter-ministerial consultation involving Commerce, Finance and the RBI** before being placed before the Cabinet.

Reason for the need for the change

1. Reduction in transaction costs

- a. Currently, an Indian DTA customer has to purchase foreign currency through an authorised dealer bank.
- b. The SEZ unit subsequently converts the foreign currency back into rupees. This results in **banking charges and unnecessary currency-conversion costs** for a transaction that takes place entirely within India.

2. Benefit to specialised sectors

- a. Sectors such as **IT, IT-enabled services, defence, aerospace, engineering, maintenance and repair and overhaul (MRO)** are likely to benefit.
- b. Indian SEZ-based firms can sometimes provide specialised services much faster than foreign vendors.

3. Benefit to public sector organisations

- a. Defence, space and aerospace PSUs often require specialised maintenance and engineering services.
- b. Rupee billing could reduce the additional costs and administrative burden associated with foreign-currency transactions.

4. Improve attractiveness of SEZs

- a. Several IT firms have reconsidered their SEZ presence after the withdrawal of earlier **Income Tax incentives**.
- b. Rupee billing could provide an additional incentive for firms to retain operations in SEZs.

5. Ease of doing business: Government departments and other domestic customers would face less paperwork and lower transaction costs while procuring services from SEZ-based firms.

Challenges and concerns

1. SEZs have a special legal status

- a. SEZs are treated as **territory outside India for several legal, customs and tax purposes**.
- b. This legal framework supports their customs and tax privileges. Therefore, relaxing foreign-exchange requirements needs careful regulation.

2. Risk of regulatory ambiguity: If the definition of a **domestic transaction** is not clearly specified, the distinction between domestic and export transactions could become blurred.

3. Possibility of revenue leakage: The Finance Ministry would need to ensure that the proposed relaxation does not create opportunities for **tax or revenue leakage**.

4. Need for clear banking rules

- a. The **RBI and authorised dealer banks** would require a clear framework for rupee settlement.
- b. Ambiguous rules could lead individual banks to interpret the provisions differently.

5. Sectoral differences

- a. A defence contractor providing specialised services to a PSU and an IT company providing services to a private Indian client may have different regulatory and operational requirements.
- b. Hence, **sector-specific guidance** may be necessary.

Way Forward

1. **The Government should harmonise the definition of services under the SEZ Act with that under the GST law** to ensure regulatory clarity.
2. The Government should **clearly define what constitutes a domestic or DTA transaction** to prevent ambiguity and misuse of the provision.
3. The **RBI should establish a transparent framework for rupee-based settlement** so that authorised dealer banks can process such transactions uniformly.

4. The Government should **issue sector-specific guidelines for defence, aerospace, IT, engineering and MRO services** according to their different operational requirements.
5. The regulatory framework should **include adequate safeguards to prevent tax evasion and revenue leakage**.
6. The Government should **periodically review the impact of rupee billing on SEZ exports, domestic business and government revenue** and make necessary adjustments.

Conclusion: Allowing rupee billing for services provided by SEZ units to domestic customers can remove an **unnecessary currency-conversion and compliance burden**. At the same time, the reform must **preserve the regulatory distinction that supports the customs and tax framework of SEZs**. Thus, the proposal can form part of a broader effort to **reorient SEZs from a purely export-led model towards an economy where domestic demand is also an important opportunity**.

Question: The proposed shift from dollar billing to rupee billing for services provided by SEZ units to domestic customers can improve ease of doing business, but may also create regulatory challenges. Discuss.

Source: [Business Line](#)

Using Trade Treaty Policy to Strengthen Commercial Arbitration

UPSC Syllabus: Gs Paper 3- Indian Economy

Introduction

India's expanding network of **Bilateral Investment Treaty (BIT)** and **Free Trade Agreement (FTA)** is reshaping how it protects investment and manages disputes. Since the 1990s, India has moved from a broad BIT regime towards narrower agreements with stronger regulatory safeguards and domestic remedies. Recent FTAs also show limited reliance on conventional **Investor-State Dispute Settlement (ISDS)**. This creates an opportunity to use India's existing commercial arbitration framework to offer foreign investors credible dispute resolution while preserving regulatory autonomy and strengthening India's position as a trusted investment destination.

Evolution of India's BIT Policy

1. **BITs after economic liberalisation:** India signed its first Bilateral Investment Treaty (BIT) with the United Kingdom in **1994**, following the 1991 opening of its economy to foreign investment.
2. **Rapid expansion of BIT network:** By **2015**, India had signed **83 BITs**, including 74 then in force, mainly with capital-exporting countries.
3. **Rise of investment disputes:** India's first treaty claim emerged in the mid-2000s, followed by its first adverse award in **White Industries** in 2011.
4. **Growing concern over ISDS:** By 2015, India faced about **17 known BIT claims**, increasing concerns over investor-state dispute settlement and regulatory constraints.
5. **Adoption of Model BIT:** In December 2015, India adopted a new Model BIT seeking **investor protection while maintaining a balance between investor rights and government obligations**.

6. **Narrower post-2015 framework:** The new approach introduced narrower definitions, stronger regulatory rights, extensive exclusions and **mandatory domestic remedies before arbitration**.
7. **Shift towards new-generation BITs:** Since 2016, India terminated **77 BITs** and adopted new-generation agreements largely based on the 2015 Model BIT.
8. **Continuing relevance of terminated BITs:** Investments made before termination can remain protected under **sunset or survival clauses, typically for 10–15 years**, keeping some terminated treaties legally relevant.

From Investor-State Disputes to Commercial Arbitration

1. **Regulatory sovereignty:** Recent BITs give greater importance to India's right to regulate, while maintaining selected protections for foreign investors.
2. **Recent treaty recalibration:** The **2025 India-Israel agreement** retained regulatory safeguards while reducing the local-remedy period to three years and extending protection to portfolio investments.
3. **Review of Model BIT:** Budget 2025–26 announced a review of the 2015 Model BIT to make it more investor-friendly while retaining regulatory safeguards.
4. **Recent expansion of trade agreements:** India has entered into **Comprehensive Economic Partnership Agreements (CEPAs)** with the UAE and Oman, along with trade agreements with Australia and EFTA, expanding its investment and trade partnerships.
5. **Changing role of ISDS:** Recent Indian FTAs generally omit conventional Investor-State Dispute Settlement (ISDS), while newer BITs continue to provide investment dispute mechanisms with stronger conditions and domestic-remedy requirements.
6. **Alternative dispute mechanisms:** The European Free Trade Association (EFTA) agreement uses a **government-to-government mechanism** instead of conventional ISDS, supported by a dedicated India-EFTA Desk.
7. **Importance of commercial arbitration:** The **Arbitration and Conciliation Act, 1996** already covers domestic arbitration, international commercial arbitration and enforcement of foreign awards.
8. **Contractual disputes and ISDS:** The India-Uzbekistan BIT excludes disputes arising solely from contractual breaches, clearly separating commercial disputes from treaty-based investment claims.

Using BITs and FTAs to Strengthen Commercial Arbitration

1. **Clarifying ISDS omission:** Future FTAs could explain that the absence of ISDS reflects confidence in India's available domestic dispute-resolution mechanisms.
2. **Providing an investor alternative:** Commercial arbitration can offer foreign investors an alternative to Indian courts when disputes arise from contracts with State agencies.

3. **Creating a middle ground:** Stronger commercial arbitration can balance India's reservations about ISDS with investors' concerns about relying exclusively on domestic courts.
4. **Recognising Indian arbitration in treaties:** Future BITs could clarify that submitting an investment dispute to commercial arbitration in India can satisfy local-remedy requirements.
5. **Separating funding rules:** Restrictions on third-party funding in ISDS should not automatically apply to commercial arbitration because their underlying policy concerns differ.
6. **Building regulatory space:** Clear treaty language could allow Indian regulators to develop a comprehensive third-party funding policy for domestic commercial arbitration.

Way Forward

1. **Balance investor protection and regulatory autonomy:** India should bring its treaty framework closer to a balance between **investor protection and the State's regulatory autonomy**.
2. **Strengthen domestic dispute resolution:** Shorter domestic-remedy periods make efficient domestic institutions and **predictable commercial arbitration** increasingly important.
3. **Review the Model BIT:** The ongoing review should make the framework more investor-friendly while retaining necessary **regulatory safeguards**.
4. **Create an external expert group:** International lawyers, economists, academics and experts from research institutions and think tanks can provide independent advice during treaty review.
5. **Ensure wider stakeholder consultation:** India should seek views from **industry bodies, arbitrators, law firms and civil society organisations** before finalising the revised framework.
6. **Enable public and parliamentary scrutiny:** The revised Model BIT should be placed in the **public domain for comments** and examined by Parliament and relevant department-related parliamentary committees.
7. **Make consultation meaningful:** The process should genuinely consider different and dissenting views rather than becoming a **box-ticking exercise**, strengthening the democratic legitimacy of investment treaties.
8. **Build investor confidence:** India should aim for agreements that prevent disputes, efficient arbitration when disputes arise and **predictable enforcement of arbitral awards**.

Conclusion

India's treaty policy is moving towards a balance between **investor protection and regulatory autonomy**. The next step is to connect this approach with strong commercial arbitration, clearer treaty provisions, wider consultation and predictable enforcement. Such reforms can improve investor confidence while strengthening India's domestic dispute-resolution system. This can support India's broader ambition of becoming a **global arbitration hub**.

Question for practice:

Discuss how India can use its trade treaty policy to strengthen commercial arbitration and improve investor confidence.

Source: [The Hindu](#)

Towards Recognising Women Farmers

UPSC Syllabus: Gs Paper 3- Land reforms in India.

Introduction

Women are playing a growing role in Indian agriculture, but their contribution is often not matched by formal recognition as farmers. Since farmer identity is largely linked to land records, women who cultivate family or other land without ownership rights can remain outside official databases and agricultural schemes. This creates a gap between **who actually farms and who is recognised as a farmer**.

Current Status of Women Farmers in India

1. **Rising participation in agriculture:** Agriculture employed around 110 million women and 127 million men in 2025, bringing women's participation close to gender parity.
2. **Feminisation of agriculture:** Women's agricultural workforce has more than doubled since 2017-18, partly because men are moving from farming towards non-farm employment.
3. **Growing share of rural women workers:** Nearly three-fourths of rural women workers are now engaged in agriculture, compared with less than half of rural men.
4. **High burden of unpaid work:** More than 41% of female agricultural workers were unpaid in 2025, compared with 20% of male agricultural workers.
5. **Limited independent work status:** Nearly 63% of men were own-account workers, compared with only 39% of women, showing women's greater dependence on family farming.
6. **Low ownership of agricultural land:** Women held only about 14% of operational agricultural land holdings according to the 2015-16 Agricultural Census, despite their growing farming role.
7. **Maharashtra's recognition gap:** In Maharashtra, 82% of rural female workers were engaged in agriculture against 58% of rural men, while women held only 15.5% of operational farmland.

Major Concerns Related to Women Farmers in India

1. **Land-linked access to benefits:** Dependence on land titles restricts women's access to **credit, crop insurance, subsidies, technology, extension services and price-support mechanisms**, despite their actual farming contribution.
2. **Limited access to government schemes:** Land-linked identification prevents many women farmers from accessing credit, subsidies, technology, extension services and other agricultural opportunities.

3. **Unequal access to PM-KISAN:** Women accounted for only 23% of PM-KISAN beneficiaries, even though women form a much larger share of agricultural workers.
4. **State-level differences in recognition:** Meghalaya had women accounting for 70% of beneficiaries and Kerala 44%, showing better outcomes where alternative recognition mechanisms exist.
5. **Structural role of social institutions:** Customary tenure and matrilineal systems in some northeastern States, along with Kerala's collective farming, improve women's access to agricultural resources.
6. **Land ownership affects economic security:** Without titles, women face weaker access to institutional credit, crop insurance and price-support mechanisms, regardless of their actual farming contribution.
7. **Recognition does not guarantee ownership:** A farmer certificate can identify a woman as a farmer, but it does not automatically provide inheritance, mortgage, sale or tenure rights.

Initiatives to Recognise and Empower Women Farmers

1. **International attention in 2026:** The United Nations' International Year of the Woman Farmer in 2026 has increased policy attention towards women's contribution and rights in agriculture.
2. **National Policy for Farmers, 2007:** The policy adopted an activity-based and land-delinked definition of farmer, but this approach was not operationalised for nearly two decades.
3. **Women Farmers' Entitlements Bill:** The Women Farmers' Entitlements Bill, 2011, introduced by M.S. Swaminathan in the Rajya Sabha in 2012, lapsed in 2013 but kept women farmers' rights in the national policy debate.
4. **Kerala's collective farming model:** Kudumbashree enables women to participate in group farming, creating an alternative pathway for agricultural participation beyond individual land ownership.
5. **Odisha's KALIA support:** The KALIA scheme has reached landless and sharecropper women, showing how agricultural support can extend beyond formal land ownership.
6. **Uttarakhand's co-ownership reform:** A 2021 amendment made mandatory co-ownership of ancestral land for wives, strengthening women's formal position over agricultural property.
7. **Maharashtra Women Farmers Empowerment Act, 2026**
 - **Independent farmer identity:** The Act recognises women engaged in farming or allied activities for at least one season **irrespective of land ownership**, through a Woman Farmer Certificate.
 - **Inclusive definition of farmer:** It covers **landless cultivators, tenant farmers, sharecroppers, agricultural labourers, livestock rearers and other allied agricultural workers**, expanding recognition beyond landowners.

- **Institutional mechanism:** Women can seek recognition through **Gram Panchayats or Nagar Panchayats**, while dedicated assistance officers at the Taluka and District levels support certification and access to agricultural services.

Way Forward

1. **Build a standardised national framework:** States should develop common definitions, certification procedures and databases so women farmers can be identified consistently across administrative systems.
2. **Integrate farmer identity with digital systems:** Woman Farmer Certificates should connect with Agri Stack and Farmer IDs to integrate women into the wider agricultural digital ecosystem.
3. **Improve database coordination:** New women farmer databases should connect with existing agricultural databases while preventing duplication, exclusion and repeated registration.
4. **Strengthen local identification:** Self-registration and Gram Sabha identification should be supported by sustained information campaigns so that landless and title-less women are not missed.
5. **Link recognition with actual benefits:** Certification should directly improve access to credit, insurance, subsidies, technology, extension services and agricultural schemes, rather than remain an administrative identity.
6. **Strengthen land and inheritance rights:** Recognition should be followed by dual-name land titling and stronger tenure security, building on the co-ownership approach adopted by Uttarakhand.
7. **Make mechanisation gender-responsive:** Agricultural mechanisation should consider the women increasingly performing farm work rather than being designed around a different labour force.
8. **Build administrative capacity:** State revenue systems need stronger implementation mechanisms so that legal recognition can gradually become secure and enforceable tenure rights.

Conclusion

Women's growing role in Indian agriculture requires a shift from recognising only landowners to recognising actual cultivators. Maharashtra's reform provides this identity, but lasting empowerment requires linking recognition with **land rights, credit, technology, welfare and decision-making power**. The long-term goal should be to make women not only visible as farmers, but equal holders of agricultural resources.

Question for practice:

Examine the need to recognise and empower women farmers in India and the measures required to bridge the gap between agricultural participation and ownership.

Source: [The Hindu](#) ; [Downtoearth](#)