



7 PM COMPILATION

February, 2025

Features of 7 PM compilation

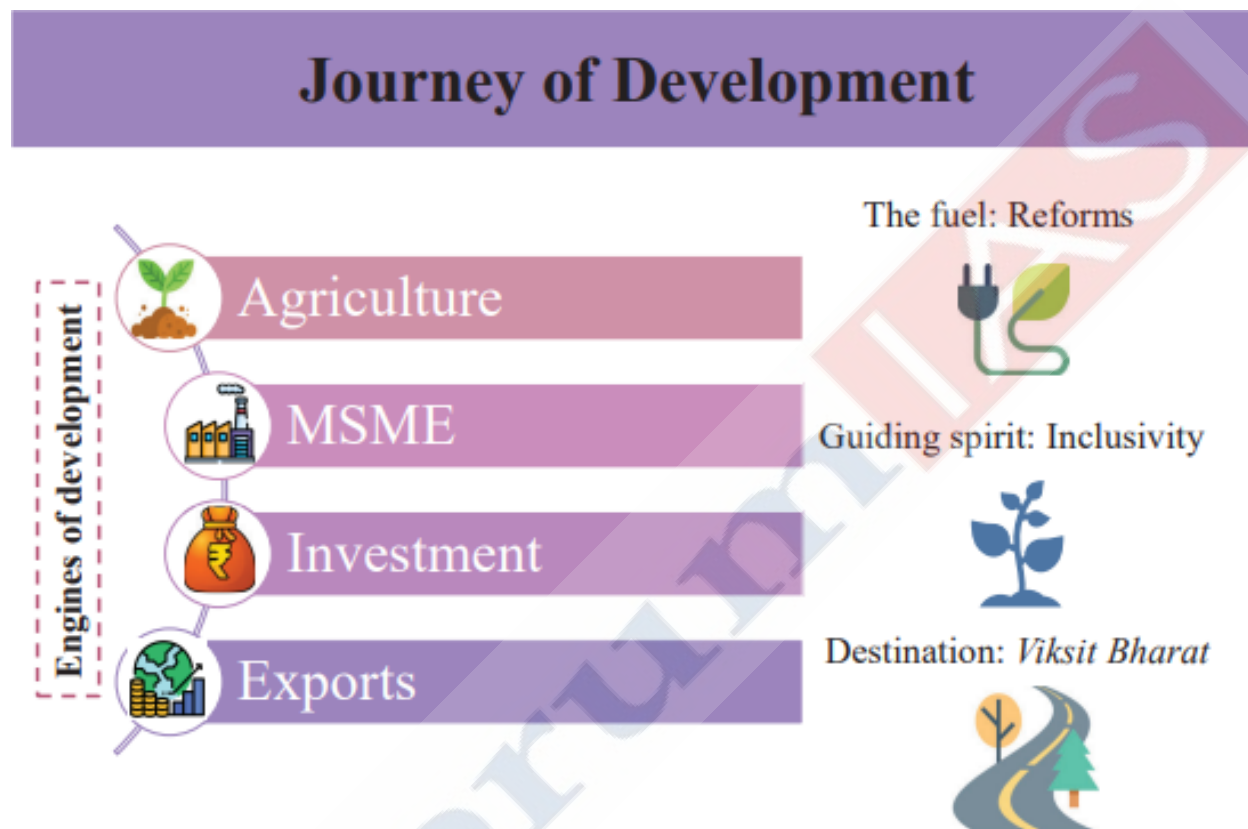
- ❖ Comprehensive coverage of a given current topic
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Union Budget 2025-2026 Highlights- Explained Pointwise

Finance Minister **Nirmala Sitharaman** presented the **Union Budget 2025-26** in the Parliament. This was her 8th consecutive budget. The Budget proposes development measures **focusing on poor (Garib), Youth, farmer (Annadata) and women (Nari)**. Union Budget highlights that Agriculture, MSME, Investment, and Exports are engines of development in the journey to Viksit Bharat using reforms as fuel, guided by the spirit of inclusivity.



Source- India Budget

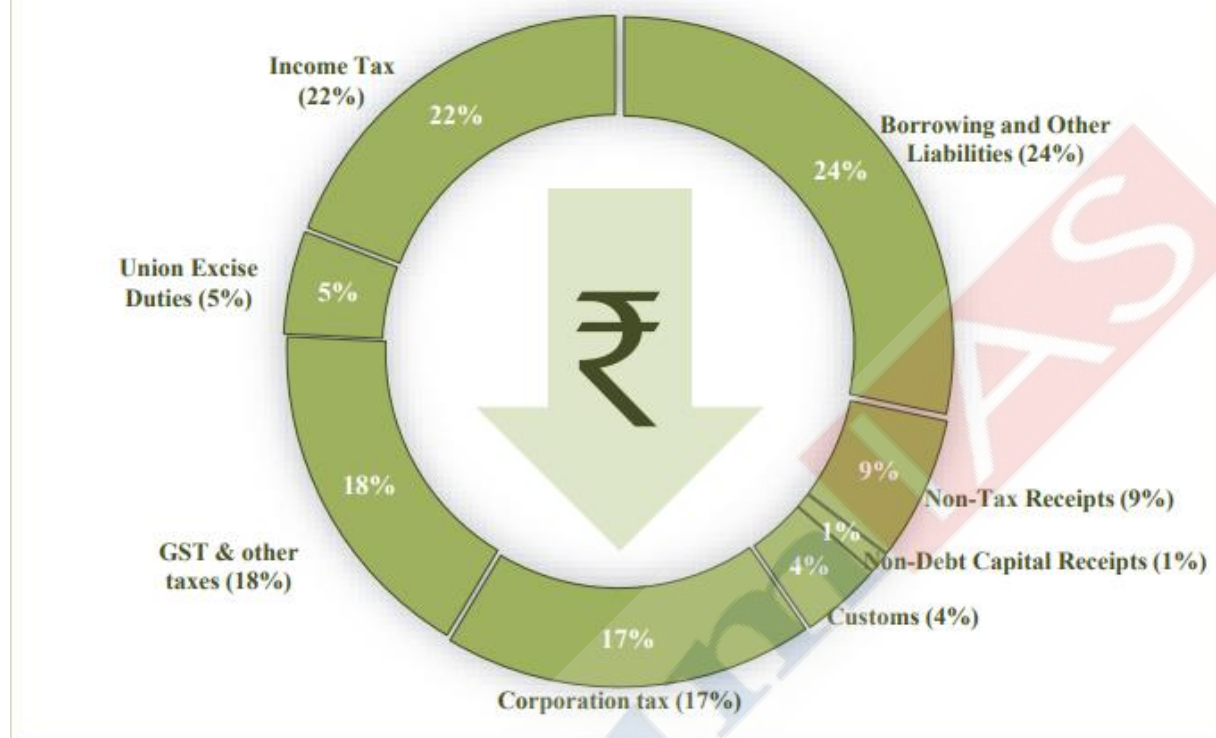
What is a budget? What are the basics of a Budget Document?

Budget– As per **Article 112 of the Constitution**, the Budget is referred to as the **Annual Financial Statement** of the Government. The **term 'Budget' is not explicitly mentioned in the Constitution**. It presents the government's estimated receipts and expenditures for a financial year.

The Union Budget is prepared by the **Department of Economic Affairs (DEA)** under the Ministry of Finance. It covers all aspects of government finances, including revenue generation, expenditure allocation, and policy announcements.

Government Receipts

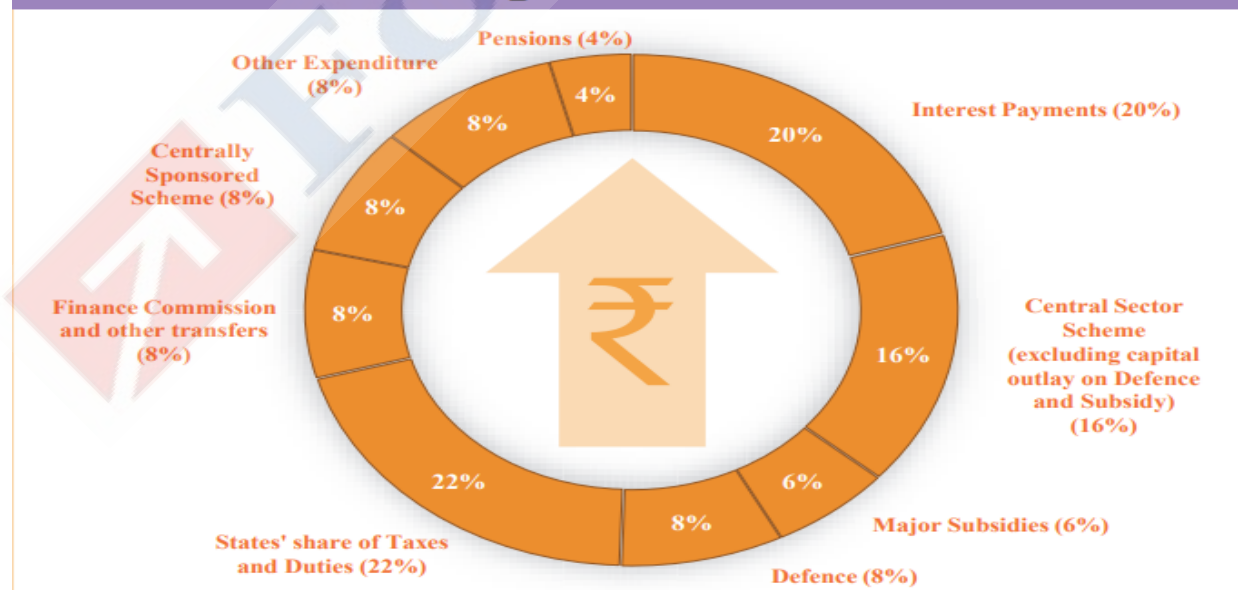
Rupee Comes From



Source- India budget

Government Receipts

Rupee Goes To



Source- India Budget

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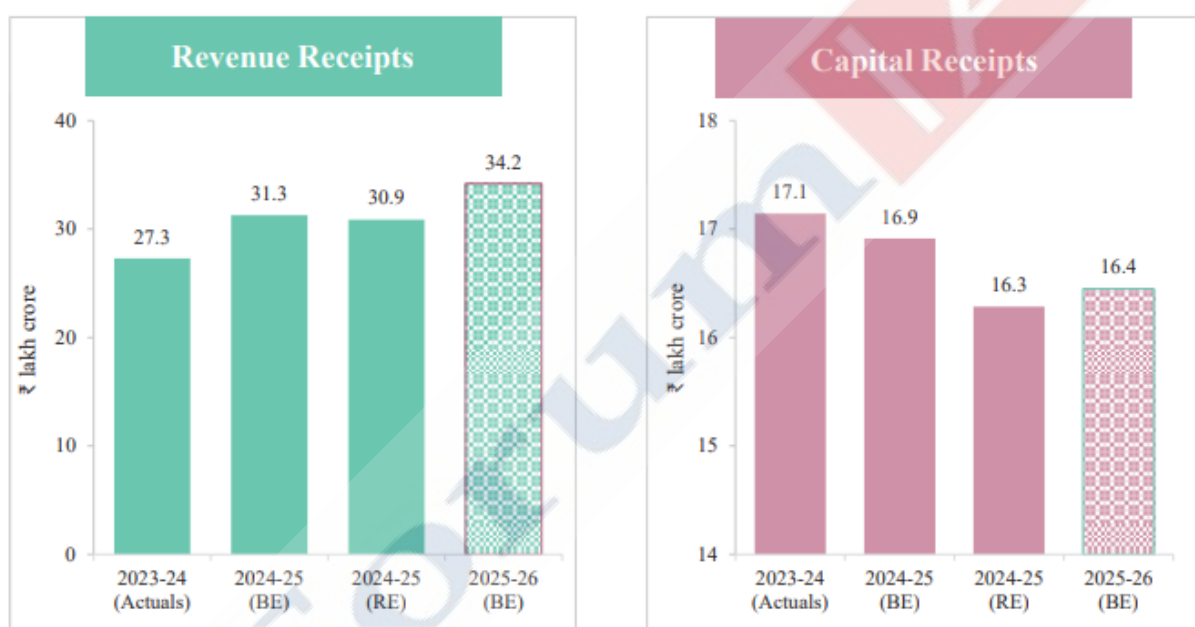
What are the macro-economic highlights of the Budget?

Budget Estimates 2025-26

a. Total Receipts for FY 2025-26

- The **total receipts other than borrowings** for the year 2025-26, is estimated to be at Rs. **34.96 lakh crore**.
- The **gross** and **net market borrowings** through dated securities during 2025-26 are estimated at Rs.14.82 lakh crore and Rs.11.54 lakh crore respectively.
- The **net tax receipts** are estimated at Rs. **28.37 lakh crore**.

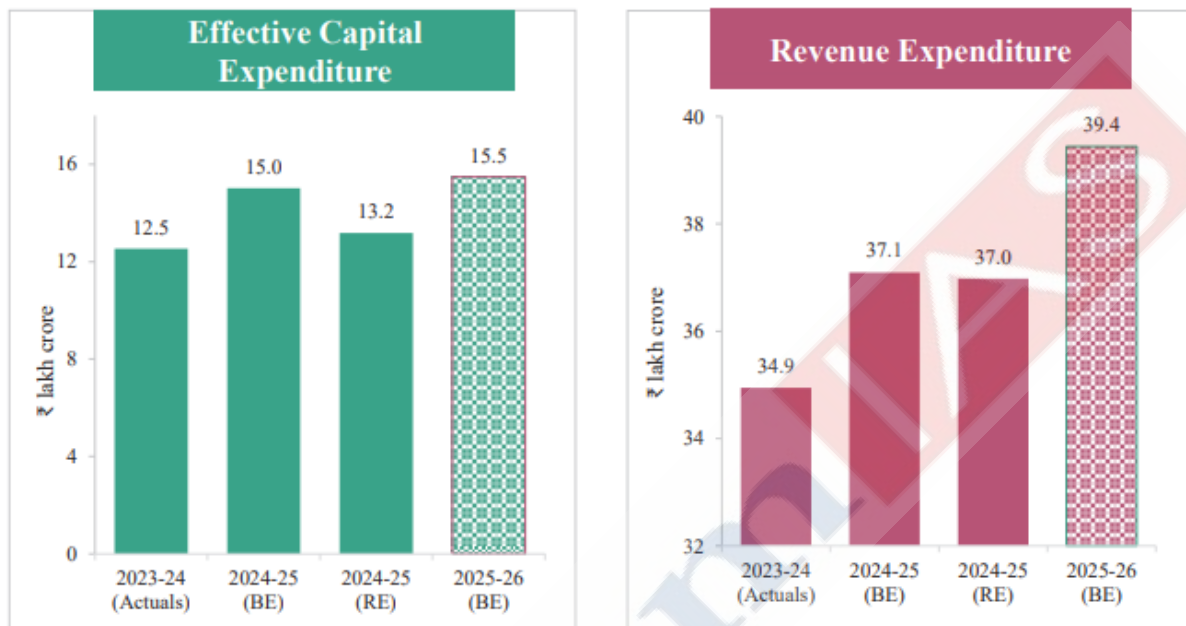
Receipts



Source- India Budget

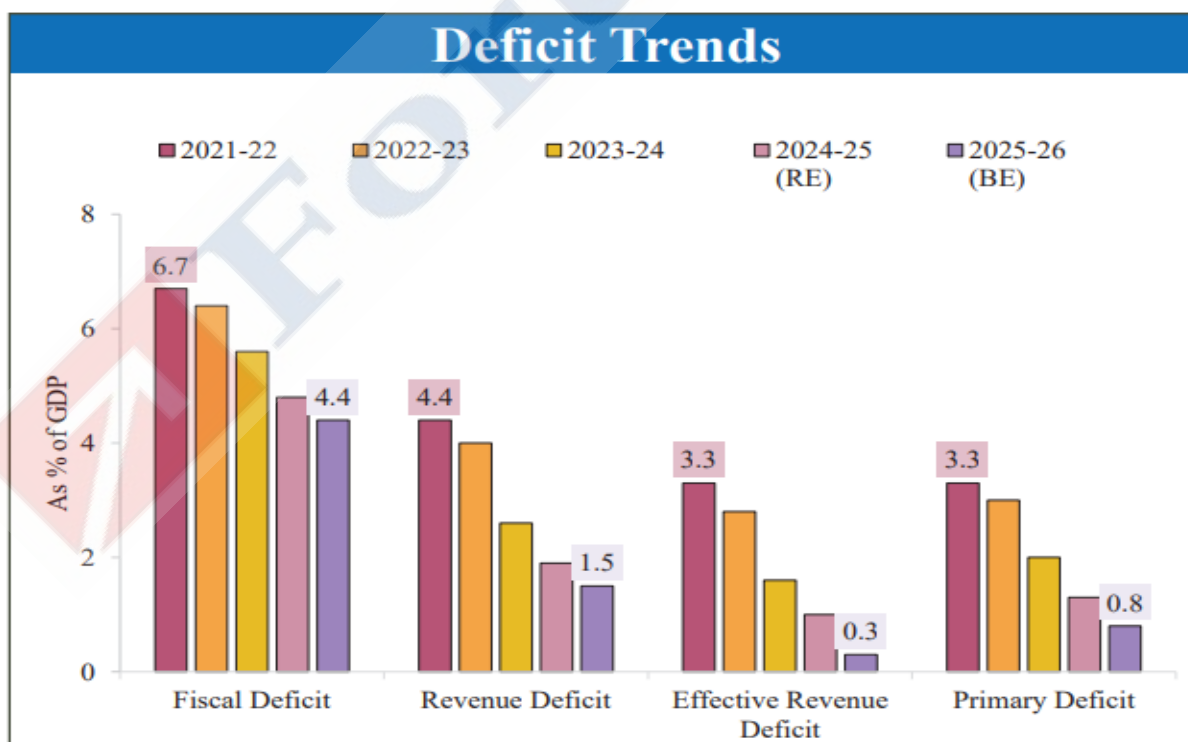
b. Total Expenditure for FY 2025-26– The total expenditure is estimated at Rs. 50.65 lakh crore.

Expenditure



Source- India Budget

c. **Fiscal Deficit**– The fiscal deficit is estimated to be **4.4 percent** of GDP.



Source- India Budget

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What are the four engines driving the journey to Viksit Bharat in the Union Budget 2025-26?**1. Agriculture as the 1st Engine of development**

Prime Minister's Dhan-Dhaanya Krishi Yojana – Agri-District Development Program- This initiative, to be launched in collaboration with state governments, will cover 100 districts with low productivity, moderate crop intensity, and subpar credit parameters. It aims to benefit 1.7 crore farmers.

Building Rural Prosperity and Resilience- A holistic, multi-sectoral program will be rolled out with state cooperation to tackle underemployment in agriculture. This will include skilling, investment, technology, and efforts to stimulate the rural economy. The first phase will target 100 emerging agricultural districts.

Aatmanirbharta in Pulses- The government will initiate a 6-year “Mission for Aatmanirbharta in Pulses,” focusing on Tur, Urad, and Masoor. NAFED and NCCF will purchase these pulses from farmers over the next 4 years.

Makhana Board in Bihar- A dedicated Makhana Board will be established to boost the production, processing, value addition, and marketing of Makhana in Bihar.

National Mission on High Yielding Seeds- A National Mission will focus on strengthening the research ecosystem, developing and propagating high-yield seeds, and ensuring the availability of over 100 seed varieties for commercial use.

Fisheries- The government will establish a framework for the sustainable exploitation of fisheries within India's Exclusive Economic Zone and the High Seas, with special emphasis on the Andaman & Nicobar and Lakshadweep Islands.

Mission for Cotton Productivity- A 5-year mission will be launched to enhance cotton farming productivity, sustainability, and promote the cultivation of extra-long staple cotton varieties.

Enhanced Credit through KCC- The loan limit under the Modified Interest Subvention Scheme will be raised from Rs. 3 lakh to Rs. 5 lakh for loans accessed through the Kisan Credit Card (KCC).

Urea Plant in Assam- A new urea plant with an annual production capacity of 12.7 lakh metric tons will be established at Namrup, Assam.



Source- India Budget

2. MSMEs as the 2nd Engine of development

Revised Classification Criteria for MSMEs- The investment and turnover limits for MSME classification will be increased by 2.5 times and 2 times, respectively.

Credit Cards for Micro Enterprises- Customized Credit Cards with a Rs. 5 lakh limit will be introduced for micro enterprises registered on the Udyam portal. A total of 10 lakh cards will be issued in the first year.

Fund of Funds for Startups- A new Fund of Funds with an expanded scope will be established, backed by a fresh Rs.10,000 crore contribution.

Scheme for First-Time Entrepreneurs- A new initiative will support 5 lakh first-time entrepreneurs from women, Scheduled Castes, and Scheduled Tribes. Term loans of up to Rs. 2 crore will be provided over the next five years.

Focus Product Scheme for Footwear & Leather Sectors- To boost productivity, quality, and competitiveness in India's footwear and leather sector, a targeted scheme has been introduced. This initiative aims to generate employment for 22 lakh people, achieve a turnover of Rs. 4 lakh crore, and drive exports exceeding Rs. 1.1 lakh crore.

Support for the Toy Industry- A new scheme will promote the creation of high-quality, innovative, and sustainable toys, positioning India as a global hub for toy manufacturing.

Boost to Food Processing- A National Institute of Food Technology, Entrepreneurship, and Management will be **established in Bihar** to support food processing enterprises.

National Manufacturing Mission – Advancing “Make in India”- A National Manufacturing Mission will be launched to boost the “Make in India” initiative, covering small, medium, and large industries. It will also **promote Clean Tech manufacturing** and strengthen domestic production of solar PV cells, EV batteries, motors, controllers, electrolyzers, wind turbines, high-voltage transmission equipment, and grid-scale batteries.

Supporting MSMEs & Furthering Make in India



Credit Cards for Micro Enterprises: Customised Credit Cards with a ₹ 5 lakh limit for micro enterprises registered on Udyam portal. In the first year, 10 lakh such cards will be issued.

Scheme for first time Entrepreneurs: For 5 lakh first-time entrepreneurs, including women, Scheduled Castes and Scheduled Tribes, a new scheme, to be launched, to provide term loans up to ₹ 2 crore during the next 5 years.



Manufacturing mission with the mandate to focus on

- Ease and cost of doing business;
- Future ready workforce for in-demand jobs;
- A vibrant and dynamic MSME sector;
- Availability of technology;
- Quality products;
- Clean tech manufacturing for climate-friendly development.

Measures for Labour Intensive Sectors

- **Focus Product Scheme for Footwear & Leather Sectors:** scheme is expected to facilitate employment for 22 lakh persons, generate turnover of ₹ 4 lakh crore and exports of over ₹ 1.1 lakh crore.
- **Measures for the Toy Sector:** To focus on development of clusters, skills, and a manufacturing ecosystem that will create high-quality, unique, innovative, and sustainable toys to represent the 'Made in India' brand.
- **Support for Food Processing:** Establishment of a National Institute of Food Technology in Bihar, enhanced income for the farmers and skilling, entrepreneurship and employment opportunities for the youth.

Significant enhancement of credit availability with guarantee cover

₹ in Crore	Credit guarantee cover	
	Current	Revised
MSEs	5	10
Startups	10	20
Exporter MSMEs	For Term Loans Up To ₹ 20 Crore	

Revision in classification criteria for MSMEs



₹ in Crore	Investment		Turnover	
	Current	Revised	Current	Revised
Micro Enterprises	1	2.5	5	10
Small Enterprises	10	25	50	100
Medium Enterprises	50	125	250	500

Source- India Budget

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3. Investment as the 3rd Engine of development

1. Investing in People

Saksham Anganwadi and Poshan 2.0- Nutritional support cost norms to be suitably enhanced.

Atal Tinkering Labs- 50,000 Atal Tinkering Labs to be established in government schools **over the next five years**.

Broadband Connectivity for Schools & Health Centers- Under the **BharatNet project**, all government secondary schools and primary health centers in rural areas will receive broadband connectivity.

Bharatiya Bhasha Pustak Scheme- A new scheme introduced to provide Indian language books in digital format for school and higher education.

National Centres of Excellence for Skilling- Five National Centres of Excellence for skilling to be set up in collaboration with global experts to equip youth for “Make for India, Make for the World” manufacturing.

Expansion of IIT Infrastructure- Additional infrastructure will be developed in the five IITs established after 2014, enabling education for 6,500 more students.

Centre of Excellence in AI for Education- A dedicated Centre of Excellence for Artificial Intelligence in education to be established with a total budget of Rs. 500 crore.

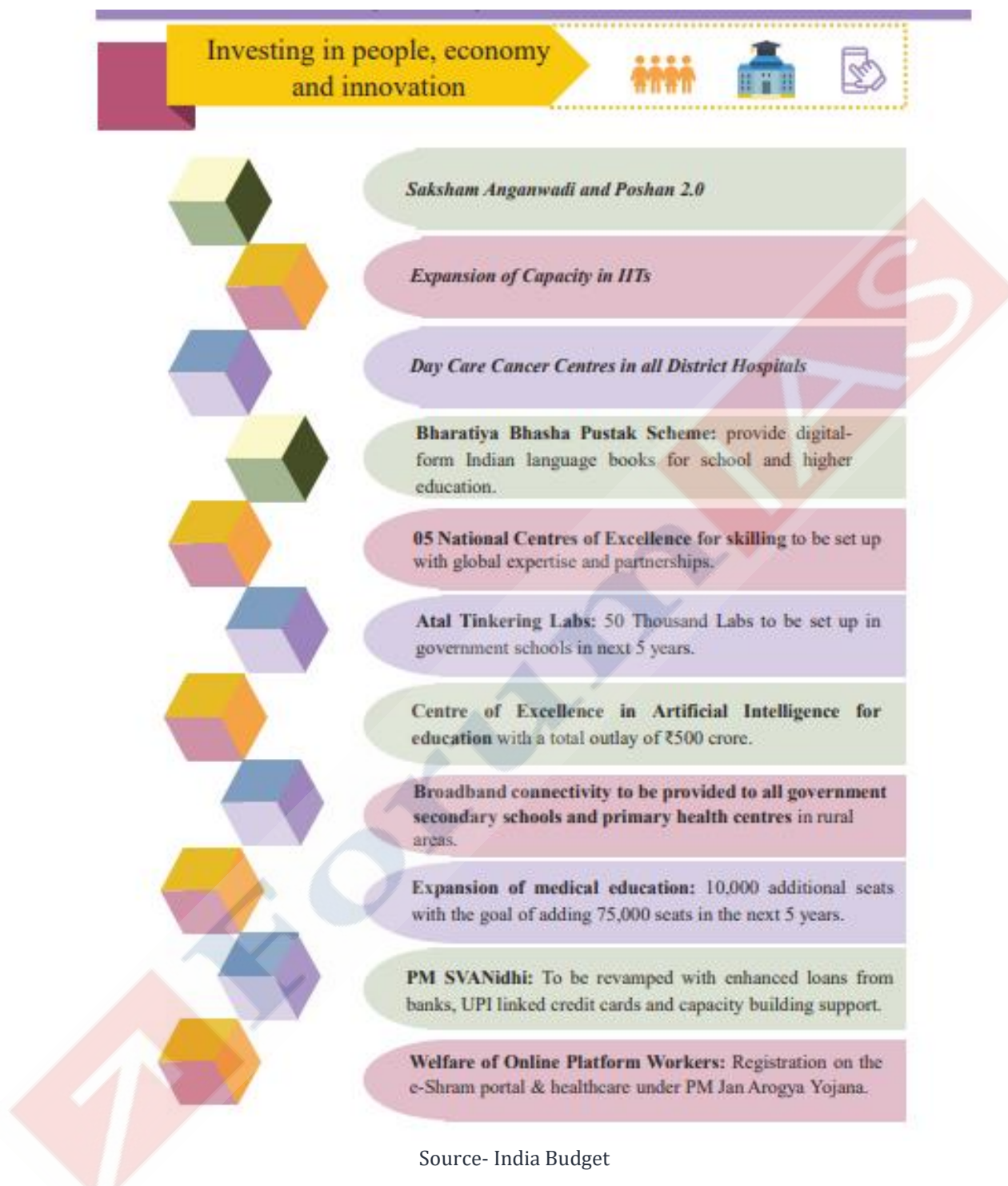
Expansion of Medical Education- An **additional 10,000 medical seats** will be created in medical colleges and hospitals next year, reaching a total of 75,000 seats over five years.

Day Care Cancer Centres- Day Care Cancer Centres to be set up in **all district hospitals within three years**, with 200 centers operational by 2025-26.

Strengthening Urban Livelihoods- A new scheme introduced to support the socio-economic upliftment of urban workers, improving their incomes and ensuring sustainable livelihoods.

PM SVANidhi- The scheme will be revamped with enhanced loan facilities, UPI-linked credit cards with a **Rs. 30,000 limit**, and capacity-building support.

Social Security for Gig Workers- Online platform workers to receive identity cards, registration on the **e-Shram portal**, and healthcare benefits under the PM Jan Arogya Yojana.



2. Investing in the Economy

Public-Private Partnership in Infrastructure- Infrastructure-related ministries to announce a **three-year pipeline of PPP projects**, encouraging state participation.

Support for State Infrastructure- A Rs. 1.5 lakh crore allocation proposed for **50-year interest-free loans to states** for capital expenditure and reform incentives.

Asset Monetization Plan (2025-30)- A second Asset Monetization Plan, worth Rs. 10 lakh crore, announced to reinvest capital into new projects.

Jal Jeevan Mission- The mission **extended until 2028** with an increased financial outlay.

Urban Challenge Fund- A **Rs.1 lakh crore Urban Challenge Fund** introduced to support initiatives for “Cities as Growth Hubs,” creative redevelopment, and water and sanitation projects. An allocation of Rs.10,000 crore is planned for 2025-26.

Nuclear Energy Mission for Viksit Bharat- Amendments to the Atomic Energy Act and the Civil Liability for Nuclear Damage Act to be proposed. A Nuclear Energy Mission for **Small Modular Reactor (SMR)** research and development will be established with a Rs. 20,000 crore budget, aiming to have five indigenously developed SMRs operational by 2033.

Shipbuilding Industry Boost- The Shipbuilding Financial Assistance Policy to be revised, with large ships above a specified size included in the Infrastructure Harmonized Master List (HML).

Maritime Development Fund- A Rs. 25,000 crore Maritime Development Fund to be set up, with up to 49% government contribution, supplemented by ports and private sector investments.

UDAN – Enhancing Regional Connectivity- A revamped UDAN scheme will **expand regional connectivity** to 120 new destinations, targeting 4 crore passengers over the next decade. Support will be provided for helipads and smaller airports in hilly, aspirational, and Northeastern districts.

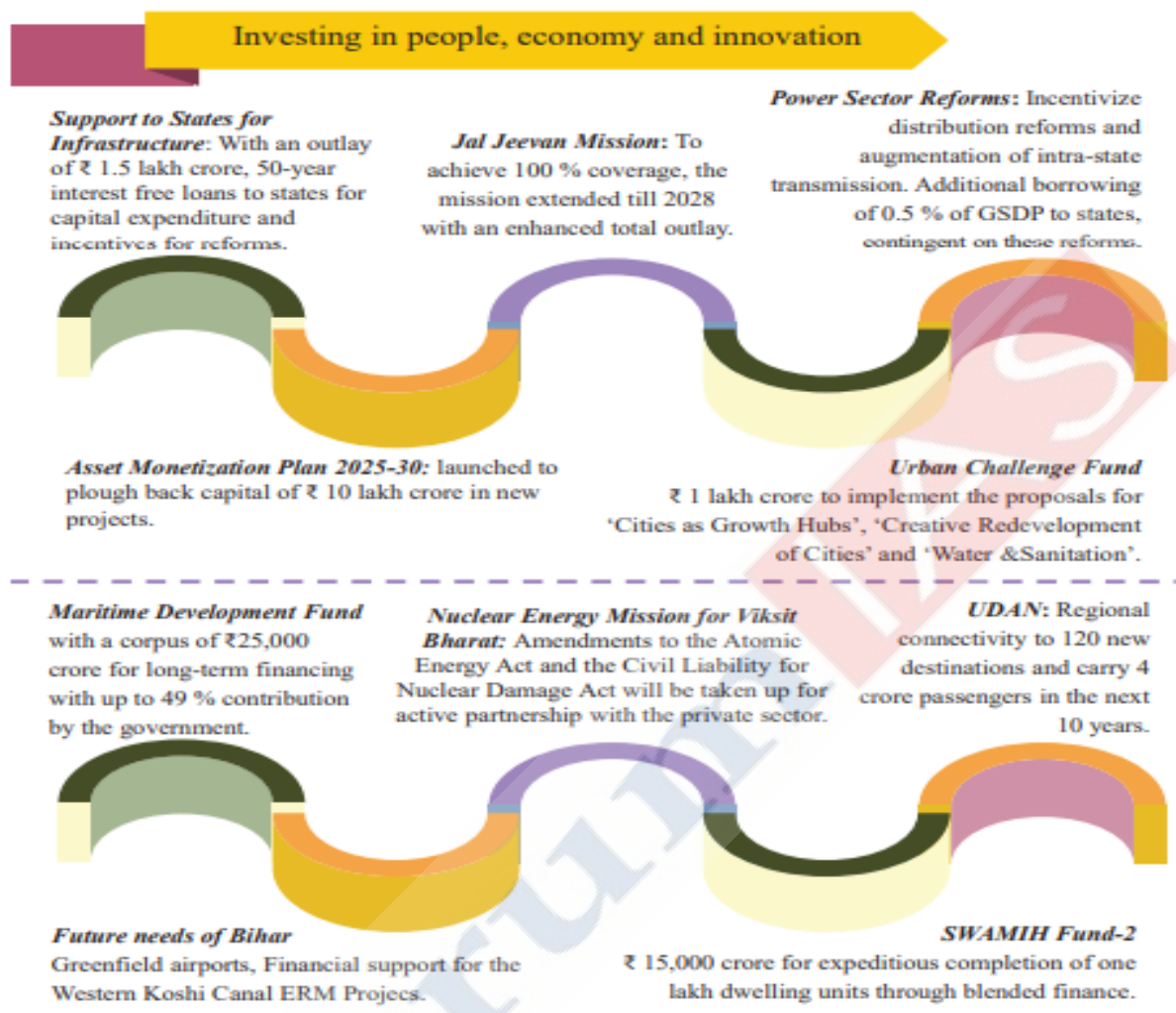
Greenfield Airport in Bihar- A new Greenfield airport in Bihar, alongside the expansion of Patna Airport and the development of a **brownfield airport at Bihta**.

Western Koshi Canal Project- Financial support allocated for the Western Koshi Canal ERM Project in Bihar.

Mining Sector Reforms- A policy for the extraction of critical minerals from tailings to be introduced.

SWAMIH Fund 2- A Rs. 15,000 crore fund announced for the swift completion of an additional 1 lakh housing units, with contributions from the government, banks, and private investors.

Tourism for Employment-Led Growth- The **top 50 tourist destinations** to be developed in partnership with states through a competitive challenge model.



Source- India Budget

4. Exports as the 4th engine of development

Export Promotion Mission- An Export Promotion Mission will be established with sector-specific and ministerial targets, **jointly led by the Ministries of Commerce, MSME, and Finance.**

BharatTradeNet (BTN)- A unified platform, '**BharatTradeNet**' (BTN), will be developed to streamline international trade, offering seamless trade documentation and financing solutions.

National Framework for Global Capability Centres (GCCs)- A national framework will be introduced to guide states in fostering Global Capability Centres, particularly in emerging tier-2 cities.

Reforms as fuel: financial sector reforms and development

FDI in Insurance Sector- The FDI limit in the insurance sector will be **increased from 74% to 100%** for companies that **reinvest the entire premium within India.**

Grameen Credit Score- Public Sector Banks will develop a 'Grameen Credit Score' framework to address the credit needs of Self-Help Group (SHG) members and rural populations.

Pension Sector Reforms- A dedicated forum will be set up for regulatory coordination and the development of innovative pension products.

Investment Friendliness Index of States- An Investment Friendliness Index will be introduced in 2025 to promote competitive cooperative federalism.

Jan Vishwas Bill 2.0- The Jan Vishwas Bill 2.0 will decriminalize over 100 provisions across various laws to enhance ease of doing business.

What are the Tax related Proposals in the Budget 2025-26?

The tax related proposals are explained through the following infographs-

1. Direct Tax

No Personal Income Tax for Income up to Rs 12 Lakh: Taxpayers with income up to Rs 12 lakh (or Rs 12.75 lakh for salaried taxpayers due to a standard deduction of Rs 75,000) will not be required to pay personal income tax.

Revised Tax Rate Structure:

- **Income up to Rs 4 lakh:** Nil (no tax)
- **Income between Rs 4 lakh to Rs 8 lakh:** 5%
- **Income between Rs 8 lakh to Rs 12 lakh:** 10%
- **Income between Rs 12 lakh to Rs 16 lakh:** 15%
- **Income between Rs 16 lakh to Rs 20 lakh:** 20%
- **Income between Rs 20 lakh to Rs 24 lakh:** 25%
- **Income above Rs 24 lakh:** 30%

TDS/TCS rationalization for easing difficulties

- The limit for tax deduction on interest for senior citizens doubled from the present Rs 50,000 to Rs 1 lakh.
- The annual limit of Rs 2.40 lakh for TDS on rent increased to Rs 6 lakh.

Reducing Compliance Burden- Reduction of compliance burden for small charitable trusts/institutions by increasing their period of registration from 5 years to 10 years.

2. Indirect Tax

Indirect Tax proposals

Rationalisation of Customs Tariff Structure for Industrial Goods



Removal of 07 tariff rates.



Apply not more than one cess or surcharge.



Apply equivalent cess to maintain effective duty incidence on most items and lower cess on certain items.

Sector specific proposals

Make in India- Exemption to open cell for LED/LCD TV, looms for textiles, capital goods for lithium ion battery of mobile phones and EVs.

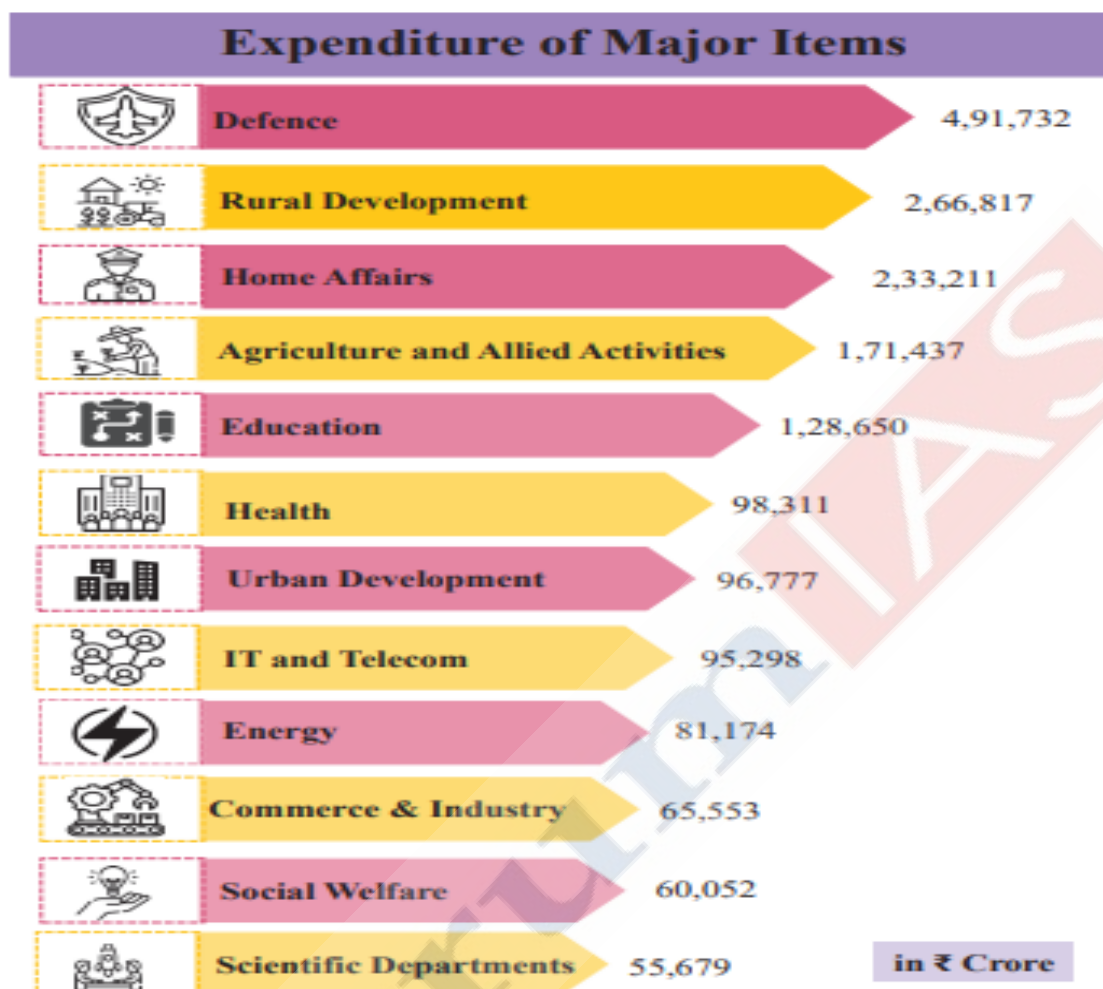
Promotion of MRO – exemption for 10 years on goods for ship building and ships for breaking, extension of time limit for export of railway goods imported for repairs.

Export promotion – duty free inputs for handicraft and leather sectors.

Trade Facilitation: Time limit fixed for finalisation of provisional assessment; new provision for voluntary declaration of material facts post clearance and duty payment with interest but without penalty; IGCR Rules amended to extend time limit to 1 year and file quarterly statement instead of monthly.

Source- India Budget

What are the Major Allocations in the Budget?



Source- India Budget

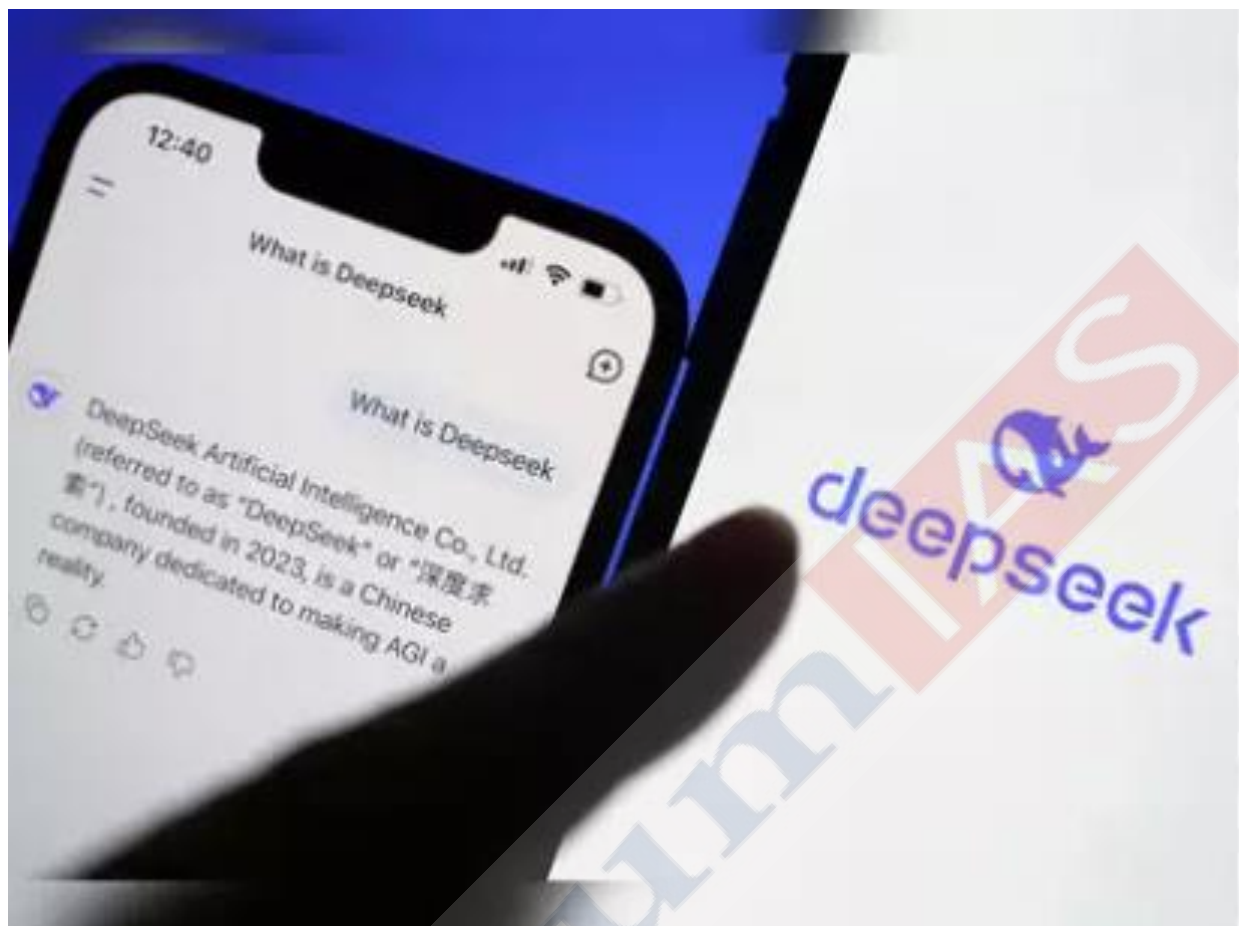
Read more- [India Budget](#)

UPSC Syllabus- GS 3- Government Budgeting

DeepSeek's AI Disruption and Lessons for India- Explained Pointwise

The rapid advancements in **Artificial Intelligence (AI)** have reshaped the technological landscape globally, with significant geopolitical and economic implications. The recent emergence of **DeepSeek, a Chinese AI startup**, has generated widespread discussion due to its breakthrough models, **DeepSeek-R1** and **DeepSeek-V3**. These models have demonstrated capabilities nearly matching top-tier AI systems from the U.S. but at a fraction of the cost.

This article explores DeepSeek's rise, its global impact, the geopolitical ramifications of generative AI, India's position in the AI race, strategic recommendations, and the economic and strategic imperatives for India in this rapidly evolving AI-driven world.



Source- The Economic Times

What is DeepSeek?

DeepSeek is a Chinese AI company headquartered in Hangzhou, **founded by entrepreneur Liang Wenfeng**, who is also the CEO of quantitative hedge fund High Flyer. DeepSeek's AI initiatives stem from Wenfeng's earlier research in AI under High Flyer AI.

One of the standout features of DeepSeek's models is their **open-sourced nature**, which allows developers worldwide to build on them. DeepSeek-V3, notably, was trained on a budget of merely \$5 million—a stark contrast to the hundreds of millions spent by AI giants such as OpenAI, Meta, and Google.

What makes DeepSeek AI models different from other global large language models?

Large language models (LLMs) are artificial intelligence (AI) systems that can understand and generate human language. They are trained on large amounts of data using machine learning techniques. **for ex–** Open AI chatGPT

1. Cost Efficiency:

a. Lower Training Costs: DeepSeek-R1 was trained for just **\$6 million**, a fraction of GPT-4's estimated **\$100 million cost**.

b. Affordable Subscription: At **\$0.50 per month**, DeepSeek's pricing is far more accessible compared to ChatGPT Plus at **\$20/month**.

c. Lower Usage Costs: Reportedly **20 to 50 times cheaper** than OpenAI's models.

2. Hardware Optimization:

- a. Uses **NVIDIA's H800 GPUs**, bypassing U.S. chip export restrictions while maintaining efficiency.
- b. Optimized to run on older hardware without compromising performance.

3. Performance Enhancements:

- a. **Reinforcement Learning**: Enhances reasoning abilities autonomously without requiring extensive labeled datasets.
- b. **Test-Time Compute**: DeepSeek-R1 can improve its problem-solving skills dynamically, excelling in math and coding tasks.
- c. **Scalability**: Transfers reasoning capabilities into smaller, more resource-efficient models.

4. Advanced AI Architecture:

- a. **Mixture-of-Experts (MoE) in DeepSeek-V3**: Uses multiple specialized models to enhance efficiency and performance.
- b. **Multi-Head Latent Attention (MLA)**: Reduces training costs while improving model efficiency.

What is the global impact of DeepSeek?

- 1. **Market Disruption**: DeepSeek's emergence led to a historic **\$600 billion drop in Nvidia's market value** and a **3% decline in Nasdaq**.
- 2. **Geopolitical Tensions**: The U.S. may impose stricter AI export controls to counter China's growing AI capabilities.
- 3. **Technology Democratization**: The open-source nature of DeepSeek challenges the proprietary AI development models of Western tech giants.
- 4. **National Security Concerns**: The **strict censorship embedded in DeepSeek** raises concerns regarding bias, misinformation, and control over digital discourse.

What are the geopolitical implications of Generative AI?

- 1. **US-China AI Rivalry**: DeepSeek's success underscores China's strategic push for AI self-reliance, reducing dependence on Western technologies.
- 2. **Technological Colonialism**: The AI landscape is increasingly monopolized by a few nations, potentially leading to digital dependency among smaller countries.
- 3. **Regulatory Challenges**: Governments worldwide must balance open-source AI development with concerns over misinformation, security, and ethical AI use.
- 4. **AI Arms Race & Strategic Alliances**– Nations are integrating AI into autonomous weapons, intelligence analysis, and cyber defense. The EU, US, India, and Japan are enhancing collaborations on AI safety to address global security concerns, including China's rapid advancements in AI-driven military technology.

Read more– [Generative AI](#)

What is the India's current position in the AI Race?**Strengths:**

- a. **Vast Talent Pool**: India produces a large number of AI engineers and researchers, with many contributing to global AI advancements.
- b. **Diverse Linguistic Ecosystem**: India's multilingual environment drives innovation in natural language processing (NLP) and AI applications tailored to regional languages.

c. Government Initiatives: Programs like the **IndiaAI Mission**, **Digital India**, and National AI Strategy aim to accelerate AI adoption and research.

d. Booming Startup Ecosystem: AI-driven startups are thriving in sectors like healthcare, finance, and agriculture.

Weaknesses:

a. Lack of Indigenous Foundational Models: Unlike the **US (GPT-4)** and **China (DeepSeek)**, India has no homegrown large-scale AI models.

b. Dependence on Foreign AI Technology: India relies heavily on US-based AI models, cloud services, and semiconductor imports.

c. Limited AI Hardware Infrastructure: India lacks high-end GPUs and cloud computing infrastructure, slowing AI training and deployment.

What are the Strategic Recommendations for India? What are the Economic and Strategic Imperatives for India?

1. Boost AI Research and Funding:

a. Increase funding for AI research through public-private partnerships.

b. Establish mission-mode projects to develop indigenous AI models.

2. Develop AI Infrastructure:

a. Build high-performance computing facilities for AI training.

b. Expand access to GPUs and cloud-based AI platforms under the IndiaAI Mission.

3. Foster Innovation and Entrepreneurship:

a. Promote AI hackathons and startup incubators.

b. Support collaborations between academia and industry.

4. Leverage Open-Source AI Models:

a. Encourage the use of cost-effective AI frameworks inspired by DeepSeek.

b. Develop AI applications tailored for Indian languages and socio-economic needs.

5. Strengthen Global Partnerships:

a. Collaborate with global AI leaders through initiatives such as **India-US iCET**.

b. Participate in international AI consortia to foster research and technology exchange.

Economic and Strategic Imperatives for India

1. Economic Imperative: Generative AI could add trillions to the global economy; India cannot afford to remain a passive consumer.

2. Strategic Imperative: Developing indigenous AI models is crucial for national pride, economic growth, and addressing unique societal needs.

Way Forward: "AI IS DEEP"

1. A: Accelerate funding for AI research and indigenous model development.

2. I: Invest in AI talent and skill development.

3. I: Improve infrastructure by enhancing cloud and GPU resources.

4. S: Strengthen open-source AI initiatives.

5. D: Diversify AI use cases in critical sectors like healthcare, education, and agriculture.

- 6. E: Encourage AI-driven startups through government support.
- 7. E: Enhance global AI collaborations for mutual technological advancement.
- 8. P: Prioritize ethical AI frameworks to ensure fairness and accountability.

Conclusion

The emergence of DeepSeek highlights the shifting dynamics in AI innovation and global power structures. India, with its strong technological base, must proactively invest in AI research, infrastructure, and policy frameworks to emerge as a global AI leader. By fostering open-source AI development, strengthening industry-academia collaboration, and securing strategic international partnerships, India can ensure its competitive edge in the global AI revolution.

Read more– [The Indian Express](#)

UPSC Syllabus- GS 3– Awareness in the fields of IT, Space, Computers

Shipping Industry in India- Explained Pointwise

The Indian shipping industry is a cornerstone of the nation's economy. With a coastline spanning 7,517 km, India stands as the **16th largest maritime nation globally**. However, despite substantial economic growth and investments in port infrastructure, the shipping and shipbuilding industry has struggled to achieve its full potential. The **Union Budget 2025-26** aims to address these challenges with significant financial and policy interventions, setting the stage for India's emergence as a global maritime power.



Source- Economic Times

What is the current status of India's Shipping Industry?

Trade handled by Maritime Sector	95% by volume and 70% by value of India's trade is managed.
Market share of exported ships	India is a leading exporter of shipping vessels with a 33% market share (Economic Survey 2024).
Share in Global shipbuilding and Ship ownership	India has a tiny presence in the global shipbuilding market, with just 0.07% share, and owns only about 1.2% of the world's ships.
Ship Recycling	3rd largest ship recycling by tonnage with 30% global market share in shipbreaking with the world's largest ship-breaking facility located in Alang
Port Infrastructure	13 major ports and 200+ notified minor & intermediate ports.

What are the key announcements for the Shipping Industry in the Budget 2025-26?

- 1. Maritime Development Fund:** A Rs. 25,000 crore fund has been established to provide long-term financing and enhance global competitiveness. However, only 49% of this fund will come from the government, with the rest dependent on major ports, raising concerns about its sustainability.
- 2. Financial Assistance Policy:** This includes credit incentives for shipbreaking and an extension of the tonnage tax scheme to inland vessels.
- 3. Basic Customs Duty Exemptions:** A 10-year extension on duty exemptions for raw materials, components, and consumables will reduce shipbuilding costs.
- 4. Infrastructure Status for Large Ships:** This move will lower financing costs by up to 10 percentage points.
- 5. Special Economic Zones (SEZs) & International Financial Centres (IFSCs):** Incentives for ship leasing, insurance, and treasury centers at GIFT City, Gujarat, will attract global players.

What are the other government initiatives for Maritime growth?

- 1. Maritime India Vision (MIV) 2030**– MIV 2030 outlines 150 initiatives for port-led development, shipping modernization, and inland water transport expansion, positioning India as a global maritime leader.
- 2. Sagarmala Program (2015)**– The program aims to harness India's coastline and waterways to improve logistics efficiency. It has achieved high project completion rates in:
 - Port modernization and industrialization
 - Port connectivity enhancement
 - Coastal shipping and inland water transport development
 - Community development in coastal regions
- 3. Green Tug Transition Program (GTTP)**- This initiative aims to replace conventional fuel-powered harbor tugs with environmentally friendly tugs by 2040.

Why is Investment in Maritime Infrastructure Crucial for India?

Economic Resilience Security & Trade	<p>a. Red Sea Crisis Impact: Houthi attacks have disrupted global shipping routes, increasing costs and delays.</p> <p>b. Dependence on Foreign Ships: India relies on foreign vessels for 95% of its international cargo, leading to high freight costs.</p> <p>c. Geopolitical Risks: Supply chain disruptions from global</p>
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	conflicts highlight India's limited domestic shipping capacity. d. Forex Savings: Strengthening domestic maritime infrastructure can reduce forex outflows and enhance trade security.
Strategic Positioning in Indo-Pacific	a. IMEC Initiative: The India-Middle East-Europe Economic Corridor (IMEC) aims to counter China's Maritime Silk Road . b. SAGAR Vision: Strengthening maritime infrastructure enhances India's leadership in regional maritime security.
Employment Generation & Skill Development	a. Seafarer Contribution: India ranks third globally in seafarer supply, contributing 10% of the global maritime workforce . Growth in shipbuilding and port operations can generate thousands of skilled and semi-skilled jobs. b. Sagarmala Programme: This initiative has already generated significant employment, with millions more jobs projected through port-led development projects.
Promotes Environmental Sustainability	a. COP28 Commitments: Maritime infrastructure modernization aligns with India's climate goals and green shipping initiatives. For ex- Harit Sagar Initiative. b. IMO's Net-Zero Target: The International Maritime Organization's 2050 net-zero emissions strategy makes green shipping infrastructure crucial.

What are the challenges in India's Maritime and Shipbuilding Sector?

- 1. Financing & Infrastructure Constraints:** Ships are not classified as infrastructure, limiting financing options, despite shipyards having infrastructure status since 2016. Also, the **SARFAESI Act 2002** prevents banks from offering long-term loans, as ships cannot be mortgaged.
- 2. Lack of Port Infrastructure & Lower Operational Efficiency:** Indian ports handled **1.4 billion tonnes of cargo (2022-23)** but lag in efficiency. Depth limitations at major ports restrict ultra-large container vessels, increasing dependency on transshipment hubs in other countries.
- 3. Skilled Workforce Deficit & Technology Gaps:** India supplies 10-12% of global seafarers but **faces a shortage of specialized shipbuilding skills**.
- 4. Regulatory & Policy Outrage:** Port expansion and maritime infrastructure projects face 2-3-year approval delays due to land acquisition and Coastal Regulation Zone compliance.
- 5. Lower Performance in Global Competition & Market Positioning:** **China dominates 46.6% of global shipbuilding**, creating high entry barriers for India. Indian shipyards operate at 60-70% capacity, limiting economies of scale and global competitiveness.
- 6. Slow Coastal Shipping Development:** Despite 7,500 km of coastline, coastal shipping **accounts for only 6% of domestic freight movement**. Lack of dedicated freight corridors raises logistics costs by 15-20%.

What should be the future roadmap & policy recommendations?

1. Strengthening Domestic Shipbuilding:

- a.** Create a National Shipbuilding Mission with direct financial support.
- b.** Introduce a Production-Linked Incentive (PLI) scheme for shipbuilding.
- c.** Improve access to long-term financing at concessional rates. **For example**, South Korea's Korea Ocean

Business Corporation (KOBIC) provides low-cost financing to domestic shipbuilders, helping them dominate global markets.

2. Enhancing Indian Shipping Competitiveness:

- a. Provide tax incentives to Indian shipowners to increase fleet size.
- b. Reintroduce the Cargo Reservation Policy to increase the share of Indian-flagged vessels in EXIM trade.
- c. Reduce taxes on ship leasing and ship financing.

3. Boosting Coastal Shipping & Inland Waterways:

- a. Improve last-mile connectivity between ports and industrial hubs.
- b. Expand multimodal logistics hubs under PM Gati Shakti.
- c. Incentivize ferry and roll-on/roll-off (RoRo) services.

4. Enhancing Port Infrastructure & Operational Efficiency:

- a. Develop ultra-large container vessel (ULCV)-friendly ports to reduce transshipment dependency on hubs like Singapore and Colombo.
- b. Invest in automation, blockchain, IoT, and AI for faster port operations. **For example**, Jebel Ali Port (UAE) operates with AI-driven efficiency, reducing ship turnaround times to just 4-6 hours.

5. Green Shipping & Sustainability Initiatives: Invest in hydrogen-powered ships, LNG bunkering facilities, and solar-powered port operations. **For example**, Norway's electric ferry fleet has drastically reduced maritime emissions.

6. Public-Private Partnerships (PPP): Encourage foreign investment in shipbuilding and port development. **For example**, Singapore's PSA Port Expansion through PPPs has made it a global transshipment hub.

Conclusion

The Union Budget 2025-26 has set the foundation for India's maritime resurgence. Long-term reforms focusing on tax rationalization, financial support, and regulatory simplifications will be **crucial in achieving India's \$2 trillion export target by 2030**. A strong maritime industry will not only enhance economic security but also position India as a global maritime leader in the coming decades.

Read more– [The Hindu](#)
UPSC Syllabus- GS 3– Infrastructure

Social and Political Impacts of AI- Explained Pointwise

Artificial Intelligence (AI) has emerged as a transformative force, reshaping industries, governance, and daily life. However, its rapid advancement has raised critical questions about regulation, ethical use, and geopolitical implications. Striking a balance between fostering innovation and ensuring responsible **AI governance has become a global priority**. In this context, world leaders are set to convene at the **AI Action Summit in Paris** on February 10, 2025, to deliberate on the future of AI oversight.

The summit aims to establish a framework that aligns AI development with public interest. This article explores the social and political impacts of AI, highlighting key challenges and opportunities in shaping global AI governance.



What is artificial Intelligence?

Artificial Intelligence- Artificial intelligence is **intelligence demonstrated by machines**. AI is a **discipline** which **focuses on formulating theories** and **methodologies** for constructing machines that emulate human thought processes and behaviours.

Generative AI is a subset of Artificial intelligence which is being increasingly used with wide ranging social and political impacts.

Generative AI- Generative AI is a type of **artificial intelligence technology** that can produce various types of **content, including text, imagery and audio**. The term 'Generative' refers to the ability of the models to create new data based on certain input parameters. **For ex-** A generative model is used to generate facial images by providing a set of parameters such as the eyes, hair, or skin colour etc.

What are the positive and negative political impacts of artificial Intelligence?

Positive impacts

1. Innovative Policy Development- AI is being increasingly used in innovative policy development. **For ex-** **AI-drafted bills in the US Congress** is an example of AI's use in legislative drafting.

2. Enhanced Political Messaging- AI is being used to **craft resonant political messages** through advanced analytics, which is revolutionizing campaign strategies.

3. New Political Platforms- AI is being used as a platform for political engagement and political ideological development. **For ex-** **Denmark's Synthetic Party using AI Chatbox** to shape its political ideology.

4. Economic Contributions- AI-driven fundraising and business ventures marks a significant shift in political finance dynamics.

5. Campaign Strategies- Generative AI is being used extensively in electoral campaigns, such as live translation of election speeches into multiple languages.

Negative Impacts

1. Promotion of 'Liar's Dividend' through Deepfakes- Liar's Dividend refers to the situation when an undesirable truth is dismissed as deepfake or fake news. Political leaders have been weaponising deepfakes generated through AI, to replace an actual piece of media and truth. **For Ex- Donald Trump's deepfake videos blur the line between reality and fake.** People start dismissing reality as fake.

2. Erosion of trust in democratic processes like elections- Doctored content, most likely in the form of a realistic fake video, is presented as fact to alter public perception and create democratic deficit. **For Ex- Capitol Hill violence, 2021 was incited by using deep fake media.**

3. Manipulation Risks- There are concerns about AI swaying elections and public opinion through the spread of false political narratives.

4. Ethical and Legal Challenges- The acceptance of AI-generated political contributions or parties raises complex ethical and legal questions about AI's role in democratic processes.

What are the positive and negative Social impacts of AI?

Positive Impacts

1. Improving Healthcare System- AI has the potential to revolutionize the healthcare sector by improving the accuracy of diagnosis. **For ex- Conversion of X-ray or any CT scan images to real images** can improve the accuracy of diagnosis.

2. Boost to Agriculture- AI enables precision agriculture, improving crop productivity by providing accurate agronomic and weather data. This is crucial for meeting the needs of a growing population.

3. Creating empathy for people of War torn regions- Projects like the Deep empathy project of MIT and UNICEF has been increasing empathy for victims of a disaster region by creating AI-images of war-torn regions like Syria, Yemen.

4. Voice restoration- The technology is being used to restore the voices of patients suffering from amyotrophic lateral sclerosis. **For ex- Launch of various 'Voice cloning initiatives'.**

5. Use in the field of creative art and Entertainment- The deepfake technology can be used to improve the dubbing of foreign language, films and resurrect dead actors. **For ex- Samsung artificial intelligence lab in Moscow bringing Monalisa to life by using deep fake technology.**

Negative Impacts

1. Crime against women- The deepfakes generated through AI are being used as a weapon to attack women dignity and chastity. According to AI company Deepttrace report, over 90% of the deepfake videos are pornographic in nature.

2. Fuelling Radicalisation and violence- The non-state actors like ISIS and Al-Qaeda, use fake videos to stir anti-state sentiments among people. **For Ex- Fake videos showing armed forces committing 'crimes in conflict areas'.**

3. Threat of Job Losses- There are fears of job losses due to the use of AI technology, which can prove to be more **cost-efficient and productive** to firms as compared to human capital. **For ex- Customer service jobs are under threat from the AI chatboxes** (Zomato's Zia).

4. Data Privacy Concerns- AI's **ability to analyze vast amounts of data** raises **significant concerns** over **data protection, cybersecurity, and privacy**.

5. Environmental Concerns- AI systems require a lot of computing power, which have grave implications for the environment. **For ex- According to analysts, training a transformer model just once with 213 million parameters can emit carbon emissions equivalent to 125 flights between New York and Beijing.**

What is the status of regulation of AI in India and across the globe?

India

a. Digital India Framework- India is developing a comprehensive Digital India Framework that will include provisions for regulating AI. The framework aims to protect digital citizens and ensure the safe and trusted use of AI.

b. National AI programme- India has established a National AI Programme to promote the efficient and responsible use of AI.

c. National Data Governance Framework Policy- India has implemented a National Data Governance Framework Policy to govern the collection, storage, and usage of data, including data used in AI systems. This policy will help ensure the ethical and responsible handling of data in the AI ecosystem.

d. Draft Digital India Act- The Ministry of Information Technology and Electronics (MeitY) is working on framing the draft Digital India Act, which will replace the existing IT Act. The new act will have a specific chapter dedicated to emerging technologies, particularly AI, and how to regulate them to protect users from harm.

Rest of the World

a. European Union- The European Union is working on the draft Artificial Intelligence Act (AI Act) to regulate AI from the top down.

b. United States- The White House Office of Science and Technology Policy has published a non-binding Blueprint for the Development, Use, and Deployment of Automated Systems (Blueprint for an AI Bill of Rights), listing principles to minimize potential harm from AI.

c. Japan- Japan's approach to regulating AI is guided by the Society 5.0 project, aiming to address social problems with innovation.

d. China- China has established the "Next Generation Artificial Intelligence Development Plan" and published ethical guidelines for AI. It has also introduced specific laws related to AI applications, such as the management of algorithmic recommendations.

What Should be the Way Forward?

1. De-biasing while training the AI- We must ensure fairness of the information which is being fed into the system, to **ensure that AI doesn't perpetuate or amplify social biases**, like **gender and racial biases**.

2. Transparency of information- Users should have transparent information about the **limitation and risks of AI**.

3. Privacy protection- The user data and confidentiality must be protected to ensure user privacy. **For ex- Strict implementation of data protection laws.**

4. Ethical use of AI- We must ensure that AI is used only for beneficial purposes. The push must be made towards **universal adoption of the Bletchley Declaration** by all the countries.

AI has the potential to give society intelligent guidance on how to approach some of the biggest problems, like climate change and pandemics. In the coming times, AI will contribute to longer, healthier, and more fulfilling lives worldwide if used responsibly.

Read More- [The Indian Express](#)

UPSC Syllabus- GS 3- Development in the field of IT

India-Indonesia Relations- Explained Pointwise

Indonesian President **Prabowo Subianto's visit to India as the chief guest for the 76th Republic Day** was a significant milestone in **India-Indonesia relations**. The two nations share deep historical, cultural, and trade ties. Notably, Indonesia's first President, Sukarno, was the chief guest at India's first Republic Day in 1950, underscoring their long-standing friendship.

The Indonesian President's recent visit also led to the signing of several Memorandums of Understanding (**MoUs**) in **health, digital infrastructure, and defence cooperation**, further strengthening ties between the two Indo-Pacific democracies.



Source- ORF

How have India-Indonesia Relations evolved over time?

<p>Early Post-Independence Period (1940s-1950s)</p>	<p>India played a crucial role in supporting Indonesia's struggle for independence from Dutch colonial rule. Under Prime Minister Jawaharlal Nehru, India emerged as a strong advocate for Indonesia's freedom on the global stage. Key developments during this period included:</p> <p>a. Treaty of Friendship (1951): Strengthening cooperation in trade, culture, and military affairs.</p> <p>b. Non-Alignment and Anti-Colonialism: Both nations were aligned on principles of non-alignment, peaceful coexistence, and anti-colonialism, leading to their active participation in the 1955 Bandung Conference and the formation of the Non-Aligned Movement (NAM) in 1961.</p>
<p>Deterioration in Ties (1960s)</p>	<p>Despite early cooperation, India-Indonesia relations faced setbacks in the 1960s due to geopolitical shifts:</p> <p>a. Sino-Indian Conflict (1962): India's ties with China worsened post the 1959 Tibetan uprising and the 1962 war, while Indonesia maintained cordial relations with China.</p> <p>b. India-Pakistan Conflict (1965): Indonesia openly sided with Pakistan during the 1965 India-Pakistan war, even providing military assistance to Pakistan, causing a strain in Indo-Indonesian ties.</p>
<p>Cold War Era (1966-1980s)</p>	<p>A shift in Indonesia's political landscape led to the gradual revival of ties:</p> <p>a. President Suharto's Era: Indonesia distanced itself from China and sought to rebuild relations with India.</p> <p>b. Maritime Boundary Agreement (1977): Strengthened cooperation in maritime affairs and regional security.</p> <p>c. Suharto's Visit to India (1980): Marked a new phase of improved diplomatic relations between the two nations.</p>
<p>Look East Policy (1990s)</p>	<p>India's economic liberalization in the 1990s and the launch of the 'Look East' policy in 1991 significantly boosted Indo-Indonesian ties:</p> <p>a. Expansion of Economic Ties: Trade and investment between the two countries witnessed substantial growth.</p> <p>b. Comprehensive Partnership: Economic, security, and cultural cooperation became key aspects of bilateral relations.</p>
<p>Act East Policy and Recent Developments (Since 2000s)</p>	<p>With the launch of India's 'Act East' policy in 2014, Indonesia emerged as a key regional partner. Notable advancements include:</p> <p>a. Trade Relations: Indonesia is India's 2nd largest trading partner in ASEAN (after Singapore), with trade growing from USD 4.3 billion in 2005-06 to US\$ 29.40 billion in 2023-24.</p> <p>b. Comprehensive Strategic Partnership (2018)– PM Modi's visit to Jakarta led to the signing of the Comprehensive Strategic Partnership and a shared vision on Indo-Pacific maritime cooperation.</p> <p>c. Maritime Cooperation: Both nations jointly advocate for the</p>

	<p>resolution of maritime disputes and the finalization of the South China Sea Code of Conduct as per UNCLOS (United Nations Convention on the Law of the Sea).</p> <p>d. Defense Cooperation: Indonesia is negotiating with India for the BrahMos missile system, with an estimated deal worth USD 450 million.</p>
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What are the key pillars of cooperation between India-Indonesia?

1. Economic & Trade Relations

- **Bilateral Trade:** It has reached \$29.4 billion in FY 2023-24, with the ambitious goal of **increasing it to \$50 billion by 2025**. Indonesia is **India's second-largest trading partner within ASEAN**.
- **Key Exports & Imports:** India's **key imports** include **coal, palm oil, and rubber**, while its key exports are refined petroleum, telecom equipment, and agricultural products.
- **Investment:** **Indian investment in Indonesia stands at \$1.56 billion**, with a focus on mining, textiles, and infrastructure, while **Indonesian investment in India totals \$653.8 million**, primarily in manufacturing and trade.
- **Trade Facilitation:** India and Indonesia have made efforts in trade facilitation, including the **ASEAN-India Trade in Goods Agreement (AITIGA) review** to reduce trade barriers, and the Local Currency Settlement MoU, which encourages trade in local currencies.

2. Strategic & Security Cooperation

- **Defence & Security**– Both countries pledged to enhance defense cooperation through initiatives such as **Coordinated Patrol, Ex Garuda Shakti (Army), and Ex Samudra Shakti (Naval)**. Additionally, both sides agreed to set up a **Bilateral Maritime Dialogue** and a **Cyber Security Dialogue**.
- **Defense Industry Collaboration:** India-Indonesia Defense Industry Exhibition (2024) showcased opportunities for cooperation in defense technology and manufacturing.

3. Energy & Health Security

- **Renewable Energy & Critical Minerals:** Both countries are focused on joint exploration of **nickel and bauxite** for clean energy and biofuel collaboration for sustainability.
- **Health Cooperation:** Both countries signed MoUs on Health Cooperation and Traditional Medicine Quality Assurance, focusing on digital health and capacity-building for healthcare professionals.

4. Technological Cooperation

- **Digital & Tech Advancements:**
 - India's digital initiatives, such as **Aadhaar, UPI, and CoWIN**, serve as models for Indonesia's digital growth
 - Collaborative efforts in quantum communication, cybersecurity, artificial intelligence, and space technology

5. Cultural & Educational Cooperation

- **Heritage & Arts:** India supports the restoration of the **Prambanan Temple, a UNESCO World Heritage Site in Indonesia**, and the Indian Cultural Centers in Jakarta and Bali promote Indian arts and yoga.
- **Education:** Scholarships for Indonesian students available through **ITEC (Indian Technical and Economic Cooperation)** and **ICCR (Indian Council for Cultural Relations)** programs

6. Multilateral Cooperation

- Both countries highlighted the significance of ASEAN centrality and collaboration on regional matters such as the ASEAN Outlook on the Indo-Pacific, the **India-Indonesia-Australia Trilateral**, the Indo-Pacific Oceans Initiative (IPOI), as well as BRICS and the Indian Ocean Rim Association (IORA).

What are the challenges in India- Indonesia relations?

1. Trade and Economic Barriers

- Lack of Comprehensive Economic Cooperation Agreement (CECA):** Unlike Malaysia and Singapore, **Indonesia does not have a CECA with India**, reducing its competitiveness, particularly in sectors like palm oil.
- Low utilization of AITIGA:** The ASEAN-India Trade in Goods Agreement (AITIGA) has a **utilization rate of only 25%**, limiting the benefits that could be gained from the agreement.
- Trade Imbalance:** India imports significant quantities of palm oil (\$11 billion in 2022) and coal from Indonesia, contributing to a trade imbalance that favors Indonesia.
- Unrealized trade potential:** Bilateral trade could increase by 33% to reach \$61 billion, indicating untapped opportunities for growth in trade.

2. Investment and Competition with China

- Dominance of Chinese investments:** Under President Joko Widodo, Chinese investments have overshadowed Indian investments. In 2024, **Indonesia signed \$10 billion worth of business deals with China**, further intensifying competition for investment.
- Protectionist policies in India:** Indian industries, especially textiles, have raised concerns about the influx of Indonesian products like **Viscose Staple Fibre (VSF)**, fearing increased competition.

3. Geopolitical and Strategic Constraints

- Growing Chinese influence:** Indonesia's participation in China's **Belt and Road Initiative (BRI)**, including large-scale infrastructure projects like railways, raises concerns for India, particularly regarding regional influence.
- Regulatory challenges in defence:** Differences in defense procurement processes have delayed joint defense projects, limiting the scope of strategic cooperation between the two nations.

4. Connectivity and People-to-People Barriers

- Limited air connectivity:** Direct flights between India and Indonesia are limited, restricting tourism, business expansion, and people-to-people exchanges.
- Visa barriers:** Restrictive visa policies hinder student exchanges, business travel, and cultural engagement, limiting deeper bilateral ties.

What should be the way forward?

1. Enhancing Trade: Accelerating the **Comprehensive Economic Partnership Agreement (CEPA)** and expanding economic cooperation in renewable energy and agriculture can address trade imbalances.

2. Strategic Partnerships: Encouraging Indonesia to join global initiatives like the **International Solar Alliance** and the **Global Biofuels Alliance** can foster mutual growth and innovation.

3. Multilateral Engagement: Strengthening cooperation through **ASEAN, IORA**, and the **Indian Ocean Naval Symposium** will align strategic interests and reinforce regional stability.

4. Economic Synergy: Joint defense projects, maritime security initiatives, and infrastructure development will build a robust Indo-Pacific framework to balance China's influence.

5. Deepened Collaborations: Expanding partnerships in IT, energy, and tourism, while fostering cultural ties, positions India as a reliable partner for Indonesia's growth trajectory.

Read more– [The Hindu](#)

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

India's R&D Funding and Private Sector Role- Explained Pointwise

India is at a crucial juncture in its research and innovation landscape. The government is actively shifting towards privatizing research funding to boost innovation and strategic autonomy. A significant step in this direction was announced in the **Union Budget 2025-26**, where Finance Minister Nirmala Sitharaman **allocated ₹20,000 crore** to the Department of Science and Technology (DST) to establish a **private sector-driven research and development (R&D) fund**. This move aims to enhance India's research ecosystem by fostering innovation in emerging technologies, including artificial intelligence (AI), deep tech, and space technology.



Source- The Hindu

What is the current state of R&D funding in India? How does the private sector drive research in other countries?

Aspect	Current Status (Economic Survey 2022)
India's Gross Expenditure on Research and Development (GERD) as % of GDP	0.64%, significantly lower than the developed and emerging nations such as China (2.4%) , Germany (3.1%), South Korea (4.8%) and the United States (3.5%) .
Global Rank in Research Publications	3rd place globally

Private Sector Contribution	It contributes 36.4% of the country's gross expenditure on R&D (GERD).
Global Rank in Patents Granted (2022)	6th place (30,490 patents granted)
AI Market Growth	Expanding at 25-35% compounded annual growth rate (CAGR), projected to reach US\$ 17 billion by 2027

Global examples of private sector-driven research

- 1. France:** Defense research is funded by the government but conducted in private defense firms.
- 2. USA:** **80% of NASA's budget is contracted out to private firms and universities.** The Jet Propulsion Laboratory (JPL) at Caltech, a private university, has been funded by NASA since 1954.
- 3. China:** The success of **DeepSeek**, a private AI initiative, highlights how private-sector innovation can drive national progress.

What are the key programs for funding private research in India and the recent budgetary announcements?

Key Programs supporting private research:

Department of Science and Technology (DST)	It provides research grants to private universities through schemes like FIST (Fund for Improvement of S&T Infrastructure) .
Ministry of Education's STARS Program	It supports private institutions in basic research
DBT-BIRAC (Biotechnology Industry Research Assistance Council):	It offers funding to private biotech firms.
State University Research Excellence (SERB-SURE):	It aims to enhance R&D in state universities and colleges.
Fund for Industrial Research Engagement (SERB-FIRE)	It supports research collaborations between industries and academia.

Recent budgetary announcements:

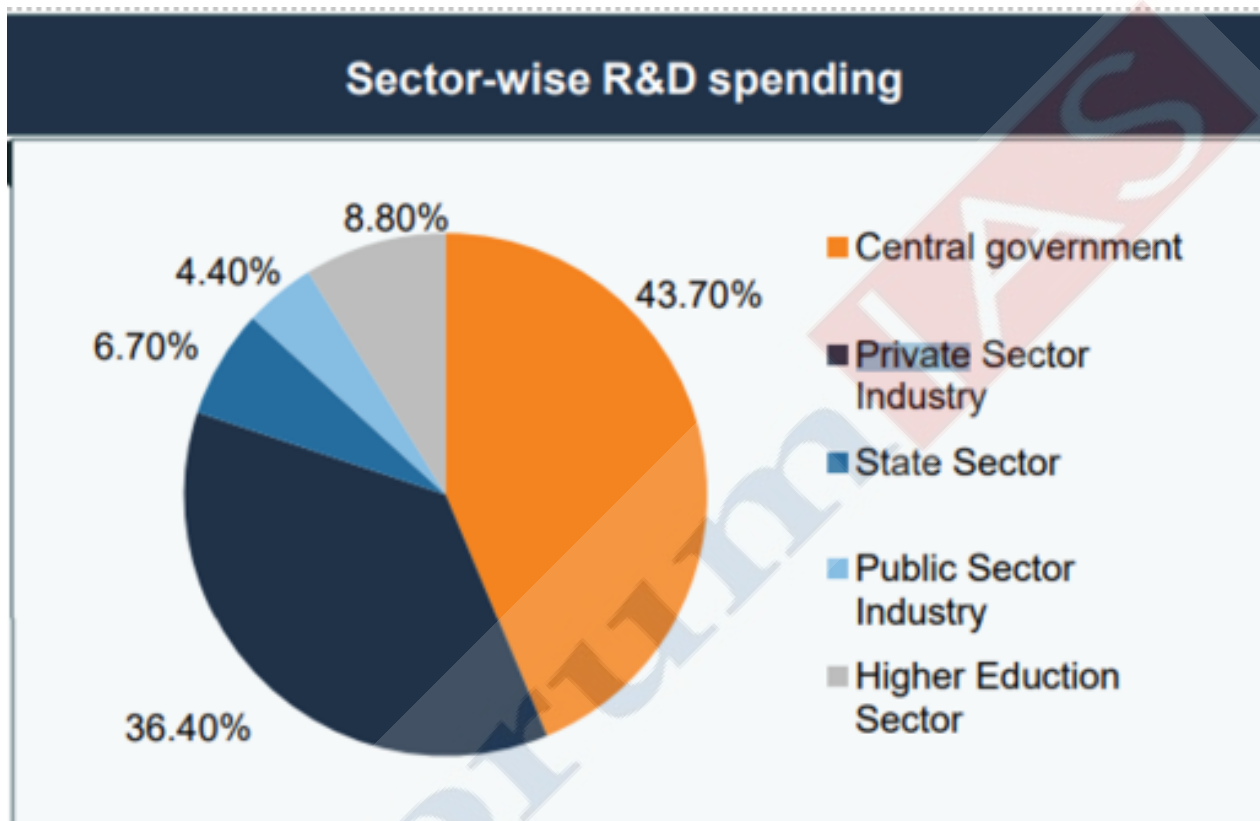
Anusandhan National Research Foundation (ANRF)	ANRF, a new organization, will allocate Rs. 2,800 crore annually to fund early-stage research in private institutions.
Budget 2025-26	Rs 20,000 crore allocated to private sector-driven research and innovation. It encourages private sector-driven R&D initiatives in sectors like AI, space technology, and advanced manufacturing.
ISRO's Private Contracts	ISRO will now purchase launch vehicles from private firms , injecting taxpayer money into private-sector engineering.
Ministry of Electronics and IT (MEITY) AI Investment	Procured 18,693 GPUs to support AI research, offering them to private IT firms at \$1 per hour.

₹1 Lakh Crore Corpus for Sunrise Technologies (interim Budget for 2024-25)

A 50-year interest-free loan to promote private sector investment in emerging fields.

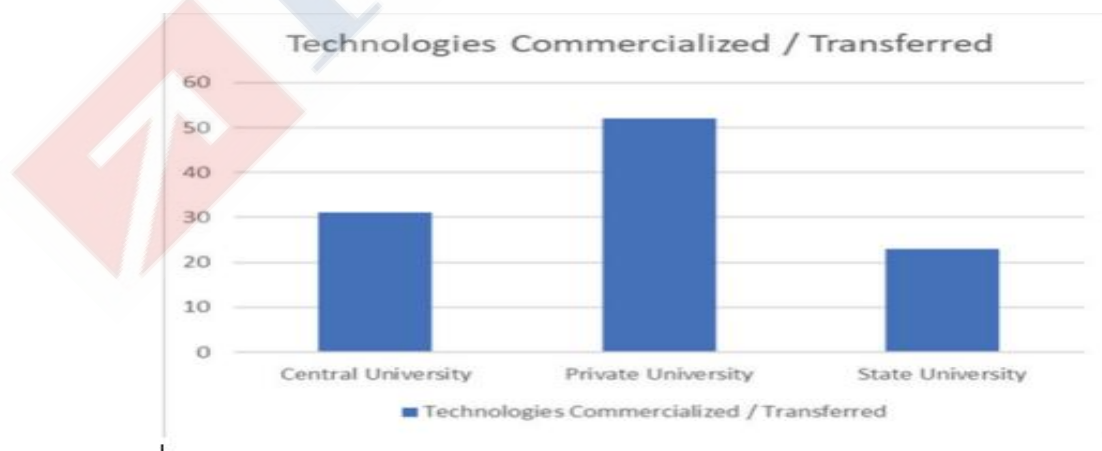
Why should public funds be used to support private research?

1. The private sector is the **second-largest contributor** to R&D funding in India.



Niti Aayog

2. Private universities **lead in innovation, prototype development, and intellectual property (IP) generation**, often outperforming central universities.



Source- Niti Aayog

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3. Collaborative R&D: Private institutions show **stronger industry collaborations**, leading to practical applications of research.

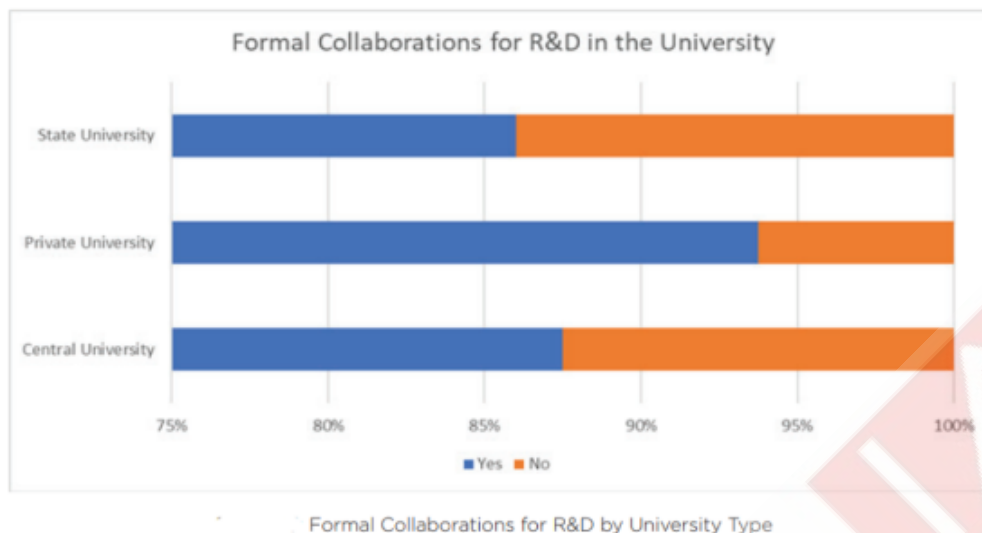


Figure 1. Source- Niti Aayog

4. Global Rankings and Research Output: Stagnant research performance and funding stress upon the need of private players involvement.

- No Indian university ranks in the top 300 of the Times Higher Education Index; only two are in the top 400.
- India has **15 researchers per lakh**

population, compared to 111 in China and 825 in Israel.

- India **contributes 4.8% of global scientific publications**, a quarter of the output from China and the USA.

What are the benefits of shifting to private sector-led research?

1. Efficiency & Innovation – Private firms operate in a competitive market, which drives them to achieve more efficient and innovative R&D outcomes.

2. Economic Growth – Private sector research aligns better with market needs, leading to enhanced commercialization and job creation in research-intensive sectors.

3. Improved Education & Industry Collaboration – Stronger academia-industry partnerships foster **better training opportunities for students and researchers**, bridging the gap between education and industry.

4. Risk Diversification – Contracting research to multiple private firms **reduces dependency on government-run laboratories**, ensuring a more diverse and resilient research ecosystem.

5. Greater Societal Impact – Knowledge spillovers from private research can contribute to higher GDP growth, benefiting society as a whole.

What are the challenges in Implementation?

1. Low R&D Investment: India's GERD remains around 0.7% of GDP, **significantly below the 2% target**.

2. Accountability Issues: Relying on the private sector for 72% of National Research Foundation (NRF) funding raises concerns about alignment with national priorities.

3. Limited knowledge dissemination: Expertise **remains isolated within select institutions like ISRO**, rather than widely distributed across academia and industry.

4. Bureaucratic hurdles: Complex layers of administrative clearance delay financial approvals and project execution.

5. Belief-Based Research Focus: Scientists express concerns over the government's emphasis on panch-gavya and Indian Knowledge Systems, potentially diverting resources from evidence-based research.

What should be the way forward?

1. Increase Public Funding for R&D– India must increase public funding for R&D by **raising GERD to at least 2% of GDP** to remain competitive. Additionally, greater financial support should be provided to state and private universities to bridge research gaps.

2. Strengthening Legal & Financial Frameworks– Legal reforms should promote **public-private partnerships (PPP) in research**, with transparent mechanisms to ensure efficient fund allocation and utilization.

3. Enhancing Industry-Academia Collaboration- The government can incentivize private sector investments in research by offering tax benefits and grants while also establishing **Centers of Excellence (CoEs) in emerging fields**.

4. Improving Research Accountability & Performance Evaluation- Creating monitoring frameworks to track research outcomes and commercialization while encouraging global collaborations to improve research output.

5. Encouraging Entrepreneurship & Startups in Deep Tech- The government can provide **grants and venture funding for startups** in sectors like AI, biotechnology, and space technology. Additionally, expanding incubators and accelerators in universities and research institutions will further support innovation and entrepreneurship.

Conclusion

India's transition towards funding private universities and firms for R&D is a pivotal step in fostering innovation and intellectual growth. This approach aligns with Prime Minister Narendra Modi's vision of "**Jai Jawan, Jai Kisan, Jai Vigyan, and Jai Anusandhan**," emphasizing the importance of scientific research in national development.

Read more– [The Hindu](#)

UPSC Syllabus-GS 3– Indian science and technological development and Research

MSME Industry in India- Explained Pointwise

The Micro, Small, and Medium Enterprises (MSME) sector is a crucial pillar of the Indian economy, contributing significantly to industrial output, employment generation, and exports. In 2023-24, MSME-related products **accounted for 45.73% of India's total exports**. Often termed the backbone of the economy, MSMEs are instrumental in realizing the vision of Atmanirbhar Bharat (Self-Reliant India). This article explores the definition, significance, challenges, government initiatives, and future roadmap for MSMEs in India.



Source- PIB

What are MSMEs and its related Statutory bodies?

MSMEs– These are enterprises engaged in the production, processing, and preservation of goods and commodities. These businesses are classified based on their investment in plant and machinery (for manufacturing) or equipment (for service enterprises), along with their annual turnover.

MSME Regulation in India– MSMEs are regulated under the **Micro, Small & Medium Enterprises Development (MSMED) Act, 2006**. In 2007, the Ministry of Small Scale Industries and the Ministry of Agro and Rural Industries were merged to form the Ministry of Micro, Small & Medium Enterprises.

Statutory Bodies under MSME Ministry

The Ministry of Micro, Small & Medium Enterprises (MSME) has four statutory bodies:

- 1. Khadi and Village Industries Commission (KVIC)** – Promotes and develops khadi and village industries to generate rural employment and strengthen the rural economy.
- 2. Coir Board** – Oversees the development of the coir industry and improves workers' living conditions.

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3. National Small Industries Corporation (NSIC) – Supports the growth of micro and small enterprises, primarily on a commercial basis.

4. National Institute for Micro, Small and Medium Enterprises (NI-MSME) – Focuses on enterprise promotion, entrepreneurship development, and policy research.

Additionally, the **Mahatma Gandhi Institute for Rural Industrialisation (MGIRI)** works to accelerate rural industrialization, support traditional artisans, promote innovation, and develop alternative technologies using local resources.

What are the key measures for MSMEs in Union Budget 2025-26?

Revised Classification Criteria	To help MSMEs scale operations and access better resources, the investment and turnover limits for classification have been increased by 2.5 times and 2 times , respectively.				
	Rs. in Crore	Investment		Turnover	
		Current	Revised	Current	Revised
	Micro Enterprises	1	2.5	5	12.5
	Small Enterprises	10	25	50	125
	Medium Enterprises	50	125	250	625
Source- PIB					
Enhanced Credit Availability	<ol style="list-style-type: none"> The credit guarantee cover for micro and small enterprises has been increased from ₹5 crore to ₹10 crore, enabling an additional credit infusion of ₹1.5 lakh crore over five years. Startups will see their guarantee cover double from ₹10 crore to ₹20 crore, with a reduced fee of 1% for loans in 27 priority sectors. Exporter MSMEs will benefit from term loans up to ₹20 crore with enhanced guarantee cover. 				
Credit Cards for Micro Enterprises	A customized Credit Card scheme will provide ₹5 lakh in credit to micro enterprises registered on the Udyam portal , with 10 lakh cards set to be issued in the first year.				
Support for Startups and First-Time Entrepreneurs	<ol style="list-style-type: none"> A new Fund of Funds with ₹10,000 crore will be established to expand support for startups. A scheme for 5 lakh first-time women, Scheduled Caste, and Scheduled Tribe entrepreneurs will provide term loans up to ₹2 crore over five years. 				

Focus on Labour-Intensive Sectors	<ol style="list-style-type: none"> 1. A Focus Product Scheme for the footwear and leather sector is expected to create 22 lakh jobs and generate a turnover of ₹4 lakh crore. 2. A new scheme for the toy sector will promote cluster development and skill-building. 3. A National Institute of Food Technology, Entrepreneurship and Management will be established in Bihar to boost food processing industries in the eastern region.
Manufacturing and Clean Tech Initiatives	<ol style="list-style-type: none"> 1. A National Manufacturing Mission will support small and medium industries under the Make in India initiative. 2. Special emphasis will be given to clean tech manufacturing, including solar PV cells, EV batteries, wind turbines, and high-voltage transmission equipment.

What is the role of MSMEs in India's economic growth?

1. Job Creation & Livelihood Opportunities

- MSMEs are the **largest source of non-agricultural employment in India**, providing jobs primarily to semi-skilled and unskilled workers.
- Government programs like **PM Vishwakarma** and **Mudra Yojana** have expanded self-employment prospects.
- Currently, more than **1 crore registered MSMEs** employ nearly **7.5 crore people** across the country.

2. Contribution to GDP & Industrial Development

- MSMEs play a pivotal role in India's economic framework, accounting for around **30% of the GDP** and **45% of the total manufacturing output**.
- They play a crucial role in industrial clusters by supplying raw materials and intermediates to large industries.
- The **Udyam portal** has streamlined the formalization of MSMEs, promoting a more structured and organized industrial sector.

3. Enhancing Exports & Foreign Exchange Reserves

- In **2023-24**, MSMEs contributed **45.73% of India's total exports**, reinforcing their vital role in international trade.
- Schemes such as the **Government e-Marketplace (GeM)** and the **Production-Linked Incentive (PLI) program** have strengthened MSMEs' integration into global supply chains.

4. Advancing Digital & Technological Innovations

- Initiatives like the **Open Network for Digital Commerce (ONDC)** are fostering digital transformation within the MSME sector.
- Currently, **72% of MSME transactions** are conducted digitally, enhancing financial inclusion and operational efficiency.

5. Promoting Women & Social Entrepreneurship

- Women-led MSMEs are contributing to gender equality and economic empowerment.
- Under the **Mudra Yojana**, loans worth **₹32.36 lakh crore** have been sanctioned, benefiting **51.41 crore entrepreneurs**, with **68% of them being women**.

What are the other government initiatives for MSMEs?

PM Vishwakarma	Provides comprehensive support for artisans and craftspeople
Udyam Registration Portal	Simplifies business registration and integration into the formal economy.
Prime Minister's Employment Generation Programme (PMEGP)	Offers credit-linked subsidy for micro-enterprises.
Scheme of Fund for Regeneration of Traditional Industries (SFURTI)	Organizes artisans into clusters for product development.
Public Procurement Policy	Mandates that 25% of government procurement be sourced from MSMEs .

What are the challenges faced by the MSME Sector?

- 1. Cumbersome Registration Process**– Lengthy registration procedures and inefficient single-window clearance systems create **bureaucratic hurdles for MSMEs**, delaying their formalization and operational setup.
- 2. Lack of Awareness About Government Schemes**– Many MSMEs struggle to navigate the complex landscape of government schemes due to inadequate awareness and poor coordination between the Centre and States.
- 3. Financial Constraints**– Limited access to institutional finance, **stringent collateral requirements**, and **high interest rates** make it difficult for MSMEs to secure the funds necessary for expansion and modernization.
- 4. Export-Related Challenges**– **Poor infrastructure**, inadequate trade facilitation, and difficulty in meeting Environmental, Social, and Governance (ESG) standards restrict MSME participation in global markets.
- 5. Labour Shortages and Skill Gaps**– A lack of skilled workers, wage disparities across regions, and inefficient training centers result in low productivity and reduced competitiveness for MSMEs.

What should be the way forward?**1. Strengthening Credit Access & Financial Support**

- Expand **collateral-free lending** via fintech platforms and alternative credit assessment models.
- Mandate **strict payment timelines** under the MSME Samadhan portal to ensure timely dues from large corporations and government agencies.
- Enhance the role and reach of **MUDRA and SIDBI** to facilitate easier credit access.
- Develop tailored **fintech solutions** and promote **financial literacy programs** for MSMEs.

2. Reducing Compliance Burden & Regulatory Bottlenecks

- Implement **single-window clearance** for faster approvals and streamlined processes.
- Establish **state-level MSME facilitation councils** for quicker grievance redressal.
- Simplify **GST registration** and reduce the frequency of regulatory amendments to ensure ease of doing business.
- Set up a **dedicated MSME Coordination Council** to streamline policy implementation and address sector-specific challenges.

3. Enhancing Digital & Technological Adoption

- Facilitate adoption of **AI, IoT, and automation** through MSME technology hubs.
- Launch **Digital MSME 2.0** to improve cybersecurity, cloud computing access, and digital marketing capabilities.

- Strengthen the **Credit Linked Capital Subsidy Scheme (CLCSS)** to support MSMEs investing in advanced technologies.
- Promote **MSME Innovation & Incubation Hubs** in collaboration with academic and research institutions.

4. Workforce Development & Skilling Initiatives

- Ensure **uniform labor wages** and introduce **affordable labor insurance schemes** for MSME employees.
- Align skill training programs under **Skill India, PMKVY, and NAPS** to address MSME workforce needs.
- Promote **women entrepreneurs** through targeted vocational training and credit linkage schemes.

5. Infrastructure Development & Cluster-Based Growth

- Strengthen MSME clusters under the **Micro & Small Enterprises – Cluster Development Programme (MSE-CDP)**.
- Encourage **Public-Private Partnerships (PPPs)** to set up **Common Facility Centers (CFCs)** for shared resources.
- Develop **MSME Industrial Parks** with subsidized utilities, logistics support, and better last-mile connectivity.

Read more- [PIB](#)

UPSC Syllabus- GS 2/ GS 3– Government policies and interventions for development in various sectors/Government Budgeting

High Level Committee for Regulatory Reforms- Explained Pointwise

Finance Minister Nirmala Sitharaman recently announced that a high-level committee for regulatory reforms will be set up for a **review of all non-financial sector regulations, certifications, licenses, and permissions**. The objective of the high-level committee will be to strengthen trust-based economic governance and take transformational measures to **enhance ease of doing business, especially in matters of inspections and compliances**. The committee will be expected to make recommendations within a year.



Source- PIB

What is the significance of regulatory sector reforms in India?

Economic boost	<ol style="list-style-type: none"> 1. Record Foreign Direct Investment (FDI) inflows of \$84.8 billion in 2021-22. 2. The ₹2.5 lakh crore Production-Linked Incentive (PLI) scheme across 14 sectors. 3. Unified Payments Interface (UPI) transactions surpassing 100 billion in 2023.
Financial fortification	<p>The Indian banking sector has significantly strengthened through:</p> <ol style="list-style-type: none"> 1. Reduction of Non-Performing Assets (NPAs) from 11.2% in 2018 to 5.0% in 2023. 2. Insolvency and Bankruptcy Code (IBC) recovering ₹2.5 lakh crore in stressed assets. 3. UPI processing over 8 billion transactions monthly.
Ease of Business Boost	<p>India's business environment has vastly improved, leading to:</p> <ol style="list-style-type: none"> 1. Ease of Doing Business ranking improvement from 142 to 63. 2. Reduction in company registration time from over 30 days

	to under 3 days. 3. Unification of 17 taxes under the Goods and Services Tax (GST).
Infrastructure Impact	Infrastructure development has been accelerated through: 1. The \$1.5 trillion National Infrastructure Pipeline. 2. Real Estate (Regulation and Development) Act (RERA) improving transparency in real estate. 3. A 40% reduction in project delays as per NITI Aayog.
Manufacturing Momentum	The manufacturing sector has gained momentum through: 1. Simplification of 29 labor laws into 4 labor codes. 2. Consistent 7%+ sectoral growth. 3. Greater integration into global value chains.
Digital Dominance	Digital transformation in India has seen rapid growth with: 1. 1.2 billion beneficiaries under the Digital India initiative. 2. Over 100,000 registered startups by 2023. 3. Improved ranking in the Global Innovation Index.
Social Sector Transformation	The social sector has witnessed inclusive growth through: 1. ₹2.25 lakh crore savings via Direct Benefit Transfers (DBT). 2. Ayushman Bharat benefiting 500 million citizens. 3. National Education Policy (NEP) 2020 reshaping the education sector.
Sustainable Development	India has advanced in sustainability with: 1. Renewable energy capacity surpassing 175 GW. 2. Over \$10 billion raised via green bonds. 3. A 15% reduction in emission intensity.

What are the key reforms undertaken?

- 1. Simplification of Regulation:** The Jan Vishwas Act 2023 decriminalized 3400+ legal provisions and reduced 39,000 compliances. The SPICe+ portal simplified business incorporation by integrating PAN, TAN, DIN, and other identifiers into a single form. For ex- The Economic Survey 2024-25 emphasized the need to “peel off layers of needless rules” and adopt a “minimum government, maximum governance” approach.
- 2. Ease of Doing Business (EoDB) and Penal Provisions:** The Jan Vishwas Act 2023 removed jail provisions for minor procedural defaults, such as delayed filings or incorrect calculations. For ex- The Economic Survey 2024-25 called for decriminalizing regulations that do not involve physical harm, fraud, or large externalities.
- 3. Sunset Clauses for Outdated Regulations:** The Economic Survey 2024-25 recommended sunset clauses to automatically repeal regulations after a fixed period unless explicitly renewed. For ex- The Insolvency and Bankruptcy Code (IBC) introduced time-bound resolutions, setting a precedent for regulatory efficiency.
- 4. Consolidation of Laws and Codes:** The Labour Codes consolidated 29 central labor laws into 4 codes, simplifying compliance for employers. The GST regime unified 8 central and 9 state taxes into a single tax, reducing compliance costs.
- 5. Structured Notification Schedules:** The Economic Survey 2024-25 proposed structured notification schedules to ensure predictable and phased implementation of regulations. The GST Council meets quarterly to announce changes, providing businesses with a clear timeline for compliance.

6. Risk-Based Regulatory Inspections: The **Shram Suvidha Portal** introduced risk-based inspections, reducing unnecessary scrutiny for compliant businesses. The **GST e-way bill system** uses data analytics to identify high-risk transactions for inspection.

What are the challenges in implementing regulatory reforms?

1. Red Tape Overload: India's regulatory framework is often criticized for being overly complex, with **over 85,000 compliances and 5,000+ jail provisions** for businesses. This creates a high compliance burden, especially for small and medium enterprises (SMEs).

2. Ease of Doing Business Mirage: Despite India's rise in the **World Bank EoDB** ranking from **142nd (2014) to 63rd (2020)**, SMEs still face challenges due to **excessive penal provisions** and **interpretation subjectivity**.

3. Legacy Laws: Many regulations, such as the **Factories Act (1948)** and **Shops and Establishments Act**, are outdated and do not align with modern business practices. **India has over 1,000 central laws and 15,000 state laws**, many of which overlap or conflict, creating confusion for businesses. **For ex-** The **TeamLease report** highlights how fragmented labour laws have slowed employment growth, making consolidation a critical reform.

4. Regulatory Volatility: Frequent and unpredictable regulatory changes create uncertainty for businesses, especially startups and SMEs.

5. Inspection Harrassment: Traditional inspection systems are often manual, subjective, and prone to corruption, leading to harassment of businesses.

What are the key recommendations for the High-Level Committee?

1. Modernizing Regulations for Growth: Introduce **sunset clauses for outdated regulations** to ensure periodic review and repeal. Also, adopt a **risk-based approach** to compliance, focusing on high-risk sectors while reducing scrutiny for low-risk businesses. **For ex-** The **GST regime consolidated 17 indirect taxes into one**, reducing compliance costs by 20-30% for businesses.

2. Smart Sanctions for Business: Restrict jail provisions to only those involving intentional fraud or physical harm. Introduce a **National Employer Compliance Grid (NECG)** to streamline compliance filings and reduce subjectivity. **For ex-** The **Shram Suvidha Portal** reduced labor inspection timelines by making reports public within 48 hours, enhancing transparency.

3. Five year check-up for Regulations: Implement sunset clauses for all regulations, with a mandatory review every 5 years. **For ex-** The **Telecom Regulatory Authority of India (TRAI)** periodically reviews its policies to align with technological advancements.

4. One-Stop Law Shop: Consolidate sector-specific laws into umbrella codes, such as the Environmental Code or Energy Code. **For ex-** The **Companies Act, 2013 replaced the 1956 Act**, simplifying corporate governance and compliance.

5. Regulatory Calendar: Introduce a structured regulatory calendar for all ministries, with pre-announced dates for notifications and amendments. **For ex-** The **RBI's monetary policy calendar** provides clarity on interest rate decisions, reducing market uncertainty.

6. AI and Analytics for Proactive Compliance: Expand risk-based inspections to all sectors, using AI and data analytics to identify high-risk entities. **For ex-** The **Food Safety and Standards Authority of India (FSSAI)** uses a risk-based approach to prioritize inspections for high-risk food businesses.

7. Global Best Practices: Adopt successful international regulatory models, such as the **US Regulatory Flexibility Act**, which mandates regular reviews of business regulations, and **Singapore's Pro-Enterprise Panel**, which reduces inspections for compliant businesses to enhance ease of doing business.

What should be the way forward?

1. "Peel the Onion" Approach: The **Economic Survey 2024-25** likens deregulation to peeling an onion—each layer removed reveals the next, making the process easier over time.

2. Digital Public Infrastructure (DPI) for Employers: The proposed **PAN 2.0** and **Entity Digilocker** can revolutionize compliance by creating a paperless, presence-less, and cashless ecosystem.

3. Butterfly Effect: Small deregulatory actions can trigger a ripple effect, leading to significant gains in business competitiveness and growth.

4. Regulatory Cholesterol: Reducing excessive regulatory burdens is essential for unlocking India's entrepreneurial potential and fostering high-wage job creation.

5. Viksit Bharat by 2047: Sustaining 8% GDP growth over the next decade requires a concerted focus on deregulation, innovation, and simplifying the regulatory framework.

Conclusion:

India's regulatory reforms have made significant strides, but the journey is far from over. By focusing on **simplification**, **decriminalization**, and **digitization**, India can create a business-friendly environment that fosters innovation, entrepreneurship, and economic growth. The Economic Survey 2024-25 and Union Budget 2024-25 provide a clear roadmap, but timely implementation and political will are crucial to realizing the vision of a Viksit Bharat.

Read more– [Live mint](#)

UPSC Syllabus- GS 2/ GS 3– Government policies and interventions for development in various sectors/
Indian Economy and issues relating to planning, mobilization, of resources

India and Global South- Explained Pointwise

India has positioned itself as a strong advocate for the Global South, raising the concerns of developing nations on global platforms. At the **18th Pravasi Bharatiya Divas** in January 2025, Prime Minister Narendra Modi highlighted India's commitment to amplifying their voice. Similarly, during the **3rd Voice of Global South Summit** in August 2024, he emphasized India's role in pushing for inclusive global governance reforms.

Since independence in 1947 to its G20 presidency in 2023, **India has consistently voiced the concerns of the Global South**. However, these nations remain underrepresented in global forums, leaving their issues largely unaddressed.

What is Global South?

1. The Global South refers to **countries that are often categorized as developing, less developed, or underdeveloped**, primarily **located in Africa, Asia, and Latin America**.

2. These nations generally **experience higher levels of poverty, income inequality**, and challenging living conditions compared to the wealthier nations of the Global North.

3. The **Global North consists of richer nations**, primarily located in North America and Europe, with some exceptions in Oceania and other regions.

The Brandt Line: Dividing the Global North and Global South



Figure 2. Source- Big Think

1. The Brandt Line was proposed by Willy Brandt in the 1980s.

2. It is an imaginary line that divides the world into wealthier nations (mostly in the Northern Hemisphere) and poorer nations (mostly in the Southern Hemisphere).

3. The line primarily represents the socio-economic divide between the Global North and the Global South.

Read More– [Fallacy, fantasy, Global South](#)

What is India's Historical Association with Global South?

India shares its historical roots of colonial struggles and underdevelopment with the countries of the Global South. Hence, under the leadership of Prime Minister Jawaharlal Nehru, newly independent India took on a leadership role in advocating for the issues of the Global South.

India's role in the Global South

Establishment of the Non-Aligned Movement (NAM)	<ol style="list-style-type: none"> 1. India played a key role in the establishment of NAM, which represented the socio-economic and political priorities of the Global South. 2. India also led efforts in drafting NAM's agenda for a New International Economic Order (NIEO) to counter the dominance of Bretton Woods institutions.
Formation of the G-77	<ol style="list-style-type: none"> 1. India played a crucial leadership role in the establishment of the Group of 77 (G-77), a coalition of 134 developing nations at the UN. 2. The primary objective of G-77 was to present a unified voice of the Global South at the UN General Assembly (UNGA) and other UN bodies.
Stockholm Conference of 1972	<ol style="list-style-type: none"> 1. India actively voiced the concerns of the Global South regarding climate change. 2. India's leadership at the conference contributed to the development of key principles, including Sustainable Development (Brundtland Report), Common But Differentiated Responsibilities (CBDR), and the Polluter Pays Principle.

Shift in India's Foreign Policy Post-Cold War

However, with the end of the Cold War and India's domestic economic crisis, a pragmatic shift emerged in its foreign policy. India began prioritizing its national economic and security interests over broader ideals of justice and equity for the Global South. This shift is evident in the following:

Neglect of NAM Post-Cold War	1. India significantly reduced its engagement with NAM, placing it in a state of dormancy. 2. In recent years, India's participation at NAM Summits has not been at the highest political level, with the Prime Minister skipping the 18th NAM Summit in 2019.
Closer strategic Ties with the Global North	India has developed deeper strategic partnerships with the United States, the European Union, and Japan. For example , the India-US Civil Nuclear Deal marked a significant shift in India's global alignments.
Engagement with New Multilateral Forums	India has strengthened its involvement in new multilateral groupings such as BRICS , SCO , and ASEAN , often at the expense of traditional platforms like G-77 and NAM.

However, with the growing economic and geopolitical heft of India, it has emerged as the Voice of Global South Once again.

What are the challenges faced by the Global South?

- 1. Limited representation in global decision-Making:** Regions like Africa and Latin America **lack permanent membership in key global institutions**, such as the UN Security Council.
- 2. Escalating public debt:** According to **UNCTAD's A World of Debt Report 2024**, developing nations face a debt crisis, with their public debt rising at twice the pace of developed economies.
- 3. Outdated global governance and financial frameworks:** Institutions like the WTO struggle with inefficiencies, such as a dysfunctional appellate dispute mechanism, while developing countries remain underrepresented in financial bodies like the World Bank and IMF.
- 4. Ideological and policy divergences from the Global North:** Differences persist regarding interpretations of democracy, human rights, and climate policies, leading to challenges in global consensus-building.
- 5. Impact of geopolitical conflicts:** Wars involving major powers, such as the **Russia-Ukraine conflict**, have exacerbated inflation in food and energy prices, disproportionately affecting the Global South.

How is India becoming the Voice of the Global South?

- 1. New Delhi Declaration-** India used the **G-20 presidency** to build consensus among the G-20 members to include the issues of the Global South like debt financing, climate justice and gender equality in the New Delhi Declaration.
- 2. Expansion of G-20-** India played a key role in giving Voice to Global South Members at the high table of G-20 by **inclusion of African Union.**
- 3. Voice of Global South Summit-** India has conducted the Voice of Global South Summit to build solidarity among the Global South countries, amidst the unprecedented challenges these countries are facing.
- 4. Vaccine Maitri-** In the wake of COVID-19, India has played a key role in saving the lives of many in the Global South Countries by supplying free vaccine and medicines.

5. More representative multilateral fora- India has also played a key role in making other multilateral fora like BRICS, SCO more representative by inclusion of countries from the Global South. **For Ex-** BRICS transforming into BRICS PLUS.

6. Climate Justice- India has been playing a key leadership role in climate negotiations to promote the interests of Global South. **For Ex-** Recently established **Loss and Damage Fund at COP28**.

What are the headwinds which inhibit India from becoming a leader of the Global South?

1. UNSC Membership- India's campaign for a permanent seat at UNSC as part of the **G-4 group** is opposed by the **Coffee Club members** which consist of Global south countries from Africa and Asia.

2. India's neglect of NAM and G-77- India has been neglecting the oldest grouping of Global South, which has often caused breakdown of effective communication between the countries of Global South.

3. China Factor- China with its deep pockets has been splurging economic aid and developmental assistance to the countries of Global South. India has been locking horns with China to emerge as the leader of Global South.

4. Lack of consistent engagement- After launching summits with regions of Africa and Indo-Pacific, India has failed to engage with them on a constant basis. **For Ex-** No India-Africa Summit has been held since the three summits from 2015-2018. India also failed to show up at the Pacific Island Summit in Papua New Guinea in 2023.

5. Big Brother Attitude- India has been accused of meddling in domestic politics of the countries of Global South. This has attracted mistrust among these countries regarding India's leadership role. **For Ex-** 'India Out Campaign' in the Maldives.

6. Delays in Project Implementation- India's aim to become the 'Voice of the Global South' is also challenged by India's incapacity to deliver on the development projects within the agreed time frame. **For Ex-** **delays in Kaladan Project**, Asia Africa Growth Corridor, etc.

What Should be the way Forward?

1. India's own Development Bank- India must establish its own Development bank to provide development assistance to the Global South and emerge as an alternative to China.

2. Revival of NAM- India must revive the NAM forum in the post COVID world, which is seeing increased ideological divide & geopolitical conflicts like Ukraine-Russia War and Israel-Hamas wars.

3. Enhanced project delivery capacity – India must invest its resources in improving the quality and timely execution of its development projects.

4. Fostering mutual respect – India should **move beyond a "big brother" approach** and build partnerships based on mutual trust and respect with Global South nations.

5. Continued summits- India must engage with the African nations and the Indo-Pacific nations by regularising the Indo-Africa summit.

6. Capacity-Building Initiatives – India can enhance its ties with the Global South by **sharing its expertise in micro, small, and medium enterprises (MSMEs), digital infrastructure, climate solutions, and food security**.

Read More- [The Hindu](#)

UPSC Syllabus- GS 2- Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests.

President's Rule (Article 356)- Explained Pointwise

President's Rule, under Article 356 of the Indian Constitution, is a crucial yet contentious provision in India's federal system. It **empowers the Centre to take direct control of a state** when its **constitutional machinery fails** or **governance collapses**, often due to **political instability, a hung assembly**, or a **breakdown of law and order**.

Originally intended as an emergency provision, its frequent invocation—especially for political gains—has drawn criticism and judicial scrutiny. Recent discussions surrounding **Manipur's political crisis**, following the **resignation of N. Biren Singh as Chief Minister**, have once again brought Article 356 into the spotlight.



Figure 3.Source- Fifty two

What is Article 356 of the Indian Constitution?

Article 356 empowers the President to impose central rule in a state on the advice of the Union Council of Ministers if he is satisfied that the state's governance cannot be carried out in accordance with constitutional provisions. Once invoked, **all functions of the state government are transferred to the**

Centre, and the **powers of the state legislature are exercised by Parliament** for the duration of its enforcement.

Exception: The only exception is the **functioning of High Courts**, which remains unaffected.

Constitutional basis for President's Rule

Articles 355 to 357 in **Part XVIII**, along with Article 365 in **Part XIX** of the Indian Constitution, pertain to the President's Rule.

Article 355	It mandates the Union to protect states from external aggression and internal disturbances , ensuring that governance aligns with constitutional principles
Article 356	Allows the President to take over the governance of a state upon satisfaction that its constitutional machinery has broken down .
Article 357	Article 357 of the Constitution of India allows Parliament to exercise the legislative powers of a state when a Proclamation is issued under Article 356

Article 365	States that if a state government fails to comply with directions from the Union , the President may assume direct control over the state.
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What is the procedure and duration for the imposition of President's Rule in India under Article 356?

1. Governor's Report: The process begins if the President, on receiving a report from the Governor, is "satisfied that a situation has arisen in which the **Government of the State cannot be carried on in accordance with the provisions of this Constitution**".

2. Presidential Satisfaction: The President, upon being convinced of the crisis, issues a proclamation imposing President's Rule.

3. Parliamentary Approval: **Within two months**, both Houses of Parliament must approve the proclamation by a simple majority.

4. Duration: **Initially, the rule lasts for six months, extendable up to three years** with parliamentary approval every six months.

5. Extension Beyond One Year: According to the **44th Amendment Act of 1978**, President's rule can only be extended over a year every 6 months under the following conditions:

- The Election Commission certifies that elections cannot be conducted in the state concerned.
- There is already a national emergency throughout India or in the whole or any part of the state.

In practice, President's Rule has been imposed in a state under any of the following circumstances:

- The state legislature is **unable to elect a leader** as Chief Minister within the time prescribed by the Governor.
- Breakdown of a coalition in the state government**, resulting in the Chief Minister losing majority support in the legislature and failing to prove a majority within the time given by the Governor.
- A **no-confidence vote** in the legislative assembly leading to the loss of majority.
- Postponement of elections** due to unavoidable circumstances such as a natural disaster, epidemic, or war.

Read more– [Difference between National Emergency and President's rule](#)

What are the consequences of the President's Rule?

1. Governor's Role: The **Governor assumes executive control** and **runs the administration on behalf of the President**.

2. Legislative Assembly: The Assembly is either dissolved or kept in suspended animation.

3. Parliament's Role: The Union Parliament takes over the legislative functions of the state.

4. Impact on Governance: **No new state laws can be enacted**, and administration is run by bureaucrats.

5. Fresh Elections: The Election Commission must conduct elections **within six months** unless **an extension is granted**.

Additionally, pending public and state welfare policies often remain stalled during the enforcement of President's Rule.

What is the history of President's Rule in India?

1. Since 1950, **President's Rule has been imposed 134 times** across 29 states and UTs.

2. **Manipur** and **Uttar Pradesh** have seen the most frequent impositions, 10 times each.

Note– However, these are not the regions that have spent the longest time under central control.

States/UTs with the longest duration under President's Rule:

1. Jammu & Kashmir – Over 12 years (4,668 days).

2. Punjab – Over 10 years (3,878 days).

- Both faced prolonged **militant and separatist activity** leading to instability.

3. Puducherry – Over 7 years (2,739 days).

- Frequent **government collapses** due to **infighting and defections**.

What is the Supreme Court landmark judgment on President's Rule?

The landmark **S.R. Bommai v. Union of India (1994)** case imposed strict judicial scrutiny on Article 356:

1. Judicial review: The court ruled that the President's decision to impose President's Rule is subject to judicial review.

2. Material consideration: The court can examine whether there was relevant material justifying the imposition.

3. Limited scope: The ruling emphasized that states are not merely appendages of the Centre, reinforcing federalism.

4. Revival of dismissed government: If **Parliament does not approve the proclamation within two months**, the dismissed state government is reinstated.

What are the criticisms of President's Rule and the key recommendations for reform?

Despite being a constitutional safeguard, Article 356 has been criticized for its misuse, particularly for political motives:

1. Frequent usage: It has been invoked over 100 times, with **39 cases under Indira Gandhi alone**.

2. Political manipulation: Often used to dismiss opposition-led state governments.

3. Centralization of power: Undermines the federal structure by placing states under direct central control.

4. Suspension of democracy: Disrupts elected governance and denies citizens a functional state government.

5. Dubious grounds: Governments have been dismissed for reasons like internal party conflicts rather than genuine governance failures.

Key Recommendations for reform

Several commissions have suggested ways to prevent the misuse of Article 356:

1. Sarkaria Commission: Advocated for **using Article 356 as a last resort** and **recommended prior warning before its imposition**.

2. Punchhi Commission: Proposed a **localized approach** where only specific areas of a state, rather than the entire state, could be brought under central rule.

What is the way Forward?

- 1. Stringent guidelines:** The Centre should adhere strictly to the guidelines set by the Supreme Court in S.R. Bommai's case.
- 2. Enhancing federalism:** Strengthen institutional mechanisms to resolve state crises without resorting to Article 356.
- 3. Judicial oversight:** Fast-track judicial review of proclamations to prevent politically motivated misuse.
- 4. Alternative measures:** Encourage dialogue, financial assistance, or Governor's intervention before invoking Article 356.
- 5. Limited scope:** Explore decentralized emergency provisions instead of imposing blanket President's Rule over an entire state.

Conclusion

President's Rule under Article 356 remains a vital constitutional provision for maintaining governance when a state government fails. However, its history is marred by instances of political misuse. While judicial interventions, particularly the S.R. Bommai case, have curtailed arbitrary impositions, further safeguards are necessary to protect India's federal structure. Moving forward, balancing the need for constitutional stability with federal autonomy is crucial for ensuring a robust and democratic India.

Read more– [The Indian Express](#)

UPSC Syllabus- GS 2– Separation of powers between various organs dispute redressal mechanisms and institutions.

Cooperative and Competitive Federalism of Freebies- Explained Pointwise

Federalism in India operates on two key principles: **cooperative federalism** and **competitive federalism**, both of which influence governance, economic growth, and fiscal discipline. However, the **growing trend of freebies-based competitive federalism** has raised concerns about sustainability, fiscal responsibility, and the long-term economic impact.

While competitive federalism fosters economic efficiency and innovation, an unchecked race to provide freebies threatens financial stability. This article explores the dynamics of cooperative and competitive federalism, their impact on governance, and the challenges posed by excessive freebies.

COOPERATIVE & COMPETITIVE FEDERALISM



Source- Big Buzz

What is the concept of Competitive and Cooperative Federalism?

Cooperative Federalism

Cooperative federalism emphasizes **collaboration between the Union and state governments**. Both levels of government share responsibilities and work together for the larger public interest. It ensures coordination and alignment of policies across the Centre and states. **Examples include:**

1. **Goods and Services Tax (GST) Council**, where the Centre and states jointly decide tax rates and structures.
2. **Ayushman Bharat and PM-KISAN**, which require Centre-state collaboration for effective implementation.
3. **Zonal Councils**, established by the **States Reorganization Act, 1956**, to resolve inter-state disputes.

Competitive Federalism

Competitive federalism fosters **horizontal competition among states** and **vertical competition between the Centre and states** to attract investment, enhance governance, and improve public services. The **NITI Aayog** promotes competition through rankings in ease of doing business, education, and health. **Examples include:**

1. **Gujarat and Maharashtra's economic rivalry** in the 2000s, offering tax breaks and subsidies to attract manufacturers.
2. **State-specific welfare schemes**, such as **Telangana's Rythu Bandhu** and **Odisha's KALIA**, complementing central schemes like **PM-KISAN**.
3. **Vibrant Gujarat Summit**, attracting global investments.

Constitutional provisions supporting Cooperative & Competitive Federalism

- 1. Seventh schedule:** It classifies legislative subjects into the **Union List, State List, and Concurrent List**, ensuring a balance of power and cooperation between different levels of government.
 - 2. Article 261 (Full Faith and Credit Clause):** Mandates that public acts, records, and judicial proceedings of one state be recognized and upheld across all states, promoting legal uniformity.
 - 3. Article 263 (Inter-State Council – ISC):** Provides for the establishment of the Inter-State Council (ISC) to investigate and discuss subjects of common interest among states and the Union, fostering cooperation.
 - 4. All India Services (Article 312):** Provides for centrally-recruited officers serving in both the Centre and states, ensuring administrative cooperation.
 - 5. Goods and Services Tax (GST) (Article 279A):** Establishes the GST Council, where states negotiate and compete over taxation policies, striving for a favorable business environment.
- NITI Aayog (Executive Initiative, Replacing Planning Commission):** Encourages a competitive approach through performance-based rankings, incentives, and best governance practices among states.

What is the present status of freebies Competitive Federalism?

1. Shift from Cooperative to Competitive Freebies- Instead of competing on efficiency and governance, **states now engage in populist policies** that include **reckless subsidies** and **fiscal imprudence**. This has turned competitive federalism into a fiscal bidding war, where states offer increasingly larger cash transfers and free services to gain political mileage.

Examples include: **Monthly cash transfers to women** announced by Karnataka and Rajasthan, despite fiscal constraints.

2. Unsustainable Fiscal Health:

- **States like Punjab and Delhi** struggle with debt due to excessive freebies.
- **Karnataka and Rajasthan's** policies of monthly cash transfers raise concerns about long-term sustainability.
- **Ease of doing business (BRAP rankings)** reflect a wide variation in competitiveness, with some states lagging due to fiscal mismanagement.

What is the significance of Competitive and Cooperative Federalism?

Competitive federalism:

- 1. Enhancing economic efficiency:** Encourages states to align policies with local needs, leading to investment and job creation.
- 2. Encouraging policy innovation:** States experiment with new governance models and regulatory frameworks.
- 3. Strengthening fiscal discipline:** Competitive federalism, when linked to financial prudence, ensures that states balance spending and revenue generation.
- 4. Improving public service quality:** To attract businesses and skilled workers, states invest in infrastructure, education, and healthcare.

Cooperative Federalism

- 1. Balanced Regional Development:** Promotes equitable growth by reducing regional disparities through collaboration between the central and state governments.

2. Facilitates Resource Sharing: Encourages **joint initiatives in infrastructure, disaster management, and environmental protection**, ensuring optimal resource utilization and avoiding duplication of efforts.

What are the key initiatives undertaken to enhance both Competitive and Cooperative Federalism?

Competitive Federalism

State-Level Policy Initiatives	<ol style="list-style-type: none"> 1. TS-iPASS (Telangana) a single-window clearance for businesses 2. Global Investors Meet (Tamil Nadu) attracts FDI and domestic investment 3. GIFT City (Gujarat) turned into a global financial hub.
Investment Friendliness Index (IFI)	To be launched in 2025, the IFI will rank states based on investment attractiveness . It will be built on the Business Reform Action Plan (BRAP) by DPIIT, which has driven regulatory reforms since 2014-15.
PPP Project Pipelines	States mandated to develop public-private partnerships (PPP) for infrastructure projects.

Cooperative Federalism

National Manufacturing Mission (NMM):	Aims to foster cooperative federalism by aligning central and state efforts to strengthen manufacturing ecosystems . Encourages States to compete on efficiency while collaborating on systemic improvements.
India Infrastructure Project Development Fund (IIPDF):	The IIPDF fosters cooperative federalism by providing financial and technical assistance , enabling states—regardless of their fiscal capacity—to actively participate in national infrastructure development.
Economic Survey 2022-23	Highlights the importance of cooperative federalism in achieving sustainable development goals.

What are the challenges in Competitive and Cooperative Federalism?

Challenges in Competitive Federalism:

- 1. Quasi-Federalism & Central Dominance:** The **Union government holds superior powers** through the **residuary list** and **precedence in the concurrent list**, often overriding state authority and limiting competition.
- 2. Unchecked competition & Race to the Bottom:** States engage in reckless subsidies and tax breaks to attract investment, often leading to fiscal mismanagement. Bureaucratic inefficiencies negate the benefits of competition, preventing real structural reforms.
- 3. Conflict Between Finance Commission (FC) and GST Council:** **Article 269A(1)** empowers the GST Council to recommend tax-sharing for inter-state trade, while **Articles 270(1A) and 270(2)** state that GST revenues must be distributed as per Finance Commission (FC) recommendations. This **imbalances both cooperative federalism (GST) and competitive federalism (FC)**.

Challenges in Cooperative Federalism:

- 1. Inequitable Distribution of Central Tax Revenue:**

- States like **Bihar, Odisha, and Assam** argue that uniform funding **ignores economic disparities**, putting them at a disadvantage.
- Richer states feel burdened by having to **contribute more tax revenue** while receiving fewer central grants.

2. Implementation Gaps in Centrally Sponsored Schemes:

- Many schemes (e.g., **Smart Cities Mission, National Health Mission**) suffer from **bureaucratic inefficiency**, leading to delays and poor execution.
- States **lack flexibility** in implementation, leading to inefficient spending.

What are the recommendations for Reform?

1. Conditional Grants Framework: The Finance Commission should **link central grants to performance-based criteria** to curb fiscal imprudence.

2. Policy Innovation: The National Manufacturing Commission should drive real policy shifts rather than duplicating existing schemes.

3. Yardstick Competition: Public rankings create reputational incentives for states to improve performance relative to peers. **For ex- Scandinavian countries use competitive federalism** while maintaining strict fiscal rules.

4. Accountability Mechanisms: Establish clear frameworks to prevent states from prioritizing populism over fiscal prudence.

5. Market-Preserving Federalism: Subnational competition drives efficiency and innovation, while a structured national framework prevents coordination failures. **For ex- Germany's federal financial system** ensures competition while maintaining equal development.

6. Balanced Competitive & Cooperative Federalism: Ensure responsible competition while collaborating on systemic improvements.

Read more- [The Hindu Business line](#)

UPSC Syllabus- GS 2- Issues and challenges pertaining to the federal structure

India-France Relations- Explained Pointwise

At the invitation of French President Emmanuel Macron, Prime Minister Narendra Modi visited France from February 10 to 12, 2025. The visit was significant in strengthening the long-standing strategic partnership between the two nations, established in 1998. **PM Modi and President Macron co-chaired the AI Action Summit in Paris**, held bilateral talks, and addressed a gathering of business leaders. The two countries also reviewed the '**Horizon 2047**' Roadmap agreed two years ago.

Key Outcomes of the PM'S France Visit

- 1. India-France declaration on Artificial Intelligence (AI)-** Both nations pledged to deepen collaboration in AI research and applications, with a focus on ethical and responsible AI development.
- 2. Launch of the India-France Year of Innovation 2026 Logo-** The official logo for the initiative was unveiled, symbolizing a shared commitment to fostering innovation and scientific collaboration.
- 3. Indo-French Center for Digital Sciences-** A Letter of Intent was signed between India's Department of Science and Technology (DST) and France's INRIA to establish a dedicated center for digital sciences, promoting research and development.

- 4. Support for Indian Startups**– An agreement was signed to host 10 Indian startups at France’s premier startup incubator, Station F, fostering entrepreneurial growth.
- 5. Collaboration on Advanced Modular and Small Modular Reactors**– A Declaration of Intent was signed to strengthen cooperation on next-generation nuclear reactor technologies.
- 6. Renewal of MoU on nuclear energy cooperation**– India’s Department of Atomic Energy (DAE) and France’s CEA renewed their agreement, reinforcing the partnership in nuclear energy.
- 7. Strengthening nuclear research collaboration**– A new implementing agreement was signed between DAE and CEA to enhance cooperation between India’s Global Center for Nuclear Energy Partnership (GCNEP) and France’s Institute for Nuclear Science and Technology (INSTN).
- 8. Triangular development cooperation**– India and France issued a joint declaration of intent to collaborate on sustainable development projects in the Indo-Pacific region.
- 9. Inauguration of India’s Consulate in Marseille**- PM Modi, along with French officials, inaugurated India’s new consulate in Marseille, strengthening diplomatic and people-to-people ties.
- 10. Environmental Partnership**– A Declaration of Intent was signed between India’s Ministry of Environment, Forest and Climate Change and France’s Ministry for the Ecological Transition to enhance cooperation on biodiversity conservation, climate action, and sustainable development.



Source- The Indian Express

What is the history of India-France Relations?

India and France have traditionally close and friendly relations.

Post India's Independence	<p>Diplomatic relations were established after India's Independence.</p> <p>a. French aircraft and helicopters like Ouragan, Mystere, Alize, Alouette, Jaguar have been part of the Indian air fleet since 1960's.</p> <p>b. In 1984, France stepped in to supply nuclear fuel to Tarapur power plant after the US backed out citing domestic constraints.</p> <p>c. France supported India's space programme since its inception, like setting up Sriharikota launch site and Centaure and Viking rocket technologies in the 1970s.</p> <p>However, the Cold War Constraints, did not let the development of a fully developed relationship.</p>
Post Cold War Era	<p>India and France entered into Strategic Partnership in 1998. The areas of defence & security cooperation, space cooperation and civil nuclear cooperation constitute the principal pillars of our Strategic Partnership</p>
<p>Agreements signed during President Macron's visit to India as Chief Guest for Republic Day 2024</p> <p>1. Defence Industrial Roadmap- To enable the joint development and production of vital military hardware and platforms.</p> <p>2. Helicopters- Tata and Airbus helicopters will partner to produce H125 helicopters in India.</p> <p>3. Fighter Jets- French engine Maker Safran to transfer 100% technology to build fighter jet engines in the country.</p> <p>4. Satellites- India's space PSU New Space India Limited and French Company Arianespace cooperation in satellite launches.</p> <p>5. Schengen Visa for Indian Students- Agreement on the activation of five year validity of Schengen visas for Indian Students pursuing their master's degree in France.</p>	

What are the areas of cooperation between India and France?

1. Geo-Political- India and France have close geopolitical relations which has only strengthened in due course of time.

- France was the **first P-5 country** to support Indian membership **in the UNSC** and the reforms of the United Nations.
- France's support was vital in India's accession to the Missile Technology Control Regime (**MTCR**), Wassenaar Arrangement (**WA**) and Australia Group (**AG**).
- France has got the **unique honour of being the country** that has been **invited the highest number of times** as chief guest for the Republic Day.

2. Geo-Strategic- France has been appreciative of the geostrategic concerns of India and has taken the following measures to bolster the geo-strategic cooperation.

- France has offered its biggest strategic asset in the Indo-Pacific territory to India. **For Ex- Indian Air Force planes** have been deployed to **Reunion Island**.
- France has also given equities in organisations such as the **Indian Ocean Commission** to India. France is also part of **India-France-Australia Trilateral Dialogue** that supports free, open and inclusive Indo-Pacific
- France has supported India on Jammu and Kashmir and has stood with India to **counter Pakistan-sponsored terrorism**, and has bolstered **India's capabilities** against China.

3. Defence and Security- India and France's Relationship in the defence and security domain has increased many folds, which are mentioned below-

- France has emerged as a key defence partner for India. It has become the **second-largest defence supplier** in 2017-2021. Major Military equipments imported from France include **Rafale** and **Mirage 2000 Fighter Aircraft** and **Scorpene Submarines**.
- India and France have been regularly conduct joint exercises- **Varuna** (Naval), **Garuda** (Air Force) and **Shakti** (Army).
- India and France have been undertaking 'joint patrolling' in the Indian Ocean Region and are striving towards **maritime domain awareness** in the Indian Ocean region.
- During recent PM Modi's visit, India offered France the DRDO-developed **Pinaka multi-barrel rocket launcher**.

4. Economic cooperation- India and France share a strong economic partnership, as outlined below

- Bilateral trade between India and France has reached a new peak at **USD 13.4 billion** in 2022-23. The exports from India have crossed **USD 7 billion**.
- France is the **11th largest foreign investor in India**. The cumulative investment of France in India is USD 10.49 billion from April 2000 to December 2022.
- More than **1,000 French establishments** are present in India. Their total turnover is around US\$ 20 billion and they employ around 300,000 persons.

5. Energy and Climate- India-France relationship is distinctly defined by the close cooperation in the fields of renewable energy to protect the Climate change.

- French support played an important role in India getting an **exemption from the Nuclear Suppliers Group (NSG) in 2008** to resume international cooperation in civil nuclear energy.
- France actively **supports India's entry** in to the **NSG**.
- India and France played a pivotal role in the establishment of **International Solar Alliance**.

6. Science and Technology- India and France share close partnership in the field of Science and Technology.

- France's CNES and India's ISRO partnership has been strengthened with the **Joint Vision for Space Cooperation in 2018**.
- India and France are collaborating on Joint Earth Observation Mission- **TRISHNA**, Joint Mars Mission and removal of space debris.
- India and France are jointly constructing the **world's largest nuclear park** in Jaitapur, Maharashtra.
- France is the first European country to accept the UPI payments system.

7. Diaspora- Around 109,000 of Indians, largely originating from French enclaves of **Puducherry, Karaikal, Yanam, Mahe** and **Chandernagore** live in France. Also, a sizable number of Indian-origin population lives in the French Overseas Territories of **Reunion Island** (280,000), **Guadeloupe** (60,000), **Martinique** (6,000) and **Saint Martin** (300).

8. Connectivity- Both countries recently agreed to strengthen cooperation on implementing the **India-Middle East-Europe Economic Corridor**, first discussed during the G20 Summit in New Delhi in 2023. The plan **includes an Eastern Corridor** linking India to the Gulf region and a Northern Corridor connecting the Gulf region to Europe. The corridor will integrate railway networks, a ship-rail transit system, and supporting road transport routes.

What is the significance of India-France Relations?

1. Securing the Indo-Pacific- India requires French support for maintaining the stability and security of the Indo-Pacific region and to counter the growing Chinese aggression. **For ex-** India-France **Joint Strategic Vision for cooperation in the Indian Ocean Region** in 2018.

2. Strategic Autonomy- The India-France relation is strategically autonomous in its truest sense, as **it is not constrained either** by the **Anglo-Saxon views** (in France) nor **the anti-western thoughts** (In India). **For ex-** France support of India after 1998 Pokhran Nuclear Test.

3. Entry to Key Organisations- France's support is crucial to India's entry into important organisations like the **UNSC** and the **NSG**.

4. Global Stability- India- France relations is crucial for checking **Russia's assertiveness in Europe** and **China's assertiveness in Asia**. This will ensure, global stability and power parity in the emerging world order.

5. Horizon 2047 Agreement- Horizon 2047 agreement between India and France lays down the future roadmap of India-France collaboration for the next 25 years. The collaboration between India and France in emerging domains such as **supercomputing, cloud computing, artificial intelligence, and quantum technologies** holds significant importance for India's future.

What are the challenges in India-France Relationship?

1. Absence of Free Trade Agreement- The absence of Free Trade Agreement has **impacted the deepening of India-France economic relations** (Bilateral trade between India and France is less than half of India's trade with Germany). Stalled progress on the **India-EU Broad based Trade and Investment agreement (BTIA)** has prevented further deepening of India-France relation.

2. Trade Imbalances and IPR issues- India- France economic relation is a concern for India as it suffers from trade imbalances (**France exports more to India**). Also, India has been criticized by France for **inadequate protection of intellectual property rights** (IPRs) of French businesses operating in India.

3. Stalled Projects- The India-France relations also face the challenge of non-operationalisation of the negotiated projects. **For ex- Stalled Jaitapur nuclear project.**

4. Differences in geopolitical approaches- While France has openly criticized the Russian Invasion in Ukraine, India has taken a nuanced approach. Also, **France's stand on China's BRI** contrasts with that of India.

5. Emerging geopolitical scenario- The Middle East disturbances like Hamas-Israel War, Chinese aggressiveness in Indian Ocean region, Ukraine-Russia war, are the emerging geopolitical tensions in India-France relations.

What should be the Way Forward?

1. Early Conclusion of FTA- India must leverage its good relations with France and convert the **idea of India-EU BTIA into reality** at the earliest.

2. Implementation of Agreement on Migration and Mobility- India and France must work jointly to **increase the mobility of students, graduates, professionals and skilled workers** while strengthening their efforts to combat irregular migration.

3. Increased Trade and Investment- The two countries must work towards increasing bilateral trade and investment with measures like **setting up joint ventures, expanding trade agreements and promoting cross-border investment.**

4. Expedition on stalled projects- A joint working group must be created to expedite the completion of the stalled projects like **Jaitpur Nuclear Power Plant.**

Read More– [The Indian Express](#)

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

New Income Tax Bill, 2025- Explained Pointwise

The Income-tax Bill, 2025, introduced in the Lok Sabha on February 13, 2025, aims to overhaul India's six-decade-old direct tax structure. The Bill **seeks to simplify the Income-tax Act, 1961**, by **removing redundant provisions, streamlining language**, and introducing a **more user-friendly framework**. Once passed by Parliament, the new law is **expected to come into effect on April 1, 2026**.



Source- The Economic Times

What is the present Status of the Income-tax Act, 1961?

1. The 1961 Act has undergone numerous amendments over the years, leading to a complex and cumbersome structure. The Act **currently spans 823 pages, with 47 chapters, 298 sections, and 1,200 provisos**.
2. Ambiguities in language and multiple cross-references have resulted in tax disputes and prolonged litigation.
3. The concept of "**previous year**" and "**assessment year**" has added to the confusion, requiring taxpayers to track two different periods.

What are the new additions in the Income-tax Bill, 2025?

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1. Simplified Structure: The Bill is 622 pages long, 24% shorter than the 1961 Act. It contains 23 chapters, 536 sections, and 16 schedules, with 57 illustrative tables compared to 18 in the 1961 Act. Redundant provisions, including 1,200 provisos and 900 explanations, have been removed.

2. Introduction of "Tax Year": The Bill replaces the concept of "previous year" and "assessment year" with a single "tax year," defined as the 12-month period from April 1 to March 31. For new businesses or professions, the tax year begins from the date of establishment and ends with the financial year.

3. Streamlined Deductions and Exemptions: Deductions for rent paid, life and health insurance premiums, provident fund contributions, and home loans are specified. Outdated exemptions, such as Section 54E (capital gains exemptions for assets transferred before April 1992), have been removed.

4. Inclusion of Virtual Digital Assets: Cryptocurrencies and other virtual digital assets are now classified as property and treated as capital assets.

5. Enhanced Dispute Resolution Mechanism: The Dispute Resolution Panel (DRP) provisions now include clear points of determination, decisions, and reasons, reducing ambiguity.

6. Digital Monitoring and Compliance: The Bill empowers the CBDT to implement digital tax monitoring systems without frequent legislative changes. "Virtual digital space" is defined to include social media accounts, email servers, cloud storage, and online banking platforms, enabling tax authorities to access information during surveys and searches.

What is the significance of the Bill and its Progress so far?

1. Simplified Language: The Bill uses clearer language, tables, and formulas to enhance understanding.

2. Reduced Litigation: By removing ambiguities, the Bill aims to reduce tax disputes and litigation.

3. Taxpayer-Friendly Approach: The focus on tabular formats for deductions, exemptions, and TDS/TCS rates makes it easier for taxpayers to navigate.

4. Modernization: The inclusion of virtual digital assets and digital monitoring systems aligns the tax framework with evolving economic realities.

Progress So Far

1. The Bill was introduced in the Lok Sabha on February 13, 2025, and will be reviewed by a Parliamentary Committee.

2. The government has incorporated over 6,500 suggestions from the public and stakeholders.

3. The Bill follows the Interim Budget 2024 announcement, where Finance Minister Nirmala Sitharaman emphasized the need for a comprehensive review of the 1961 Act.

What is the impact of the Bill?

1. Improved Taxpayer Trust: The "trust first, scrutinize later" approach will foster greater trust between taxpayers and the government, encouraging a culture of compliance.

2. Better Tax Administration: Improved clarity and reduced litigation will enhance tax administration and revenue collection.

3. Economic Growth: A modernized tax framework will support India's transition to a \$5 trillion economy by fostering a transparent and efficient tax environment.

4. Ease of Doing Business: The simplified tax structure and reduced compliance burden will improve India's ranking in the **Ease of Doing Business Index**, attracting more foreign and domestic investments. Businesses, especially MSMEs, will benefit from clearer provisions and reduced litigation, enabling them to focus on growth.

5. Support for Digital Economy: The inclusion of virtual digital assets like cryptocurrencies in the tax framework will provide clarity to investors and traders in the growing digital asset market.

What are the challenges and its future implications?

1. Implementation: Transitioning to the new system may require **significant administrative effort** and taxpayer education.

2. Digital Infrastructure Gaps: While the Bill emphasizes **digital monitoring**, uneven access to digital infrastructure, especially in **rural and remote areas**, could hinder implementation.

3. Potential for New Disputes: While the Bill aims to reduce litigation, the introduction of new concepts like **"tax year"** and virtual digital assets could lead to interpretational challenges and disputes in the initial years.

4. Resistance to Change: Stakeholders accustomed to the old system may resist adopting the new framework.

What is the way Forward?

1. Stakeholder Engagement: Continuous engagement with taxpayers, businesses, and tax professionals to address concerns and ensure smooth implementation.

2. Capacity Building: Training tax officials and upgrading digital infrastructure to support the new system.

3. Periodic Review: Regular assessment of the Bill's impact to identify and address any emerging issues.

4. Alignment with Global Best Practices: Incorporate global best practices in tax administration to ensure the new framework remains competitive and aligned with international standards. Collaborate with international organizations like the **OECD** to learn from their experiences in tax simplification.

Conclusion

The Income-tax Bill, 2025, represents a historic milestone in India's tax landscape. By simplifying the language, removing redundancies, and incorporating modern provisions, the Bill aims to create a transparent, efficient, and taxpayer-friendly system. While challenges remain, the Bill's focus on "trust first, scrutinize later" aligns with the government's vision of minimum government and maximum governance.

Read more– [The Indian Express](#)

UPSC Syllabus- GS 3– Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

India's need of DOGE- Explained Pointwise

Prime Minister Narendra Modi's recent visit to Washington and his meeting with Elon Musk have sparked discussions on how India can adopt innovative governance models like **USA's DOGE** (Department of Government Efficiency). DOGE focuses on cutting government wasteful, streamlining bureaucracy, and improving efficiency. For India, adopting a similar institutional framework can help realize the mantra of Minimum Government, Maximum Governance.



Source- X (formerly twitter)

Why does the concept of DOGE appeal in India?

- 1. Large Government Size-** India's government remains a lethargic, wasteful behemoth, with **48.47 lakh employees** and **67.95 lakh pensioners** draining taxpayer money. Salaries and pensions consume a significant portion of state budgets, leaving little for development.
- 2. Redundant and overlapping ministries-** Many ministries and departments overlap in functions, such as, **Ministry of Agriculture and Farmers Welfare** vs. **Department of Animal Husbandry and Dairying**. Further there is the presence of redundant ministries like the **Ministry of Information and Broadcasting**– an outdated institution meant for controlling media rather than facilitating it.
- 3. Inefficiencies in government setup-** The Indian office setups reflect India's socialist-era inefficiencies where 10 employees often do the work of one.
- 4. Presence of outdated posts-** The continuation of outdated posts like **collectors**, a **colonial legacy** that continues to control district development without modern governance tools.
- 5. Economic Losses-** McKinsey Global Institute (2021) has estimated that **inefficiencies in public service delivery** cost India 3% of GDP annually.
- 6. Delayed Reforms and Public Discontent-** Critical policies, such as **labour reforms** and **land acquisition**, often face bureaucratic bottlenecks. Further, delays in accessing basic government services contribute to a trust deficit between citizens and the state.

What advantages does the implementation of DOGE present?

- 1. Rationalization of Expenditure-** For India, which spends heavily on salaries and pensions for 48.47 lakh employees and 67.95 lakh retirees, DOGE could be a game-changer in realizing Modi's vision of **MIGA** (Make India Great Again).
- 2. Fiscal Prudence-** Implementation of DOGE could **free up funds** currently wasted on **redundant ministries** and **overstaffed offices**, redirecting them to critical areas like healthcare, education, and infrastructure.
- 3. Efficient Governance-** **Streamlining bureaucracy** would improve service delivery, reduce corruption, and make the government more responsive to citizens' needs.
- 4. Boost to Private Sector Growth-** DOGE would help in **reducing bureaucratic red tape**, which can attract foreign investment and stimulate job creation.
- 5. Enhanced Global Competitiveness-** A more efficient governance structure will enhance India's **Ease of Doing Business rankings**.

What are the Challenges in implementation of DOGE?

- 1. Political Resistance-** Closing ministries and reducing government jobs would face strong opposition from bureaucrats and politicians who benefit from the status quo.
- 2. Unemployment Concerns-** With government jobs being a preferred career choice, large-scale cuts could generate unemployment concerns.
- 3. Bureaucratic Resistance-** The bureaucracy remains resistant to large-scale downsizing due to political influence and employment dependencies.
- 4. Populist Constraints-** Certain state governments (Tamil Nadu, Karnataka) struggle with fiscal discipline due to populist policies.
- 5. Implementation Challenges-** Adapting the DOGE model to India's complex bureaucracy would require strong political will and effective execution.
- 6. Public Perception-** The government must ensure that reforms are seen as pro-people rather than anti-employee.

What measures can be adopted for enhancing government efficiency?

- 1. Legislation for Efficiency-** India should establish **Indian Department of Government Efficiency** (IDOG) to audit and restructure bureaucratic operations, Inspired by the U.S. Office of Management and Budget (OMB) and Singapore's Public Service Division (PSD).
- 2. Merge Redundant Ministries-** Overlapping departments like **Agriculture** and **Animal Husbandry** should be combined into a single ministry. Further, the redundant ministries like Ministry of Information and Broadcasting can be downsized and reoriented in approach.
- 3. Performance-Based Employment-** Introduce **Key Performance indicators** (KPIs) and **real-time monitoring** for civil servants. Public-Private Efficiency Task Force must be formed to recommend and oversee structural reforms.
- 4. Optimization of Government Assets-** Unused government assets should be utilized for **revenue generation**. Further, there should be acceleration of digitization & automation to reduce human resource dependency in governance.

5. Gradual Implementation- A phased approach to downsizing, ensuring re-skilling and alternative employment opportunities should be implemented for affected government employees.

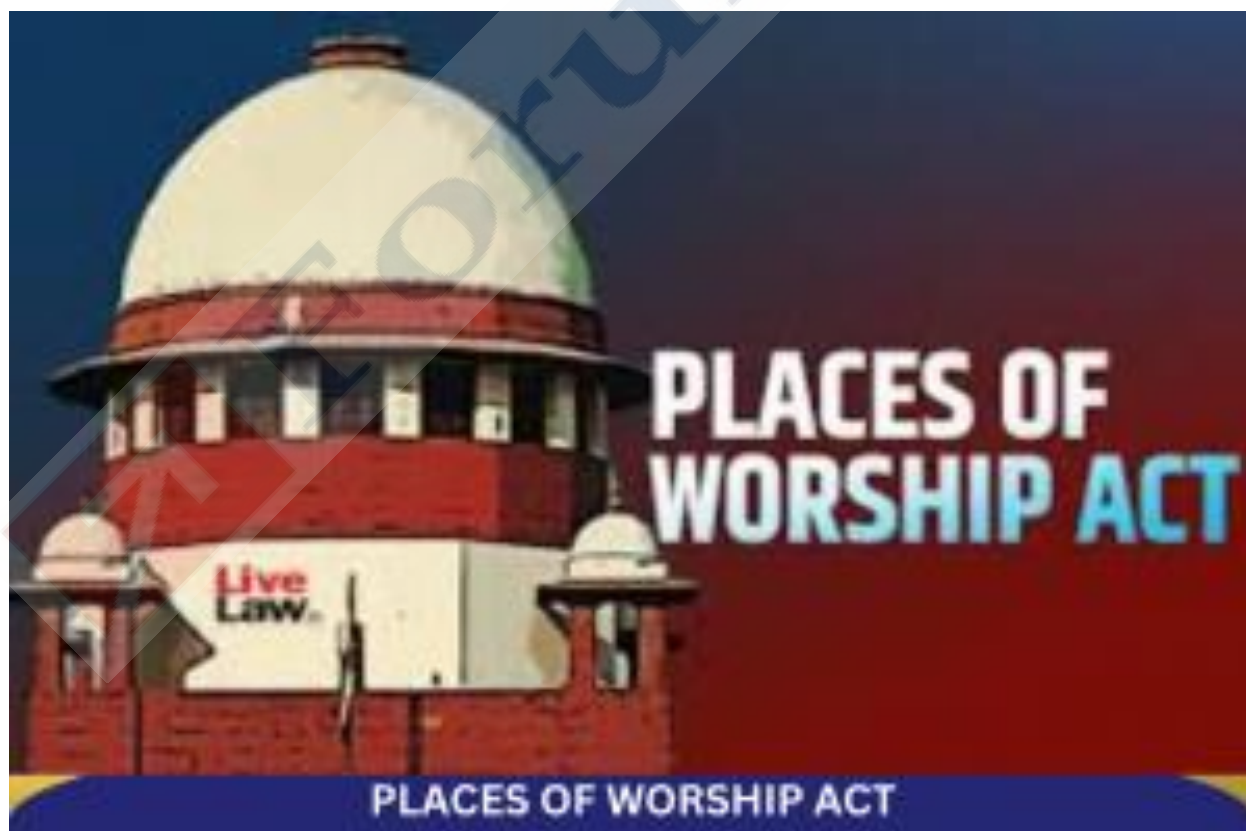
6. Global Best Practices- Learn from countries like Denmark and South Korea, which have successfully reduced government expenditure while improving public services.

India's journey towards Minimum Government, Maximum Governance requires bold reforms to eliminate bureaucratic inefficiencies and wasteful expenditure. By streamlining ministries, commercializing government assets, and abolishing outdated posts, India can free up resources for development and create a more efficient, responsive, and accountable government. In Make India Great Again, adopting DOGE could be the first step towards realizing this vision.

Read More- [The Deccan Herald](#)
UPSC Syllabus- GS 2 Governance

Places of Worship Act 1991- Explained Pointwise

Chief Justice of India Sanjiv Khanna has **barred new petitions challenging the Places of Worship Act, 1991**. While rejecting fresh filings, the Supreme Court has allowed intervention petitions introducing new legal grounds. The Act prohibits altering the religious character of places of worship as they stood in 1947, except for the Ram Janmabhoomi dispute. The recent **Sambhal** and **Ajmer Sharif shrine disputes**, has also brought the Places of Worship Act 1991, back into national focus. The Act was enacted to freeze the status of religious places of worship as they existed on 15th August, 1947. It **prohibits conversion of any place of worship** and **provides for the maintenance of the religious character** of any place of worship.



However, former Chief Justice D.Y. Chandrachud's remark that the Places of Worship Act does not preclude determining a site's religious character on the specified date (15th August, 1947), has brought much confusion to the law.

What is the background, aim and major provisions of the Places of Worship Act 1991?

Background of the Act- As the **Babri-Masjid Ram Janmabhoomi** dispute escalated, the Vishwa Hindu Parishad and other Hindu organizations also contested the **Gyanvapi mosque in Varanasi** and the **Shahi Idgah in Mathura**. In September 1991, the P.V. Narasimha Rao government passed a special law freezing the status of places of worship as they were on August 15, 1947. This law excluded the Ayodhya structure since its litigation was still in progress.

Aim of the Act- The Act aims to **prevent the conversion of any place of worship** and ensure the **preservation of its religious character**. It states that the religious character of a place of worship must remain as it was on **August 15, 1947**.

Major Provisions of the Act

Prohibition of Conversion (Section 3)	Prevents the conversion of a place of worship , whether in full or part, from one religious' denomination to another or within the same denomination.
Maintenance of Religious Character (Section 4(1))	Ensures that the religious identity of a place of worship remains the same as it was on August 15, 1947 .
Abatement of Pending Cases (Section 4(2))	Declares that any ongoing legal proceedings concerning the conversion of a place of worship's religious character before August 15, 1947, will be terminated , and no new cases can be initiated .
Exceptions to the Act (Section 5)	<p>a. The Act does not apply to ancient and historical monuments, archaeological sites, and remains covered by the Ancient Monuments and Archaeological Sites and Remains Act, 1958.</p> <p>b. It also excludes cases that have already been settled or resolved and disputes that have been resolved by mutual agreement or conversions that occurred before the Act came into effect.</p> <p>c. The Act does not extend to the specific place of worship known as Ram Janmabhoomi-Babri Masjid in Ayodhya, including any legal proceedings associated with it.</p>
Penalties (Section 6)	Specifies penalties, including a maximum imprisonment term of three years and fines , for violating the Act.
Read More- The Places of Worship Act, 1991	

What are the arguments raised against the Places of Worship Act 1991?

- 1. Unconstitutional as it bars judicial review-** Critics of the act hold it unconstitutional as it **bars the right to seek judicial review of a grievance** (Art 13(2)).
- 2. Violation of principle of law 'ubi jus ibi remedium'**- Critics hold that the Places of Worship Act goes against the principle of law '**ubi jus ibi remedium**' (**where there is a right, there is a remedy**). It thus **violates the concept of Rule of Law**, which is the core of Article 14.
- 3. Arbitrary and irrational retrospective cutoff date-** The opponents of the Act criticize it on the account of it **creating arbitrary irrational retrospective cutoff dates**. The status quo determined by a colonial power is

considered final by barring the remedies against illegal encroachment on the places of worship and pilgrimages.

4. Violation of principle of Secularism- The critics of the Places of Worship Act criticize the act for violating the principle of secularism. The prohibition of Hindus, Jains, Buddhists, and Sikhs from reclaiming their places of worship which were invaded and encroached upon by fundamentalist barbaric invaders, is cited as a major reason for the opposition of Places of Worship Act.

5. Violation of Freedom of Religion- The Places of Worship Act, 1991 is held by its critics against the liberty of belief, faith, and worship to all citizens. Freedom of religion is guaranteed to all citizens under Articles 25 and 26 of the Constitution.

What is the significance of Places of Worship Act 1991?

1. Preservation of Religious Status Quo- The Act ensures the continuity of religious practices and prevents retrospective claims on places of worship by mandating that the religious character of all places of worship, as it stood on August 15, 1947, cannot be altered.

2. Promotion of Communal Harmony- The Act aims to prevent communal tensions and conflicts by prohibiting the conversion of any place of worship.

3. Promotion of Secularism- The law reinforces India's commitment to secularism by ensuring that disputes over religious sites do not undermine the principle of equality among all religions.

4. Deterrence Against Misuse- The Act discourages individuals or groups from attempting to stir communal unrest for political or social gains by criminalizing the alteration of religious sites.

What implications are created by challenges against the Places of Worship Act 1991?

1. Threat to Secularism- The challenges to the Places of Worship Act potentially undermine India's commitment to secularism, as the Act was designed to protect the religious character of places of worship.

2. Political Implications- The petitions and debates are becoming a tool in political agendas and are influencing political narratives

3. Historical Reinterpretation- The petitions, by questioning historical facts and attempting to change the religious status of sites, could lead to a reinterpretation of history, impacting the collective memory and cultural heritage of the nation.

4. Public Trust and Harmony- Challenges to the Act and the filing of numerous petitions against mosques risk breaching of public trust and could lead to communal disharmony. The recent case of Sambhal Violence is the case in Point.

Way Forward

1. Comprehensive evaluation by SC- The SC must conduct a comprehensive evaluation of the Places of Worship Act to address its criticisms and limitations.

2. Safeguarding judicial review- The judiciary's ability to review cases must be safeguarded to ensure that the constitutional rights are upheld.

3. Maintenance of Balance- A balance must be maintained between protecting the religious character of sites and respecting the rights of diverse communities.

4. Promotion of fairness and consistency- Fairness and consistency must be promoted through public consultation, transparency, and reconsideration of exclusions for specific sites.

Read More- [The Hindu](#)

UPSC Syllabus- GS 2- Indian Constitution

Disaster Management Bill 2024- Explained Pointwise

Recently, the Government of India introduced a bill proposing **several amendments to the Disaster Management Act 2005**. These amendments to the act mainly aim at **improving the operational efficiencies** in responding to a natural disaster. Though the Bill seeks to significantly expand the role and responsibilities of the National Disaster Management Authority (NDMA), however, it misses the opportunity to upgrade and strengthen the institutional status of NDMA.

What are the Important Changes introduced in the Disaster Management (Amendment) Bill 2024?

Establishment of Urban Disaster Management Authorities	The amendment Bill seeks to establish an Urban Disaster Management Authority headed by the Municipal commissioner for large metropolitan cities, which often comprise many districts. This can help in having a unified and coordinated approach towards city-level disasters such as urban flooding.
Mandatory for the States to raise SDRF	The Disaster Management Act 2005, did not make it mandatory for the states to raise State Disaster Response Force (SDRF) . The size and capacity of the SDRFs in the states vary significantly. The Bill proposes to make it mandatory for every state to raise and maintain an SDRF.
Legal Status to National Crisis Management Committee (NCCM)	The amendment Bill gives legal status to the NCCM . It makes NCCM the nodal body to deal with disasters with 'serious or national ramifications.'
Enhanced role of NDMA	The Bill proposes to significantly expand the role and responsibilities of the NDMA. It will take stock of the entire range of disaster risks to the country, including risks from emerging disasters .
Shift of responsibilities in the preparation of Disaster Plans	The National Disaster Management Authority (NDMA) and State Disaster Management Authorities will be responsible for preparation of disaster plans at the national and state levels. Earlier, the disaster management plans were prepared by the National Executive Committee and State Executive Committees.
Creation of Disaster Databases	The NDMA will be required to create and maintain a national disaster database with information on the assessment of the disaster, fund allocation, expenditure, and preparedness and mitigation plans . The SDMA's will also need to create state-level disaster databases .
Compensations	The Bill proposes that the NDMA should recommend guidelines for minimum standards of relief to be provided to people affected by disasters. This includes a recommendation on compensation amounts in case of loss of lives, damage to homes and property, and loss of livelihoods .
Clarified definition of Disasters	The Bill clarifies that the definition of Disasters does not include man-made disasters caused due to law-and-order situation. For ex- Loss of lives, suffering, or property damage in a riot would not fall in the disaster.

What are the concerns with the Disaster Management (Amendment) Bill 2024?

The Disaster Management (Amendment) Bill, 2024, raises significant concerns as it overlooks participatory governance, accountability, and efficiency. Instead of addressing the gaps in the Disaster Management Act (DMA), 2005, the Bill dilutes critical provisions, weakening its framework.

- 1. Top-Down Terminology-** The Bill **employs top-down language** like 'monitor' and 'guidelines' instead of inclusive terms such as 'supervision' and 'direction.'
- 2. Less focus on Community Engagement-** Critics argue that the Bill **excludes local communities**, which global frameworks like the Yokohama Strategy and Sendai Framework recognize as first responders.
- 3. Weak Acknowledgment of Local Roles-** The Bill fails to integrate the roles of local communities, panchayats, and NGOs. Historical events like **Cyclone Aila (2009)**, **Kedarnath floods (2013)**, and **Kerala floods (2018)** have highlighted the proactive role of locals leading initial rescue efforts before the arrival of official teams.
- 4. Ignorance of Intersectional Vulnerabilities-** Critics argue that the Bill does not address intersectional discrimination, **leaving vulnerable groups such as women, the disabled, lower castes, and LGBTQIA communities exposed to systemic neglect**. It disregards the importance of inclusive datasets to capture layers of discrimination.
- 5. Absence of Performance Evaluation-** The Bill lacks mechanisms for assessing district authorities' preparedness.
- 6. Removal of Relief Standards-** **Sections 12 and 13** of the **Disaster Management Act 2005**, which mandated minimum relief standards and loan repayment assistance, have been removed. Similarly, Section 19, which ensured State compliance with relief standards and provided for widows, orphans, and livelihood restoration, has been dropped without replacement.
- 7. Reduced Enforcement Provisions-** Mandatory enforcement measures in Sections 35(2b) and 35(2d) that promoted disaster preparedness have been removed.
- 8. Neglect of Animal Welfare-** The Bill completely ignores animal welfare during disasters, despite the thousands of animals affected during a disaster.
- 9. Lack of Regional Collaboration-** The Bill fails to address regional cooperation despite rising zoonotic and epizootic diseases. It overlooks frameworks like the 2011 SAARC Agreement on Rapid Response to Natural Disasters and potential partnerships with SAARC, BIMSTEC, and BRICS.

What is the Disaster Management Act, 2005? What is the objective of the Act?

The Disaster Management Act, 2005 was enacted in India to provide a **comprehensive framework** for **disaster management** across the country. The Act encompasses **11 chapters** and **79 sections**, focusing on effective disaster management, risk reduction, and rehabilitation efforts.

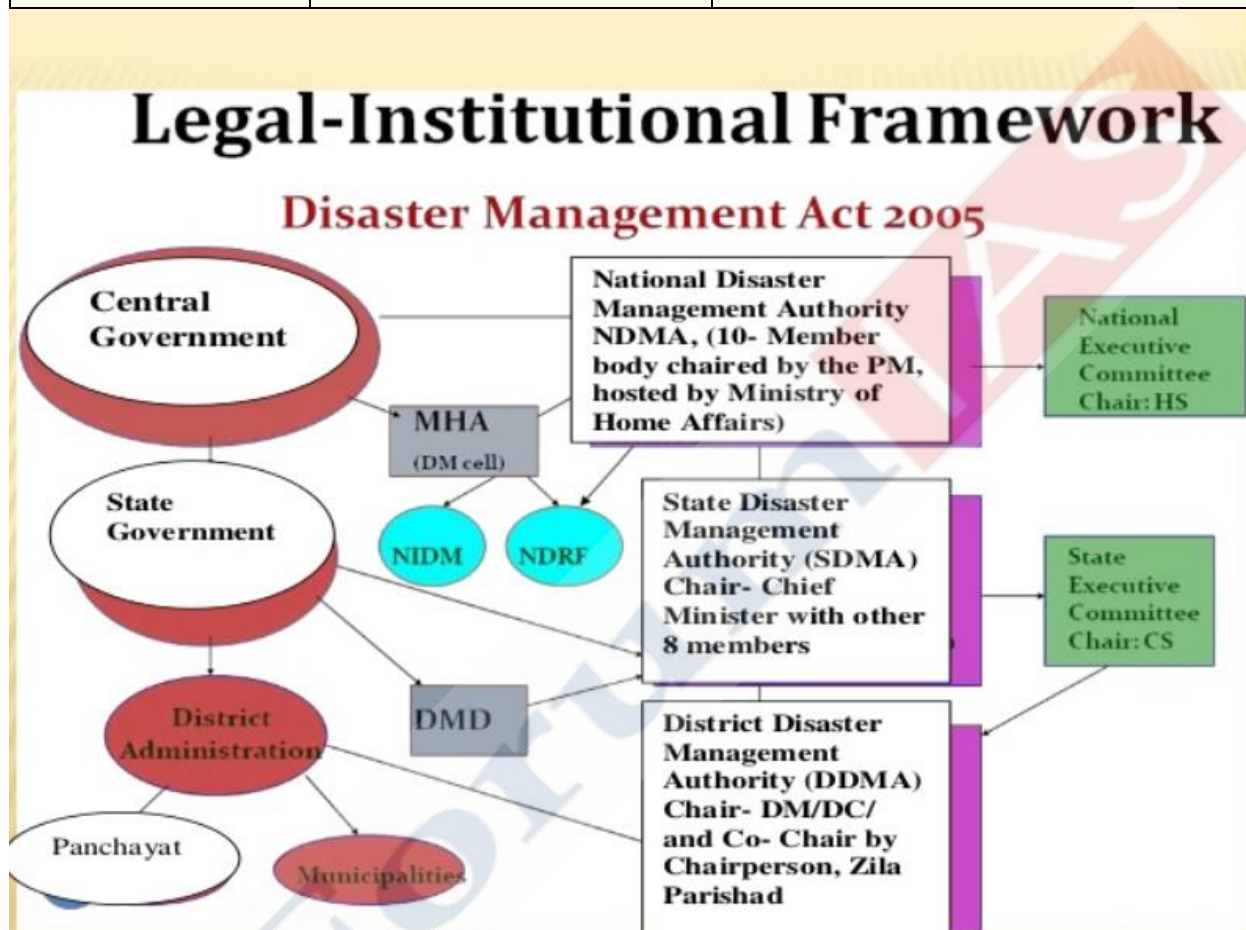
Objectives of the Disaster Management Act 2005

- a. Disaster Management Policies-** The Act seeks to formulate and execute disaster management policies.
- b. Disaster prevention and Mitigation-** The act seeks to provide necessary measures for disaster prevention, mitigation, by enhancing preparedness and capacity building for the anticipated forthcoming calamities.
- c. Disaster Relief-** The Act seeks to provide financial aid and assistance to the disaster-affected state and people.

Legal-Institutional Framework of the DM Act 2005

Institutions	Role	Composition
First Tier		
National Disaster Management Authority (NDMA) (Section 3)	Act as the central body for disaster management policies, plans, and guidelines (Section 6)	Chairperson- Prime Minister Members- Ministers of State for Home Affairs, Agriculture, Atomic Energy, Science & Technology, and other relevant ministries Vice-Chairperson and other members- As nominated by the Chairperson
National Executive Committee (NEC)(Section 8)	Assist the NDMA in performing its functions and ensure compliance with the directions.	Chairperson- Home Secretary Members- Secretaries to the Government of India in various departments, Chief of the Integrated Defense Staff of the Chiefs of Staff Committee
National Institute of Disaster Management (NIDM) (Section 42)	Training, research, and capacity-building institution.	Director- Appointed by the Central Govt. Members- Experts and professionals in disaster management and related fields
National Disaster Response Force (NDRF) (Section 44)	Special response force for disaster situations	Control- Director-General appointed by the Central Government Composition- Various battalions from Central Armed Police Forces
Second Tier		
State Disaster Management Authority (SDMA) (Section 14)	Lay down the state disaster management plan and policies	Chairperson- Chief Minister Members- Ministers nominated by the Chief Minister, including the Minister for Disaster Management
State Executive Committee (SEC) (Section 20)	Ensure that the state's disaster management plan is implemented with coordination and monitoring.	Chairperson- The state's chief secretary Members- Department secretaries, as determined by the state government.
Third Tier		
District Disaster Management Authority (DDMA) (Section 25)	Organize, plan, and carry out disaster management initiatives at the district level.	Chairperson- District Magistrate Co-Chairperson- Elected representative of the local authority Members- Include the Chief Medical Officer, Superintendent of Police, and additional district-level personnel nominated by the state government.

Local Authorities (Section 41)	Execute disaster management procedures in compliance with district and state plans .	Composition- Consists of town planning authorities, municipalities, district and cantonment boards, Panchayati Raj establishments, and other organizations in charge of urban development and planning.
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Source- Slide Share

Funding Framework Provided by the Disaster Management Act 2005

The funding framework of the Disaster Management Act (DMA) 2005 in India is primarily structured around two key financial instruments- the **National Disaster Response Fund (NDRF)** and the **State Disaster Response Fund (SDRF)**.

National Disaster Response Fund (NDRF)	The NDRF is established to provide timely financial assistance for immediate relief and rehabilitation during disasters. The NDRF is funded by the central government , and its utilization is governed by guidelines issued by the National Disaster Management Authority (NDMA) .
State Disaster Response Fund (SDRF)	The SDRF operates at the state level, complementing the NDRF. Each state government is required to establish its own SDRF to address local disaster management needs. The SDRF is funded through contributions from both

	the central and state governments, with the central government typically providing a significant portion of the funding.
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What is the Significance of the Disaster Management Act 2005?

1. Establishment of Legal institutional Framework- The Act has led to the creation of the **NDMA, SDMA**s at the state level, a National Disaster Response Force (**NDRF**), and a National Institute of Disaster Management (**NIDM**). These institutions help in mitigating disasters by promoting disaster-related research, training, awareness, and capacity building.

2. Disaster Mitigation- The institutional framework provided by the Disaster Management Act, has **served India well in dealing with natural disasters**. Over the years, it has helped in saving thousands of lives, and has provided **relief, rescue and rehabilitation services**.

3. Emphasis on Disaster Risk Reduction- The Act emphasizes the importance of disaster risk reduction by promoting the **integration of disaster management** into **development planning processes**. For **ex- National Disaster Management Policy in 2009** and **National Disaster Management Plan in 2016**, stress on the importance of Disaster Risk reduction which is the main aim of the Act.

4. Facilitation of Resource Allocation- The Act provides for the establishment of the National Disaster Response Fund (**NDRF**) and State Disaster Response Funds (**SDRFs**) to ensure **timely financial assistance** for disaster response and relief operations.

5. Promotion of Community Participation- The Act recognizes the importance of community participation in disaster management by **emphasizing the role of local authorities** and **community groups** in disaster response and recovery efforts.

What are the Challenges with the Disaster Management Act in India?

Institutional Challenges

1. Absence of vice-chairperson of NDMA- The post of Vice chairman of NDMA has been **vacant for about a decade**. The absence of Vice-chairperson has **deprived NDMA of the leadership** and the **necessary political heft to deal with states** and other Government agencies.

2. Lack of administrative financial powers- NDMA **lacks administrative financial powers**, and routing of every small decision through the Home Ministry is an inefficient and time-consuming process.

3. Staff-Shortage in NDMA- The NDMA is severely short-staffed at the top. There are only three functioning members in NDMA. Earlier, the NDMA would have **six to seven members**, with each in charge of a specific type of disaster.

4. NDMA's Invisibility during major crises- The Disaster Management Act has been criticised for its inadequate project planning and execution. National Disaster Management Authority (**NDMA**) was **nearly invisible during major crises** like the **COVID-19 pandemic**.

Functional Challenges

1. Ineffective integration and prioritisation of disaster risk reduction (DRR) efforts- Disaster risk reduction (**DRR**) efforts are **critical for mitigating the impact of disasters**. Comparative studies have highlighted the lack of integration of disaster risk reduction (**DRR**) efforts with the developmental works.

2. Ineffectiveness in addressing Public Health Crises- The Act lacks functional provisions to comprehensively address the relief, rescue and rehabilitation in cases of **epidemics** and **bioterrorism**.

3. Lack of emphasis on Man-made hazards and Climate change risks- The Act has **not effectively addressed** the systemic and cascading nature of **climate-change related disasters** and **man-made disasters**.

4. Centralised and Top-Down Functioning- The centralized and top-down functional nature of the Disaster Management Act has often led to the **neglect of local and community-based interventions** crucial for long-term resilience and recovery.

Funding Challenges

1. Inadequate Funding- The allocated funds are insufficient to meet the actual needs during large-scale disasters. This has led to delays in response and recovery.

2. Bureaucratic Delays- The disbursement process prescribed by the DMA has met with bureaucratic hurdles, hindering timely assistance to affected populations.

What Should be the Way Forward?

1. Revision of key definitions- **Section 2 of the Act** should be **amended to include explicit definitions** for 'hazards,' 'prevention,' and 'mitigation,'. This will provide consistency and clarity throughout the Act.

2. Inclusion of disaster prevention chapters- Chapters that **explicitly address disaster prevention** and include **comprehensive prevention plans** should be introduced and included.

3. Enhanced accountability measures- **Judicial oversight to hold officials accountable** for their actions under the Act must be enhanced under the Act. This would enhance transparency and effectiveness of the Act.

4. Modernization of early warning systems- The early warning and forecasting clauses must be updated to incorporate **modern technologies** such as **GIS** and **AI**. This would improve prediction accuracy and response in cases of Disaster.

5. Community engagement and policymaker involvement- **Community awareness of disaster risks and management strategies** should be **enhanced**. The active engagement of policymakers and stakeholders in supporting and implementing disaster risk reduction and management initiatives, should be prioritised.

6. Special resource allocation- Specific annual budget allocations for disaster management must be **designated to ensure adequate funding for Disaster Management**.

Adopting these recommendations can transform the Disaster Management Act of 2005 into a more effective tool, promoting a proactive, organized, and successful approach to disaster management in India.

Read More- [The Hindu](#)

UPSC Syllabus- GS-3 Disaster Management

India-Qatar Relations- Explained Pointwise

India's relationship with Qatar has evolved into a strategic partnership, marked by significant developments in trade, energy, and security. The recent visit of Qatar's Emir, Sheikh Tamim bin Hamad Al-Thani, to India in February 2025 underscores the deepening ties, with agreements to double bilateral trade to 28 billion and Qatar's pledge to invest 10 billion in India. This partnership is pivotal for India's energy security, economic growth, and geopolitical influence in West Asia.

Key Highlights of the Recent India-Qatar Bilateral Engagement

Trade Expansion- Both nations have set an ambitious goal to double bilateral trade from \$14 billion to

\$28 billion by 2030. India and Qatar have also agreed to double bilateral trade by 2030 and explore a Comprehensive Economic Partnership Agreement (CEPA).

Financial & Economic Collaboration- India and Qatar have signed a Revised Double Taxation Avoidance Agreement to prevent fiscal evasion. Further, there will be operationalization of UPI in QNB's Points of Sales in Qatar.

Investment- Qatar has committed to investing \$10 billion in India, focusing on sectors such as infrastructure, technology, manufacturing, food security, logistics, and hospitality.

Security & Counter-Terrorism- Both leaders of India and Qatar have unequivocally condemned terrorism, including cross-border terrorism. Further, there will be strengthening of intelligence sharing, law enforcement collaboration, and cybersecurity measures.

Regional & Global Cooperation: India and Qatar have pledged to work together on UN reforms, particularly the Security Council. Further, there will be strengthening of ties within the Gulf Cooperation Council (GCC), with Qatar facilitating India-GCC strategic dialogue.

What is the history of India-Qatar diplomatic relations?



Source- Britannica Encyclopedia

1971	India was among the few countries which recognized Qatar soon after its independence in 1971.
1973	India and Qatar established full diplomatic relations in 1973. Year 2023, marks the 50 years of the bilateral diplomatic relations.
2008	Visit of PM Manmohan Singh to Qatar marked a significant turning point in India-Qatar Relations.
2015	The Emir of Sheikh Tamim Bin Hamad Al Thani visited India in 2015.
2016	PM Narendra Modi visited Qatar in 2016.

What is the significance of India-Qatar Relations?

Political Significance- Qatar's membership in **Gulf Cooperation Council (GCC)** is politically significant for India, especially concerning issues like Kashmir. Also, India needs support of Qatar for **UNSC permanent membership**.

Energy Security- Qatar is the largest supplier of LNG to India. LNG makes up almost **50% of our LNG imports**.

Strong economic and trade ties- India is among the **top four largest export destinations** for Qatar (Qatar exports to India- LNG, LPG, chemicals and petrochemicals, fertilisers, plastics). India is also among the **top three sources of Qatar's imports** (India's key exports to Qatar include cereals, copper articles, iron and steel articles, vegetables, fruits).

Strong Business Presence of Indian Companies- Several Indian Companies like L&T, Wipro, TCS and TechMahindra operate in Qatar.

Large Expatriate Community and Remittances- Around **8 lakh Indian expatriate community** live and work in Qatar. The flow of remittances (**around 750 million dollars**) and safety of Indian expatriate community, makes Qatar vital for India's interest.

Defence and strategic co-operation- India and Qatar have signed a **Defence Cooperation Agreement for stronger defence cooperation**. The maritime relations are further strengthened by **Exercise Zair-Al-Bahr**.

Vibrant Cultural Exchanges- Cultural events organised by community organizations affiliated to the **Indian Cultural Centre (ICC)**. Qatar was a co-sponsor of India's resolution for **declaration of June 21 as International Yoga Day**.

What are the Challenges in the India-Qatar Relations?

Trade Imbalance: India's trade deficit with Qatar remains high, with Qatari exports dominating the trade basket.

Energy Security Dependence: India relies **heavily on Qatar for LNG imports** (over 40% of its total LNG needs). Any geopolitical instability or disruptions in supply chains (such as price hikes or policy changes) could impact India's energy security and economic growth.

Regional Geopolitical Dynamics: The **Israel-Hamas conflict** and **US-Gulf tensions** pose challenges to India's balanced diplomacy.

Diaspora Concerns: Labor rights issues and occasional anti-India narratives in Qatari media require diplomatic attention. **For ex- Kafala System**.

Anti-India Narratives: Some Qatari media outlets and social media influencers have echoed critical narratives about India's internal policies, particularly concerning religious and human rights issues.

What Should be the Way Forward?

Strategic Alignment: Focus on long-term partnerships in energy, technology, and infrastructure.

Regional Stability & Diplomacy: Utilize Qatar's mediation role to navigate conflicts in West Asia and Afghanistan.

Economic Diversification: Reduce trade dependency on LNG by expanding into technology, fintech, and advanced manufacturing.

Institutional Frameworks: Establish joint business forums and investment treaties to facilitate smoother economic cooperation.

Conclusion

The India-Qatar strategic partnership marks a significant milestone in India's West Asia policy, offering immense opportunities for economic growth, energy security, and geopolitical influence. By addressing challenges like trade deficits and diaspora welfare, and leveraging Qatar's mediation role in regional conflicts, India can strengthen its position in West Asia. The partnership, rooted in mutual trust and shared interests, is poised to play a pivotal role in shaping the future of the region and advancing India's global aspirations.

Read More- [The Hindu](#)

UPSC Syllabus- GS 2- International Relations

India's Tech Education Problems- Explained Pointwise

India, home to the **third-largest startup ecosystem (DPIIT)** and a **booming IT industry**, is facing a **paradox**—while the **demand for tech talent is surging**, the **quality of tech education in India is declining**. According to recently released **India's Graduate Skill Index 2025** by Mercer-Mettl report there has been a **drop in overall employability from 44.3% in 2023 to 42.6% in 2024**. Similarly, **TeamLease Digital's report** finds that only 45% job seekers are employable in Indian IT-tech sector due to skill crunches. This mismatch between tech education skills and industry requirements raises concerns about India's ability to sustain its digital economy.



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What is the present status of Tech Education in India?

1. Market and Valuation- The EdTech sector is valued at **\$7.5 billion** (2024) and is projected to reach **\$29 billion by 2030**, growing at a CAGR of 25.8%, with over 100 Mn paid users. Skill development, K12, test preparation, and online certification are the fastest growing subsegments of India's edtech sector. This space has five unicorns: PhysicsWallah, LEAD, Eruditus, upGrad, and Vedantu.

2. Declining Quality of Engineering Institution- Of 3,500+ engineering colleges, over **50% face low enrolments** due to poor faculty, outdated curricula, and lack of research infrastructure. Also, **2/3 MTech seats in India's engineering colleges lie vacant** (AICTE Report 2023). NAAC's 2023 assessment found that only 10% of institutions offer tech programs with an 'A+' rating (Academic Bank of Credits, Ministry of Education).

3. Skill Gap and Outdated Curriculum- Indian graduates lack industry-relevant skills, especially in AI, blockchain, and cybersecurity, with only **46% of graduates employable in AI/ML-driven roles** (Mercer-Mettl). Universities still focus on rote learning rather than problem-solving, coding proficiency, and innovation.

4. Limited AI Research and Patents- According to the Stanford AI Index 2024, China produced 4x more AI research papers than India. The US remains the leader in high-impact AI research. India holds <1% of global AI patents, while China leads with 60%.

What is the significance of Tech Education in India?

Driving Economic Growth- The IT sector contributes 8% to GDP, employing 5M+ professionals (NASSCOM 2024). A well-trained tech workforce could add \$1 trillion to India's economy by 2030 (McKinsey 2023).

Boost to Innovation and Startups- India ranks 3rd globally in startups ecosystem, yet only 30% of tech startups survive beyond three years due to lack of expertise.

Enhanced Employability and Global Competitiveness- 2024 WEF Report ranks India 112/130 nations in terms of workforce readiness for Industry 4.0. With the rise of AI-driven automation, tech skills are crucial to prevent large-scale unemployment.

Strengthening National Security- India is facing rising cyber threats, yet there are only 10,000 cybersecurity professionals graduate annually, far below the 1 million demand projected by CERT-IN (2024). Improved tech education will lead to strengthening of national security.

Increased Demand of tech professionals- Global capability centers (GCCs) and non-tech sectors like BFSI, communication, media and technology, retail and consumer business, life sciences and healthcare, engineering research and development, and energy and resources, have expanded entry-level hiring of tech professionals.

What are the challenges in tech education in India?

1. Doctoral Deficit- Despite producing the **world's second-highest number of engineering graduates**, **India lags behind the US and China in doctoral programmes**. The numbers reveal a stark disparity, as India has only one-third of the number of PhD holders compared to the US and one-fifth compared to China. This shortage at the advanced research level directly impacts innovation and intellectual property creation.

2. Industry-Academia Gap- Only **7% of colleges have strong industry tie-ups** (AICTE 2023). Internship opportunities in tech sector remains scarce.

3. Faculty Shortage and Quality of Teaching- **35% of engineering faculty positions are vacant** (AICTE 2024), with many professors lacking industry experience.

4. Brain Drain and Migration of Tech Talent- Over 50,000 Indian engineers migrate annually to the US, Canada, and Europe for better opportunities (MEITY Report 2023). India struggles to retain top talent due to low salaries, research limitations, and bureaucratic hurdles.

5. Limited Focus on Emerging Technologies- Only 15% of universities offer courses in AI, blockchain, and quantum computing (AICTE 2024). While DeepSeek-V2 and GPT-4 are globally competitive, India has no major homegrown generative AI product at scale.

6. Digital Divide in Tech Education- Rural students struggle with poor internet access and limited exposure to coding and IT skills. Only 18% of government schools offer basic computer education (ASER Report 2023).

What steps have been taken for reforming the tech education landscape of India?

Policy Initiatives & Implementation

1. National Education Policy (NEP) 2020- Introduction of coding from Class 6, multiple entry-exit options in higher education with focus on experiential learning.

2. Skill India Digital Hub (SIDH)- A comprehensive digital platform designed to synergize and transform the skills, education, employment, and entrepreneurship landscape in India.

3. Development of AI-Powered Educational Platforms- Collaborations between the government, educational institutions, and tech companies have led to the creation of AI-powered platforms such as DIKSHA, NISHTHA Online, and SWAYAM.

Infrastructure Development

1. Smart India Hackathon- Engaged 2M+ students, solved 500+ real-world problems, and generated 200+ startup ideas since 2017.

2. Technology Innovation Hubs- Under the NM-ICPS, 25 Technology Innovation Hubs (TIHs) have been established in reputed institutes across the country and each TIH has been assigned a Technology Vertical in the areas of advanced technologies.

Industry-Academia Partnerships

1. Future Skills PRIME- NASSCOM-Meity partnership aimed at making India a Digital Talent Nation.

2. Infosys Springboard- Infosys launched this platform to provide free online courses in programming, AI, and data science to students and professionals.

What should be the Way Forward?

1. Industry-Aligned Curriculum and Skilling Initiatives-

- Mandating AI, data science, and cloud computing as part of core engineering courses.
- Collaborations with tech giants like Google, Microsoft, and TCS for updated course modules and certifications.
- Government programs like Skill India and NASSCOM's FutureSkills Prime should be scaled up.

2. Strengthening Research and Innovation-

- Increasing R&D spending from 0.7% to 2% of GDP to match global standards.
- Encouraging tech startups in universities with dedicated incubators.
- Incentivizing patent filings through subsidies and mentorship programs.

3. Digital Infrastructure and Accessibility- Expanding high-speed internet and smart classrooms in rural India. Free or subsidized coding courses and e-learning platforms for underserved students.

4. Faculty Development and International Collaboration- Upgrading faculty training programs with industry exposure. Hiring foreign professors and fostering global university tie-ups.

5. Bridging the Gender Gap in STEM- Scholarships and mentorship programs for women in tech. Mandatory diversity policies in educational institutions.

6. Retaining Indian Talent- Higher salaries, tax incentives, and research grants to keep top engineers in India. Creating more AI & deep-tech job opportunities to reduce brain drain.

India stands at a critical juncture—either tech education becomes a bottleneck or a launchpad for global leadership. By reforming curricula, fostering industry-academia collaboration, and investing in emerging technologies, India can position itself as a leader in innovation and economic growth. The futureDESIGN, futureLABS, and futureSKILLS strategy aligns with India's vision for Viksit Bharat 2047, making technology the driving force for the nation's future.

Read More- [The Indian Express](#)

UPSC Syllabus- GS 2- Issues Related to Education

Ragging in India – Challenges & Measures Explained Pointwise

Ragging in educational institutions has been a persistent issue in India, often resulting in severe physical, psychological, and emotional harm to students. Despite strict legal provisions and Supreme Court directives, incidents of ragging continue to occur, as highlighted by the **recent cases in Kerala's Government College of Nursing, Kottayam**, and Government College, Karyavattom, Thiruvananthapuram. This article explores the issue of ragging, its impact, reasons for its persistence, and measures to eradicate it effectively. **Ragging in India**



Source- The Indian Express

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What is the definition of Ragging?

The Supreme Court of India, in the **Vishwa Jagriti Mission v. Central Government (2001) case**, defined ragging as any act that:

- Involves disorderly conduct, spoken or written words that tease or treat a fresher/junior rudely.
- Displays **rowdy or undisciplined behavior** causing annoyance, hardship, or psychological harm.
- **Instills fear or apprehension** in freshers/juniors.
- Forces students to perform acts they wouldn't normally do, leading to shame or embarrassment.
- Adversely affects the physical or mental well-being of students.

Ragging can take many forms, including physical, psychological, sexual, or verbal abuse, often leading to severe consequences such as depression, anxiety, and even suicides.

What are the recent incidents of ragging and related statistics?

Despite efforts to curb ragging, incidents continue to be reported across the country. Some concerning statistics include:

Kerala Case (2025)	A video from a Government Nursing College in Kottayam showed a student being tied and assaulted, highlighting the persistent issue of ragging.
UGC Helpline Data (2009-2023)	<ol style="list-style-type: none"> 1. Over 8,000 ragging complaints were logged. 2. Complaints increased by 208% from 2012 (358 complaints) to 2022 (1,103 complaints). 3. 78 student deaths allegedly due to ragging between 2012 and 2023.
State-wise Data	<ol style="list-style-type: none"> 1. Highest student deaths: Maharashtra (10), Uttar Pradesh & Tamil Nadu (7 each), Telangana (6), Andhra Pradesh (5), Madhya Pradesh (4). 2. Highest complaints: Uttar Pradesh (1,202), Madhya Pradesh (795), West Bengal (728), Odisha (517), Bihar (476), Maharashtra (393).
Institutions with most complaints	<ol style="list-style-type: none"> 1. Banaras Hindu University (BHU) – 72 complaints. 2. Maulana Azad National Institute of Technology, Bhopal – 53 complaints. 3. MKCG Medical College, Berhampur – 49 complaints.

What are the consequences of Ragging?

1. Impact on Victims

- **Physical harm:** Cases of injuries, disabilities, and even deaths due to violent ragging.
- **Psychological trauma:** Victims suffer from anxiety, depression and suicidal tendencies.
- **Academic disruption:** Fear of harassment leads to loss of focus, absenteeism, and declining performance.
- **Health issues:** Stress-induced problems like insomnia, eating disorders, and substance abuse.

2. Legal consequences for Perpetrators:

- **Criminal Charges:** Ragging is punishable under various IPC sections, including:
 - Section 323 – Causing hurt

- Section 506 – Criminal intimidation
- Section 509 – Outraging modesty
- Section 306 – Abetment of suicide (in extreme cases)
- **Academic Penalties:** Suspension, expulsion, blacklisting from institutions, and loss of scholarships.
- **Career Damage:** Criminal records can lead to disqualification from government jobs and private employment opportunities.

3. Impact on Educational Institutions

- **Loss of reputation:** Institutions known for ragging face negative media attention and declining admissions.
- **UGC & Government Action:** Colleges failing to curb ragging risk funding cuts, de-recognition, and legal action under UGC Clause 9.4.
- **Campus environment:** A culture of fear and violence disrupts learning and student well-being.

4. Impact on Parents & Society

- **Emotional & Financial Burden:** Parents of victims suffer mental distress and financial hardships due to medical and legal expenses.
- **Erosion of Trust:** Society loses faith in educational institutions as safe spaces, leading to increased calls for strict anti-ragging laws.

What are the challenges in combating Ragging?

1. Weak Enforcement of Regulations– Despite Supreme Court directives and UGC regulations, enforcement remains ineffective.

- **Clause 9.4 of the UGC Regulations** allows action against non-compliant institutions, yet it has never been enforced since 2009.
- Institutional apathy leads to ragging complaints being dismissed as trivial conflicts.

2. Lack of awareness and sensitization

- Many seniors are unaware of the severe psychological and legal consequences of ragging.
- Institutions fail to conduct effective orientation programs to educate students on the dangers of ragging.

3. Fear of reporting

- Victims hesitate to report due to fear of retaliation from seniors.
- Social stigma discourages victims from speaking out, as they fear being labeled weak.

4. Ineffective grievance redressal

- Many anti-ragging committees exist only in name, lacking real authority or action.
- Complaints are often ignored or not resolved in a timely manner.

5. Inadequate monitoring & grievance mechanisms

- Poor CCTV surveillance and lack of digital complaint tracking reduce transparency and accountability.
- Inefficiencies in anti-ragging helplines result in many cases going unreported or unresolved.

6. Cultural Acceptance

- **“Initiation Ritual” Mindset:** Many seniors perceive ragging as a tradition to bond with juniors.
- **Peer Pressure:** A cycle of abuse continues as former victims impose the same experiences on newcomers.

What are the committees and legal framework against Ragging in India?

- 1. Raghavan Committee (2007)**- Recommended mandatory anti-ragging affidavits, FIR filing, disciplinary actions, and sensitization programs.
- 2. Unny Committee (1999)**- Emphasized student safety, institutional accountability, and grievance redressal.
- 3. UGC Regulations (2009)**- Allowed strict penalties for institutions failing to prevent ragging. These regulations were based on the recommendations of the Raghavan Committee.
- 4. Bharatiya Nyaya Sanhita (BNS), 2023**- New criminal provisions to address ragging under wrongful restraint, criminal intimidation, and assault.
- 5. State-Specific Anti-Ragging Laws**- Kerala (1998), Maharashtra (1999), Andhra Pradesh (1997), Assam (1998) have strict anti-ragging laws.
- 6. Information Technology (IT) Act (2000):** Cyber ragging (e.g., online harassment or bullying) can be prosecuted under the IT Act. Section 66A (now repealed) and **Section 67** (publishing obscene material) were used to address online ragging.

Supreme Court guidelines on Ragging

Vishwa Jagriti Mission v. Central Govt (2001): The Supreme Court mandated strict anti-ragging measures in educational institutions.

Institutional Responsibilities	<ol style="list-style-type: none"> 1. Set up Anti-Ragging Committees & Squads for surprise checks and complaint redressal. 2. File FIR within 24 hours of a confirmed ragging incident. 3. Display anti-ragging guidelines prominently on websites and campuses. 4. Make students submit affidavits annually pledging not to engage in ragging.
Legal & Administrative Measures	<ol style="list-style-type: none"> 1. Establish UGC's 24×7 Anti-Ragging Helpline (1800-180-5522). 2. Impose monetary fines, rustication, and debarment from exams for offenders. 3. Require mandatory sensitization programs for students and faculty.

What is the way forward?

1. Strengthening legal & institutional framework

- Invoke UGC Clause 9.4 against non-compliant institutions.
- Fast-track trials and strict punishment for offenders.

2. Technology-driven monitoring

- Install AI-based CCTVs in hostels and campuses.
- Create anonymous digital complaint tracking systems.

3. Awareness & Behavioral change

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- Conduct mandatory anti-ragging workshops.
- Implement student mentorship programs to foster inclusivity.

4. Strengthening reporting mechanisms

- Improve UGC helpline accessibility.
- Establish anonymous online reporting portals with direct police alerts.

5. Community and peer involvement:

- Mobilize senior students to act as mentors and promote a positive campus culture.
- Engage parents and local communities in anti-ragging initiatives.

Conclusion

Despite strong laws and Supreme Court guidelines, ragging continues to plague India's education system. A multi-pronged approach involving legal action, institutional reforms, technology integration, and cultural change is essential. Strict enforcement and student-led initiatives can create a safe and inclusive academic environment, free from the menace of ragging.

Read more– [The Indian Express](#)

UPSC Syllabus- GS2– Governance- Issues relating to development and management of Social Sector/Services relating to Education

Telangana Tunnel Collapse- Explained Pointwise

Eight workers have been trapped inside the collapsed **Srisailem Left Bank Canal (SLBC) tunnel** in Telangana's Nagarkurnool district. The incident occurred when a **three-meter section of the tunnel's roof collapsed** during maintenance work to repair a leak. Out of the 70 workers present, most managed to escape, but eight individuals remain unaccounted for. **Telangana Tunnel Collapse**

The rescue mission faces **significant challenges due to the accumulation of water and silt in the tunnel**, with approximately 200 meters filled with debris. Specialized teams of the Indian Army, National Disaster Response Force (NDRF), State Disaster Response Force (SDRF), and a group of 'rat miners' from Uttarakhand have been deployed to assist in the rescue operations.



Source- Indian Express

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What is the Srisailem Left Bank Canal (SLBC) tunnel? What are the key features of the SLBC tunnel?

The Srisailem Left Bank Canal (SLBC) tunnel is a **crucial irrigation project** in Telangana. It is designed to **supply water from the Krishna River** to **drought-prone areas** in the **Nalgonda** and **Mahbubnagar districts**. It is part of the larger Srisailem Lift Irrigation Scheme, which aims to improve water accessibility for agriculture and drinking purposes.

Key Features of the SLBC Tunnel:

- a. Length:** The tunnel is approximately 50 km long. It is one of the longest tunnels in India for irrigation.
- b. Purpose:** It has been designed to carry water from the Srisailem Reservoir to regions that face chronic water shortages.
- c. Location:** The tunnel runs through the Nallamala Hills in Nagarkurnool district, Telangana.

The project has faced multiple delays since its inception, primarily due to geological challenges, financial constraints, and technical difficulties.

What are the possible reasons behind the Telangana Tunnel Collapse?

- 1. Weak Geological Conditions-** The tunnel passes through the Nallamala Hills, which consist of **fragile rock formations**. Continuous exposure to high water pressure may have weakened the rock structure over time. The presence of **fault lines** or **loose rock formations** made the tunnel section vulnerable to collapse.
- 2. Water Seepage and Leakage-** According to reports, the maintenance work was being carried out to fix a leak. This indicates **pre-existing structural weaknesses** due to **water seepage** and **leakage**.
- 3. Poor Maintenance and Delayed Repairs-** The SLBC tunnel has been under construction for over two decades, and has been facing multiple delays. **Lack of timely inspections** and **maintenance** could have allowed cracks and weak spots to go unnoticed.
- 4. Structural Instability-** The caving in of 3-meter section of the tunnel roof suggests **weak concrete reinforcement** and **erosion of support structures**.
- 5. Human and Technical Factors-** Lack of real-time monitoring for detecting early warning signs like vibrations or minor cracks, further **exacerbated the risk of tunnel collapse**.

What are the methods of Tunnel Excavation used in India?

In India, two methods of Tunnel Excavation are employed-the drill and blast method (DBM), and tunnel-boring machines (TBMs).

Techniques	Method of Excavation	Use and Advantages
Tunnel-boring machines (TBMs)	TBMs bore the rock from the front using a rotating head. The portion of the excavated tunnel is supported by installing precast concrete segments.	TBMs are used when the rock cover is up to 400 metres tall . TBM method was used for construction of tunnels for the Delhi Metro.
Drill and Blast Method (DBM)	DBM involves drilling holes into the rock and loading them with explosives. When the explosives are detonated, the rock breaks apart.	DBM method is used for mountains which are 1000-1200m high . DBM is used for tunnel

		construction in the Himalayas, Jammu & Kashmir and Uttarakhand.
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TBM method is much safer but expensive, when compared with the DBM method.

What are the initiatives taken for ensuring safe tunnel construction mechanism in India?

- 1. Creation of Tunnel Zone department in the MoRTH-** A tunnel zone department has been created in the Ministry with a mandate to build the capacity for excellence in tunnelling, preparation of guideline on design and construction of tunnel.
- 2. Constitution of Expert Committee on Tunnel-** This expert committee has been created for resolving technical issues which arise in implementation of Tunnel Projects in the country.
- 3. Indian Standard Code for Tunnel Construction-** The Indian Standard Codes-**IS 15026 (2002)** and **IS 4756 (1978)** have been issued for tunnel Construction. This code prescribes the guidelines for tunnel design, lighting and ventilation.
- 4. IRC Codes for Tunnels-** **IRC code 2019 for tunnels** is being implemented to ensure the road tunnels which are constructed, are as per the international standards.
- 5. Implementation of other standard codes in tunnel construction-** Integrated Tunnel Control Systems (ITCS), The Work in Compressed Air Regulations 1996, Emergency Evacuation and Rescue Plans for tunnels & RDSO (Research Designs and Standards Organisation) guidelines must be properly implemented.
- 6. International Tunnelling and Underground Space Association safety practices in tunnel construction-** According to these guidelines on the safety practices in tunnel construction, particular attention should be given to the means of escape in an emergency situation like **specific escape routes marked by signs** and **contingency plan**.

What should be the way forward to ensure safe tunnel construction?

- 1. Detailed geotechnical studies-** Currently, in India the design and construction of a tunnel project is done simultaneously. More detailed geotechnical studies like the **petrographic analysis, needs to be done to incorporate in the design and the construction of the tunnel project**.
- 2. Regular monitoring by specialist geologist-** Regular site visits of an independent specialist geologist must be conducted to check for **probable failures** and to **determine the rock's stand-up time**. (Rock-stand up time- It is the duration for which a rock can remain stable without any support. Support is given to the rock within its stand-up time.)
- 3. Supports provided to the tunnel must be tested for adequacy-** Supports of the tunnel like **shotcrete** (sprayed concrete that works as a membrane to prevent parts of the rock from falling), **rock bolt** (a long anchor bolt for stabilising rock excavations), **steel ribs** and **tunnel pipe umbrella** need to be properly tested for its adequacy to prevent tunnel collapse.
- 4. Arrangements for safe evacuation in case of collapse-** There must be **deployment of NDRF personnel & proper safety equipments** to ensure safe evacuation in case of any mishap. The construction companies must submit a **safety plan** along with the bid for the projects.

Tunnel-building technology is around 200 years old and, if executed properly, tunnels aren't dangerous.

Read More- [The Indian Express](#)

UPSC Syllabus- GS 3- Disaster Management

Right to Information Act- Explained Pointwise

The introduction of the Right to Information (RTI) Act was a landmark moment for Indian democracy, as it empowered citizens to seek transparency from the government. The Act was seen as a tool to curb corruption and enhance public accountability. However, despite its strong legal framework, the Act has failed to meet expectations, and democracy remains largely unaffected.



Source- The Daily Guardian

What is Right to Information? What is the Philosophical basis of the Right to Information?

Right to Information- The right to information is the right which ensures that the **public become 'citizens' rather than becoming 'subjects'** in a democratic state, by having unhindered access to the flow of information regarding the functioning of the different arms of the government- legislature, executive and judiciary.

Philosophical Basis of Right to Information- The **philosophical basis** of Right to Information can be found in the **thoughts of Aristotle**. According to Aristotle, **Liberty and equality**, which are the foundational values of Democracy, **can be attained only by the citizen's unhindered right to attain information about the functioning of the government**. The information available to each person and society at large shapes individual personality, political and social identity, and economic capability.

Recognition in International Law-

a. Recognised as Foundational Principle of UN- The United Nations (UN) recognised this right from the start, in 1946. The General Assembly resolved that **Freedom of Information is a fundamental human right** and the **touchstone for all freedoms** to which the United Nations is consecrated.

b. Recognition in the International Covenant on Civil and Political Rights- The right to Information was made a legally binding obligation after its affirmation in Article 19 of the International Covenant on Civil and Political Rights.

As a result, the right to access information has been **firmly enshrined in international human rights law**.

What is the history of the constitutional recognition of Right to Information in India?

The Right to information **has not been mentioned explicitly** as a fundamental right in the constitution. SC has held **Right to Information (RTI) to be a derivative of Article 19 (1) (a) which grants the freedom of speech and expression**. RTI is also linked to the Indian constitution's Right to Life and Personal Liberty (Article 21).

State of U.P. v Raj Narain (1975)	SC held that the right is implicit in the right to freedom of speech and expression , explicitly guaranteed in Article 19 of the Indian Constitution.
S.P. Gupta v. President of India (1982)	SC asserted the right of the people to know about every public act and the details of every public transaction undertaken by public functionaries.
People's Union for Civil Liberties v. Union of India case	SC elevated the status of right to information to a human right and linked it to right to life enshrined in Article 21 of the Constitution.

Legislative Recognition- The RTI movement by **Mazdoor Kisan Shakti Sangathan (MKSS)**, and judicial emphasis on RTI, compelled the Parliament to enact the **Right to Information Act in 2005**.

RTI Act 2005 aims to provide a practical regime for citizens to obtain information from public authorities, as well as to promote transparency and accountability in the work of all public authorities.

What is the significance of the Right to information Act?

1. Exposing corruption- RTI has been used as a weapon to expose the issues of corruption, nepotism and favouritism in India. **For ex- CWG scam, coal allocation scams were exposed** through the use of this **right exercised under the RTI Act, 2005**.

2. Ensuring transparency in functioning of the executive- The RTI Act has been used to enhance the transparency in the functioning of different government departments. **For ex- Public Distribution System transparency in UP**.

3. Strengthening of Democracy- The has provided the citizens the **right to ask questions** and **the right to get answers from the public authorities**. This has strengthened democracy in India through active participation of the public.

4. Change in Govt work culture from secrecy to openness- The use of the Right to Information Act has mandated officials in every office to change their attitude and duty from **one of secrecy to one of sharing and openness**. **For ex- Maintenance of public records**.

5. Teeth to judiciary to invalidate laws encroaching fundamental rights- The Act has given more teeth to judiciary to invalidate laws which promote veil of secrecy and encroach fundamental rights. **For ex- Recent invalidation of the Electoral Bonds scheme which promoted anonymity in political funding**, on the grounds of violation of the right to information.

What are the challenges with the Right to Information Act?

- 1. Misuse of the Act-** Sometimes the different types of information sought has no public interest and has been used to misuse the law and harass the public authorities. **For ex- Attainment of publicity by filing RTI** and a **vindictive tool** to harass or pressurize the public authority.
- 2. RTI vs Official Secrets-** There are certain Govt functions which demand a veil of secrecy for protection of national interest and maintenance of public order. **For ex- Demand of Right to information about Rafael Aircraft procurement**, which could have led to the public availability of information about its specifications. This could be utilised by hostile neighbours to counter the advantages.
- 3. RTI vs Right to Privacy-** RTI and the right to privacy conflicting to each other in certain cases. This conflict has been used to draft certain contentious legislations and schemes. **For ex- Govt defence of the denial of information in the electoral bonds scheme on the grounds of protection of donor's privacy.**
- 4. Low awareness level-** Awareness level about this right is low, especially among the **disadvantaged communities** such as **women rural population, OBC/SC/ST population.**
- 5. Executive's apathy-** The right has been subjected to executive's apathy in recent times. **For ex- The RTI Amendment Act 2019, which downgraded the powers and position of the CICs and ICs.**
- 6. Non- application on Political Parties-** The right cannot be exercised to seek information from the political parties. Political parties are the pillars of Indian democracy. **The non- application of the RTI on political parties pose a grave threat to Indian democratic setup.**
- 7. Bureaucratic Control-** Most Information Commissioners are **retired bureaucrats** who **resist sharing power with citizens.** They treat their roles as post-retirement benefits.
- 8. Low Case Disposal Rate-** High Court judges dispose of over 2,500 cases per year, but RTI commissioners clear fewer cases. They should ideally handle over 5,000 cases annually.
- 9. Long Delays-** The RTI Act mandates 30 days to provide information, but commissions have no time limit, leading to backlogs over a year.
- 10. Weak Enforcement-** Commissioners rarely use penalties against officials who deny information.

How have the Supreme Court rulings changed the RTI Act?

CBSE vs Aditya Bandopadhyay- In 2011, the Supreme Court ruled in *CBSE vs Aditya Bandopadhyay* that RTI should not burden the administration. It said indiscriminate RTI requests could slow governance. According to critics, this decision has discouraged information sharing and painted RTI users as troublemakers.

Girish Ramchandra Deshpande vs CIC- In 2012, the Supreme Court ruled in *Girish Ramchandra Deshpande vs CIC* that personal information could be denied under Section 8(1)(j) of the RTI Act. According to critics, the Court ignored the part of the law that required officials to prove why the information should be denied. This ruling became a precedent, making it easier to reject RTI requests.

What should be the way forward?

- 1. Re-affirmation of the right to information as a cardinal virtue of democracy-** The SC through its verdicts, **like in the case of electoral bonds**, must re-affirm the right of information as a cardinal virtue of democracy.
- 2. Making the information available in local languages-** The information associated with the RTI Act and its functioning **must be made available in the local language**, considering the diverse nature of our country.

3. Education about the right- Education about the right to know **should be made mandatory at the school level in our new education policy** to develop a sense of responsibility and vigilant citizenship in the forthcoming generation.

4. Making RTI applicable on Political parties- The parliament **must bring the Political parties under the ambit of RTI** to ensure proper functioning of the Great Indian democracy.

5. Code of Conduct- A code of conduct must be evolved for the Central and State Information Commissioners. It is imperative for the commissioners to keep a strict distance from government heads and officialdom.

The Supreme Court's guidelines in *DDA vs Skipper Construction (P) Ltd* should be followed in letter and spirit. The SC ruled that (a) High Courts must resist the temptation to exercise their writ jurisdiction in order to correct errors made by the SICs/CICs; (b) If the High Court quashes a CIC/SIC order, it must categorically find that the order was without jurisdiction or palpably erroneous.

Read More- [The Hindu](#)

UPSC Syllabus- GS 2- Governance

Steps to Reclaiming India's Cooperative Dream- Explained Pointwise

India's cooperative movement, dating back to the early 20th century, was designed to democratize credit, empower rural populations, and counter exploitative intermediaries. Over time, cooperatives have played a crucial role in agricultural credit, dairy production, and rural marketing. In recent times, the government has placing immense importance on cooperative driven development.



Figure 4. Source- Cornell Cooperative Enterprise Programme

What is the present status of Cooperative Sector in India? What have been the government steps in this regard?

As per the Economic Survey 2022-23, India has over **8.5 lakh cooperative societies**, covering around **30 crore members**, with PACS forming the backbone of the rural credit system. There are more than **65000 functional Primary Agricultural Credit Societies (PACS) across country**. The government's plan to establish two lakh PACS and has taken several measures for the same:

1. New Model Bylaws- The government through the new model bylaws has allowed PACS to expand

beyond traditional territories, promoting modernization and diversification.

2. Phased Rollout of PACS- The government has been implementing PACS in two phases

Phase 1: Establishment of 32,750 cooperatives with NABARD, 46,000 dairy cooperatives with NDDB, and 5,500 fishery cooperatives with NFDB.

Phase 2: Expansion to cover 15,000 new villages.

3. Liquidation of Defunct PACS- The government has been establishing SOPs to **replace non-functional cooperatives**, unlocking opportunities in 15,000 new villages.

4. Inclusivity Focus- There has been an **explicit emphasis** on the participation of women, Dalits, and tribals, fostering social and economic equity.

5. Global Supply Chain Integration- Leveraging PACS for forward and backward linkages, addressing past limitations in market access and competitiveness.

6. Digital Integration- Initiatives like **micro-ATMs** and **RuPay Kisan Credit Cards** have been introduced to modernize PACS operations. NABARD, NDDB, and NFDB have been actively involved in the establishment of cooperatives in their respective sectors.

7. Alignment with Budget 2023-24- The government has allocated Rs.900 crore to strengthen PACS under the Cooperative Development Fund.

What is the Significance of Cooperative Sector in India?

1. Grassroots Empowerment- By democratizing credit and resources, PACS can empower rural populations and reduce dependency on intermediaries.

2. Rural Development- Integration of Cooperatives into global supply chains can enhance market competitiveness and boost farmer incomes.

3. Promoting Financial Inclusion- PACS serve as the first point of credit access for small and marginal farmers. PACS account for 41 % of the KCC loans given by all entities in the Country and 95 % of these KCC loans through PACS are to the Small and Marginal farmers.

4. Social Equity- Inclusivity measures can foster social harmony and economic equity among marginalized groups.

5. Agricultural Productivity- PACS can play a pivotal role in enhancing agricultural productivity through better credit access and value-added services.

What are the Challenges with the cooperative sector in India?

1. Growing Political Interference- Many cooperatives have become vote banks, which are being controlled by local elites, which have sidelined marginal farmers and labourers.

2. Inefficient Management- Lack of professional governance has led to financial mismanagement and operational failures.

3. Lack of financial viability and sustainability- Excessive reliance on government subsidies have made the cooperatives economically fragile and uncompetitive. Many PACS struggle with high NPAs due to poor loan recovery mechanisms and inadequate risk assessment.

4. Operational Inefficiency- Slow adoption of technology, including digital platforms for loan processing and record-keeping, have reduced the operational efficiency of cooperatives.

5. Limited Inclusivity- Women, Dalits, and tribal communities have been historically excluded from decision-making roles in the cooperatives.

6. Fragmented Approach- Most cooperatives remain sector-specific, failing to integrate into value chains, reducing market efficiency.

What should be the Way Forward?

1. Data-Driven Approach- Conduct comprehensive surveys to identify areas where PACS are most needed, thereby optimizing resource allocation.

2. Grassroots Participation- Involve local communities in decision-making to foster ownership and accountability.

3. Public-Private Partnerships- Collaborate with the private sector to access modern technology and global markets.

4. Policy Consistency- Ensure consistent policy implementation across states with cooperation between central and state governments.

5. Focus on Value Addition- Expand PACS activities to include food processing, cold storage, and export facilitation.

6. Professionalization of Management- Capacity-building programs must impart financial literacy and modern management skills.

Read More- [The Hindu](#)

UPSC Syllabus- GS 2- Governance

Status of Nuclear Energy in India- Explained Pointwise

Nuclear energy has emerged as a **cornerstone** of India's quest for energy security, sustainable development, and **technological leadership**. With a growing population and rapid industrialization, India's energy demand is projected to **double by 2040**. Nuclear energy, with its low carbon footprint and high energy density, offers a viable solution to meet this demand while aligning with global climate goals. India's **three-stage nuclear program**, centered on uranium, plutonium, and thorium, is a testament to its long-term vision for energy independence. From powering homes to propelling submarines and advancing space exploration, nuclear energy is integral to India's strategic, economic, and scientific aspirations.



Status of Nuclear Energy in India

What is the present status of Nuclear Energy in India?

Civil Nuclear Power	<p>Number of Operational Nuclear Power Plants- India has 22 operational nuclear reactors with a total installed capacity of 7,480 MW (as of 2024).</p> <p>New Nuclear Projects- Several new reactors are under construction, including Kudankulam (Units 3-6), Gorakhpur Haryana Anu Vidyut Pariyojana, and Kaiga Units 5 & 6, expected to add nearly 7,000 MW in the next decade which will add 8,000 MWe by 2031.</p> <p>Indigenous Reactor Technology- India has developed Pressurized Heavy Water Reactors (PHWRs), Prototype Fast Breeder Reactor (PFBR), and is progressing towards thorium-based Advanced Heavy Water Reactor (AHWR).</p>
Nuclear in Defense	<p>Nuclear-Powered Submarines- India has developed INS Arihant, the country's first indigenous nuclear-powered ballistic missile submarine (SSBN), and is working on INS Arighat and additional units.</p> <p>Nuclear-Capable Missiles- India has a range of nuclear-capable missiles, including Agni (I-V), Prithvi, and K-15 (Sagarika).</p> <p>Nuclear Research and Collaborations- India collaborates with the IAEA, Russia (Rosatom), and the US (123 Agreement) for nuclear technology exchange, while advancing indigenous research at BARC, IGCAR, and NPCIL.</p>
Technologies in Use and Development	<p>PHWRs- The backbone of India's nuclear program, using natural uranium as fuel.</p> <p>Fast Breeder Reactors (FBRs)- The 500 MWe Prototype Fast Breeder Reactor (PFBR) is under development, aiming to use plutonium and thorium for fuel.</p> <p>Molten Salt Reactors (MSRs)- It is still in the research phase, focusing on thorium utilization.</p>

	Small Modular Reactors (SMRs) - These reactors are being explored for deployment at retiring coal plant sites.
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What is the significance and importance of Nuclear Energy?

- 1. Energy Security**- The three-stage nuclear program aims to utilize thorium, ensuring long-term energy independence. Nuclear power accounts for about **3% of India's electricity generation** but is targeted to reach **22% by 2050**.
- 2. Clean Energy**- Nuclear power is a low-carbon energy source, contributing to **India's Net Zero by 2070 goal**. It complements renewable energy by providing base-load power, ensuring grid stability.
- 3. Space Exploration**- Nuclear energy powers **radioisotope thermoelectric generators** (RTGs) for deep-space missions, such as Chandrayaan and Mangalyaan.
- 4. Defence**- Nuclear-powered submarines and missiles enhance India's strategic deterrence and second-strike capability. Indigenous development of nuclear reactors and weapons reduces dependency on foreign technology.
- 5. Medical Advancements**- BARC-developed radiopharmaceuticals aid in cancer treatment, with India producing over **50 radioisotopes for medical use**.
- 6. Food Preservation**- Nuclear technology enhances food irradiation, increasing shelf-life and preventing spoilage.

What have been the government schemes for the promotion of Nuclear Energy?

Three-Stage Nuclear Program	Stage 1: PHWRs using natural uranium. Stage 2: Fast Breeder Reactors using plutonium and thorium. Stage 3: Thorium-based reactors for sustainable energy.
Bharat Small Reactors (BSR)	It aims to deploy small modular reactors in collaboration with the private sector.
International Collaborations	Indo-US Nuclear Deal - Facilitated access to global uranium markets and advanced technologies. Civil Nuclear Cooperation Agreements - Signed with Russia, France, USA, Japan, and others for fuel supply and technology transfer. Nuclear Insurance Pool (2016) - Mitigates risks associated with nuclear energy projects.

What are the Challenges associated with Nuclear Energy?

1. Technological and Infrastructure Challenges

- a. High Initial Costs**- Nuclear plants require significant capital investment compared to coal or renewables.
- b. Limited Indigenous Uranium Supply**- Dependence on imports hinders energy security.
- c. Delayed Project Completions**- Kudankulam and PFBR projects have faced repeated delays.

2. Safety and Environmental Concerns

- a. Radiation Risks**- Safety concerns post-Fukushima impact public perception.
- b. Nuclear Waste Management**- India lacks robust long-term nuclear waste disposal mechanisms.

3. Regulatory and Political Challenges

Public Opposition- Protests in Tamil Nadu and Maharashtra have stalled nuclear projects.

Policy Uncertainty- Frequent changes in regulations delay private sector participation.

4. Geopolitical Constraints

NSG Membership Roadblock- India's non-signatory status to the NPT limits access to advanced nuclear technologies.

Global Uranium Market Volatility- Prices and supply chain disruptions affect India's nuclear fuel procurement.

What should be the Way Forward?

1. Accelerate Thorium-Based Reactors- Given India's vast thorium reserves, fast-tracking **AHWR deployment** is crucial for the growth of nuclear energy.

2. Enhancing Private Sector Involvement- Allowing greater participation of companies like **L&T, Tata, and Reliance** in nuclear infrastructure can boost innovation.

3. Expanding Public Awareness and Transparency- Addressing misconceptions through public engagement can improve acceptance.

4. Strengthening Global Collaborations- Expanding partnerships with **France, Russia, and the US** for technology exchange and uranium supply.

5. Developing Small Modular Reactors (SMRs)- Investing in **indigenous SMR designs** can complement large nuclear plants.

6. Focus on Nuclear Waste Management- Setting up **deep geological repositories** for spent nuclear fuel.

7. Leveraging AI and Digital Tools- Integrating **AI-driven safety systems** and predictive maintenance can enhance reactor efficiency.

India's nuclear energy program is not just about powering homes; it is about powering the nation's aspirations. From ensuring energy security to advancing space exploration and strengthening national defence, nuclear energy is a strategic asset for India. The journey from uranium to thorium symbolizes India's transition from energy dependence to energy independence. With bold initiatives, technological innovation, and strategic collaborations, India is poised to harness the full potential of nuclear energy. As the world moves toward a low-carbon future, India's nuclear energy program stands as a beacon of sustainable development and technological leadership. The dream of "Viksit Bharat" is not just a vision; it is a mission powered by the atom.

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UPSC Syllabus- GS 3- Science and Technology

Delimitation Exercise in India: Balancing Democracy and Federalism- Explained Pointwise

The recent spat between the Centre and Tamil Nadu over delimitation has again opened up one of the most crucial debates of democracy- **the question of representation**. The **last delimitation happened in 1975**, after which Indira Gandhi put a freeze until 2000. A year later, Parliament again froze the number of members of the Lok Sabha and state assemblies till 2026. The delimitation of constituencies for the Lok Sabha and State Legislative Assemblies is to be carried out on the basis of the **first Census after 2026**. Due to this inordinate delay, several issues related to democracy, demography and federalism await the fifth delimitation exercise.



What is Delimitation? What is the constitutional status behind Delimitation in India?

Delimitation refers to the process of **redrawing the boundaries of electoral constituencies** to ensure **fair representation** based on **population changes**.

Delimitation Commission- The Delimitation Commission is a statutory body responsible for determining the boundaries of various constituencies in the country for the purpose of elections. It is governed by the **Delimitation Act, 2002** and is conducted by the Delimitation Commission under **Articles 82** and **170** of the Indian Constitution. The objective is to provide equitable representation to all regions while maintaining the principle of **one person, one vote**.

What is the significance of Delimitation Exercise in India?

1. Political Representation and Electoral Fairness- Ensures democratic legitimacy through equitable distribution of seats in Lok Sabha and State Assemblies. **E.g.** The 2002 Delimitation Commission led to a **better voter-per-MP ratio in urban and rural areas** and prevented malapportionment, ensuring each MP represents roughly the same number of citizens.

2. Upholding Democracy- The Reduces gerrymandering (political manipulation of electoral district boundaries to advantage a party, group, or socioeconomic class within the constituency) , ensuring fair electoral contests. **E.g.** Supreme Court in **Kuldip Nayar v. Union of India (2006)** upheld the importance of delimitation for fair democracy.

3. Socio-Economic Equity- The Delimitation Exercise enhances representation for marginalized communities and Scheduled Tribes. **E.g.** The J&K Delimitation Commission **allocated more seats to Jammu** to address past disparities.

4. Strengthening of Federalism- The Delimitation process ensures equitable representation among states, balancing national unity with regional autonomy. **E.g.** The **42nd Amendment's population freeze prevented southern states with lower population growth from losing representation**, thereby upholding the spirit of cooperative federalism, crucial for India's unity.

5. Administrative Efficiency- The Delimitation exercise ensures a manageable voter-to-representative ratio, aiding governance. **E.g.** **Mumbai and Bengaluru saw improved electoral administration post the 2002 exercise.**

6. Electoral Integrity and Governance- The Delimitation process aligns representation with new demographic realities, as seen in global examples like the **UK Boundary Commission**.

What are the concerns associated with Delimitation Exercise?

1. Population vs. Development- Southern states argue that delimitation based solely on population would penalize them for successful family planning and economic development. **E.g.** **Tamil Nadu's fertility rate is 1.6**, while **Bihar's is 3.0**.

2. Federalism at Risk- States with low population growth may feel politically marginalized, leading to North-South divide concerns. There are concerns that the Delimitation Exercise can create federal Imbalance as states with better governance may feel punished for controlling population. **E.g.** **Sarkaria Commission (1983) warned against excessive centralization of power.**

3. Manipulation- There are concerns that political parties may influence constituency boundaries for electoral gains. **E.g.** **Allegations of bias in the J&K delimitation process (2022).**

4. Delays and Political Resistance- There are instances of increased political resistance as seen in the case of **Justice Kuldip Singh-led Commission (2002)** facing pushback from political parties unwilling to lose seats.

5. Economic Disparities- Southern states argue that **higher revenue generation** (GST collections, per capita income) should be factored into representation.

What Should be the Way Forward?

1. Implement Expert Recommendations- The following commissions have suggested the following reforms for ensuring federal balance and delimitation needs.

Sarkaria Commission (1983): Suggested a balanced approach between federalism and national unity.

Punchhi Commission (2010): Proposed equal weightage to population and governance needs.

2. Ensure Transparency and Independent Oversight- The Election Commission's autonomy should be strengthened to ensure fair delimitation process.

In **Kuldip Nayar v. Union of India (2006)**, SC emphasized the need for fair representation while balancing federal concerns.

In **TN Seshan v. Union of India (1995)**, SC highlighted the importance of an independent delimitation body.

3. Constitutional and Legislative Reforms- Amend **Articles 81 and 82** to ensure balanced regional representation and Introduce proportional representation models used in Germany and Canada.

4. Policy Suggestions

Weighted Representation Model: Combining population size, economic performance, and governance.

Independent Delimitation Commission: Free from political interference.

Phased Implementation: A gradual transition to prevent political instability.

Delimitation is a delicate balance between democracy and federalism. While it ensures equal representation, challenges related to regional disparities, population dynamics, and governance issues must be addressed. The Supreme Court and Election Commission must play a proactive role in ensuring transparency and fairness. A balanced approach grounded in constitutional values, expert recommendations, and global best practices—is essential to uphold India’s democratic and federal ethos.