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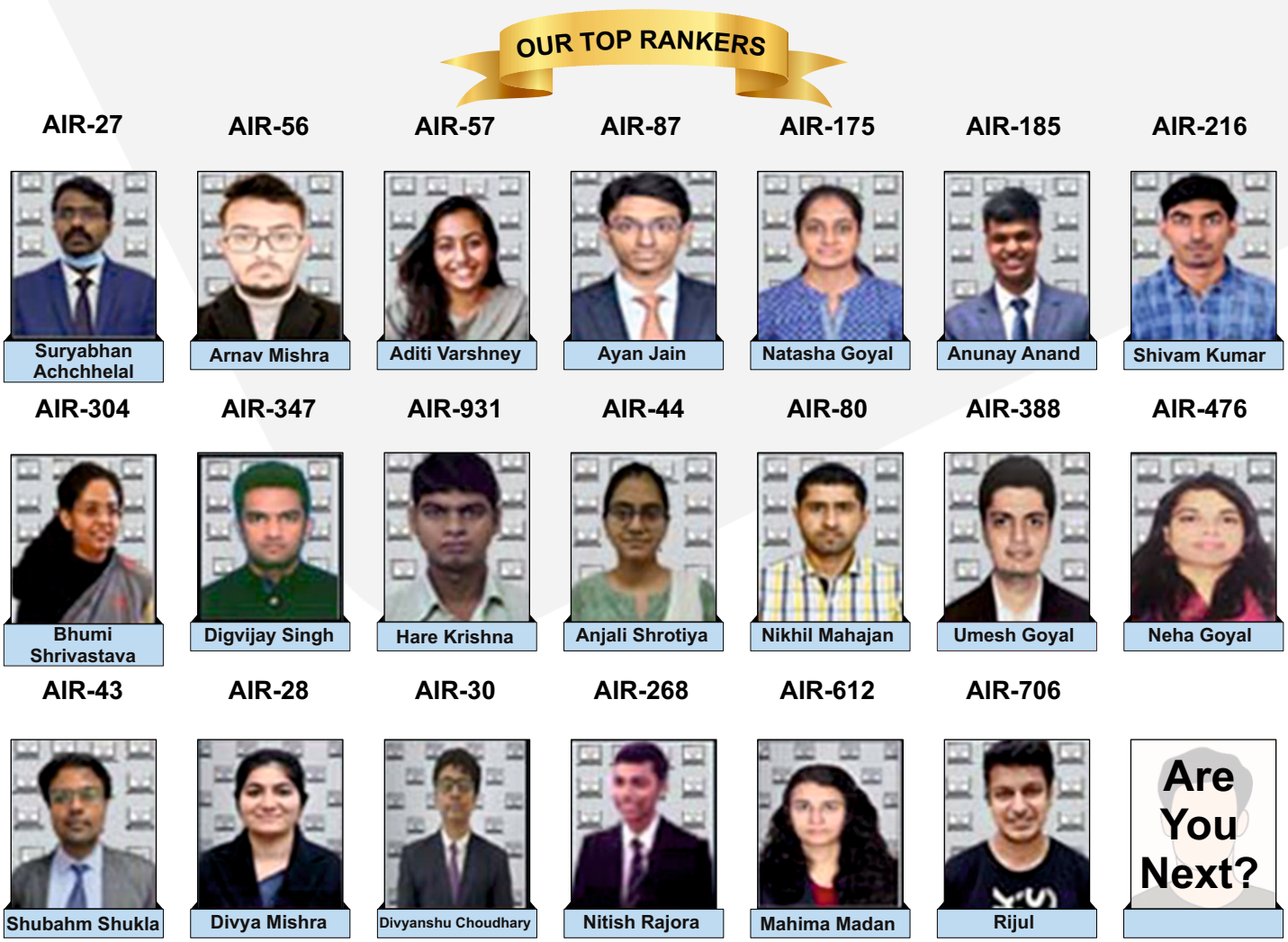
This Current Affairs book by the Plutus IAS team is designed in such a fashion that it holistically covers all the relevant and important topics for the Civil Services Exam to make aspirants exam-ready. Plutus IAS Current Affairs Book is a secondary source of information; the newspaper will remain the primary source for the preparation of Current Affairs.

Now, Current Affairs are no longer merely current; they are Contemporary Affairs. Questions asked in both Prelims as well as the Mains assess the conceptual clarity of an aspirant. This book is prepared with the aim of helping you understand the interlinkages of both Static and Dynamic news events and internalize the concepts required to crack this examination.

The Plutus IAS team wishes you all the best. Prepare for the UPSC Civil Services Examination with a calm, composed, or serene mind and some patience to crack this examination in one go.

Team
Plutus IAS

Sources:
The Hindu | The Indian Express | The Economic Times | Press Information Bureau | PRS Legislative Research | IDSA: Institute for Defense Studies and Analysis | Yojana and Kurukshetra | Lok Sabha and Rajya Sabha Debates.



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OCTOBER 2025
CURRENT AFFAIRS

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PLI SCHEME: POWERING INDIA'S INDUSTRIAL RENAISSANCE

WHY IN THE NEWS?

India's Production Linked Incentive (PLI) Scheme has emerged as a major driver of domestic manufacturing, with an outlay of ₹1.97 lakh crore and approvals granted to 806 applications across 14 key sectors. The scheme is central to India's goal of raising manufacturing's share to 25% of GDP and achieving a $5 trillion economy. It supports flagship initiatives like Atmanirbhar Bharat and Make in India, boosting local production of electronics, mobile phones, and high-value goods. By promoting large-scale investment, it strengthens India's industrial competitiveness and export potential. Closely aligned with the India Semiconductor Mission, backed by a ₹76,000 crore package, it also integrates India into global electronics and semiconductor value chains.

INTRODUCTION: A NEW CHAPTER IN INDIA'S GROWTH STORY

From factory floors to innovation labs, India's manufacturing sector is undergoing a quiet transformation, one powered by policy intent and industrial ambition. At the heart of this shift is the Production Linked Incentive (PLI) Scheme, which stands as a cornerstone of India's ambition to raise manufacturing's contribution to 25% of GDP and claim its place among the world's leading industrial economies.

With an incentive outlay of ₹1.97 lakh crore, the scheme is more than just a financial package. Today, with 806 applications approved across 14 strategic sectors, the scheme reflects strong industry confidence and robust adoption.

What is PLI?

The Production Linked Incentive (PLI) scheme is a government initiative **launched in 2020**. The primary aim was strengthening India 's manufacturing capabilities by offering financial incentives to eligible companies based on their incremental sales.

The scheme initially targeted **three sectors**[3] and over time, it has expanded to include **14 secto rs** ranging from electronics and textiles to automobiles and food processing.

The scheme aligns with national goals like Atmanirbhar Bharat and India's vision of a $5 trillion economy. It fuels the Make in India movement by reviving domestic manufacturing at scale. It powers Digital India by driving local production of mobile phones, and electronics, making technology more accessible and affordable. And it aligns closely with the India Semiconductor Mission, which, backed by a ₹76,000 crore package, aims to provide financial support for investments in semiconductor fabrication, display manufacturing & chip design to strengthen India's integration into global electronics value chains.

BACKGROUND: GENESIS OF THE PLI SCHEME

India's services sector has long powered the economy, contributing over 50% to GDP. To create more balanced and resilient growth, the government turned focus to manufacturing: a key driver of jobs, exports, and self-reliance. In 2020, the Production Linked Incentive (PLI) Scheme was

launched to boost domestic manufacturing through targeted, performance-based incentives across strategic sectors.

The PLI Scheme was first launched in April 2020, beginning with the Mobile Manufacturing and Specified Electronic Components, Critical Key Starting materials/Drug Intermediaries and Active Pharmaceutical Ingredients and Manufacturing of Medical Devices. Following its initial success, the scheme was progressively extended to cover 13 key sectors of the economy, including pharmaceuticals, automobiles and auto components, Textile Products, white goods, and specialty steel, among others.

Over time, the scheme attracted strong interest from both domestic and global players, leading to approvals of multiple projects in sectors such as electronics, bulk drugs, medical devices, and textiles. For example, in February 2021, the Union Cabinet approved the PLI scheme for the pharmaceuticals sector with an outlay of ₹15,000 crore. Similarly, in September 2021, a ₹25,938 crore PLI scheme for the automobile and auto component industry and PLI scheme for Drones and Drone Components with funding of ₹120 crore for 3 years was cleared.

By November 2024, committed investments under the PLI scheme had reached ₹1.61 lakh crore. This momentum carried into 2025, with realized investments rising to about ₹1.76 lakh crore with 806 approved applications as more projects shifted from approval to active implementation. By focusing on sectors such as electronics, textiles, pharmaceuticals, and automobiles, the initiative links financial incentives to measurable results like increased production and incremental sales. This performance-based model attracts investments from both domestic and global players but also encourages businesses to embrace cutting-edge technologies and achieve economies of scale.

SECTORAL COVERAGE: FROM CHIPS TO CHEMICALS

The Production Linked Incentive (PLI) Scheme covers the following 14 critical sectors, with tailor-made incentives and performance frameworks



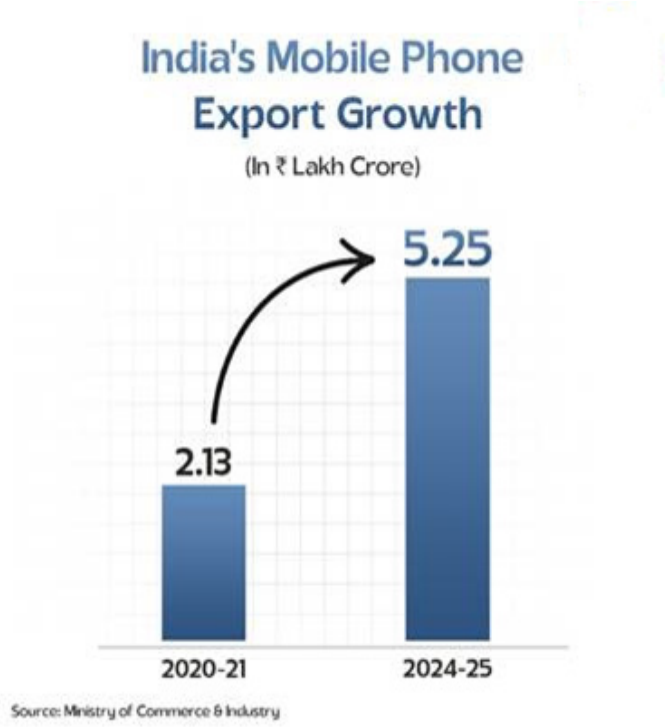
Source : Ministry of Commerce and Industry

SOME OF THE TOP PERFORMING SECTORS UNDER PLI SCHEME INCLUDE

Electronics & Mobile Manufacturing

The electronics sector has emerged as a flagship success story under the PLI strategy, driven by strong policy backing through initiatives like the National Policy on Electronics (NPE) 2019. With this policy foundation in place, the PLI attracted both global OEMs and Indian champions, propelling India into the global electronics value chain. The impact has been substantial with production surging by 146%, from ₹2.13 lakh crore in FY 2020-21 to ₹5.25 lakh crore in FY 2024-25. PLI Scheme has encouraged major smartphone companies shifting its production to India. As a result, India has become a major mobile phone manufacturing country.

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Automobile & Auto Components

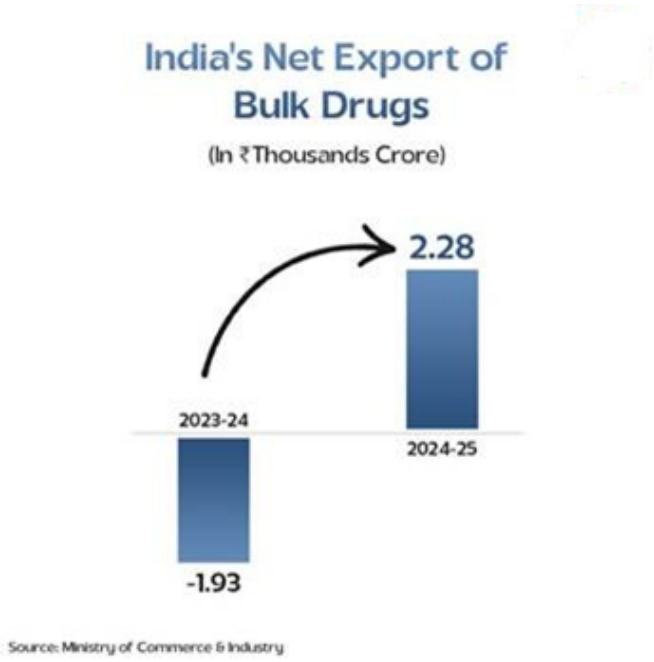
Under the PLI scheme, India has attracted committed investments worth ₹67,690 crore. As of March 2024, ₹14,043 crore has been invested, generating over 28,884 jobs. These schemes aim to make India a global EV and clean-tech hub by supporting and driving sustainable mobility aligned with the Faster Adoption and Manufacturing of Electric Vehicles (FAME) initiative. The Scheme proposes financial incentives for 19 categories of Advanced Automotive Technology (AAT) vehicles and 103 categories of AAT components to boost domestic manufacturing of Advanced Automotive Technology products and attract investments in the automotive manufacturing value chain.

Food Processing

With 171 approved applications under the PLI scheme till October 2024, the food processing sector has seen investments of over ₹8,910 crore, with ₹1,084 crore disbursed in incentives. The scheme complements initiatives like PM-Formalization of Micro Food Processing Enterprises (PM-FME) and Pradhan Mantri Kisan SAMPADA Yojana (PMKSY), aiming to modernize processing units, enhance branding of Indian food products, and boost value-added exports.

Pharmaceutical Drugs

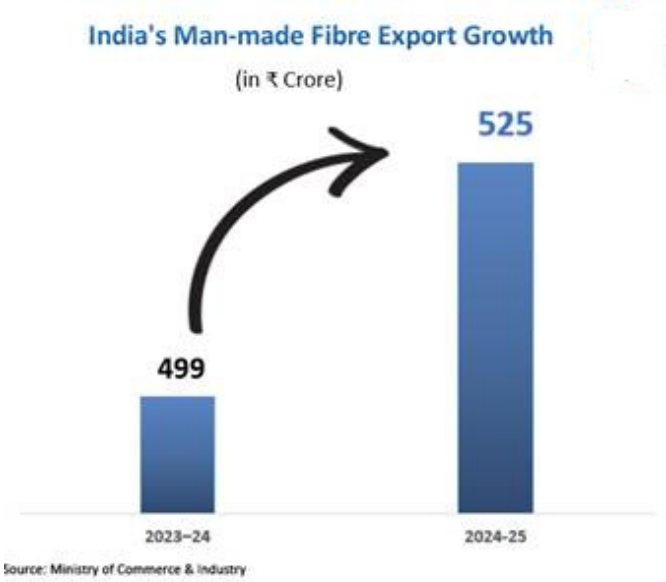
Once heavily dependent on imports for essential raw materials, India's pharma backbone is now regaining its strength. Thanks to focused PLI support, the country transitioned from a net importer (₹1,930 crore deficit in FY 2021-22) to a net exporter of bulk drugs (₹2,280 crore surplus in FY 2024-25). In the first three years, pharma sales under PLI crossed ₹ 2.66 lakh crore, including exports worth ₹ 1.70 lakh crore. The overall Domestic Value Addition in the Sector has been 83.70% as on March 2025.



Textiles

The PLI Scheme for Textiles was approved with an outlay of Rs. 10,683 crore in September, 2021, to promote production of MMF Apparel, MMF Fabrics and products of Technical Textiles in the country to enable textile sector to achieve size and scale and to become competitive. Man-made Fibre (MMF) exports rose to around ₹ 525 Crore in FY 2024–25 (from ₹ 499 Crore in FY 2023–24), while technical textile exports climbed to ₹294 Crore, up from ₹200 Crore the previous year. Government of India is actively promoting textile and garment exports through various schemes/initiatives such as Rebate of State and Central Taxes and Levies (RoSCTL) scheme which supports zero-rated exports for apparel, garments, and made-ups, while other textile products are covered under the Remissions

of Duties and Taxes on Exported Products (RoDTEP) scheme.



Source: Ministry of Commerce & Industry

Performance So Far

By November 2024, the scheme had attracted committed investments of ₹1.61 lakh crore, surpassing expectations and demonstrating strong industry confidence in India's policy direction. Actual investments realized have continued to rise, reaching approximately ₹1.76 lakh crore by March-2025, as more projects moved from approval to implementation stages.

The production impact has been remarkable. Total sales by PLI participants exceeded ₹16.5 lakh crore, reflecting impressive growth in key sectors such as electronics, pharmaceuticals, automotive, and textiles.

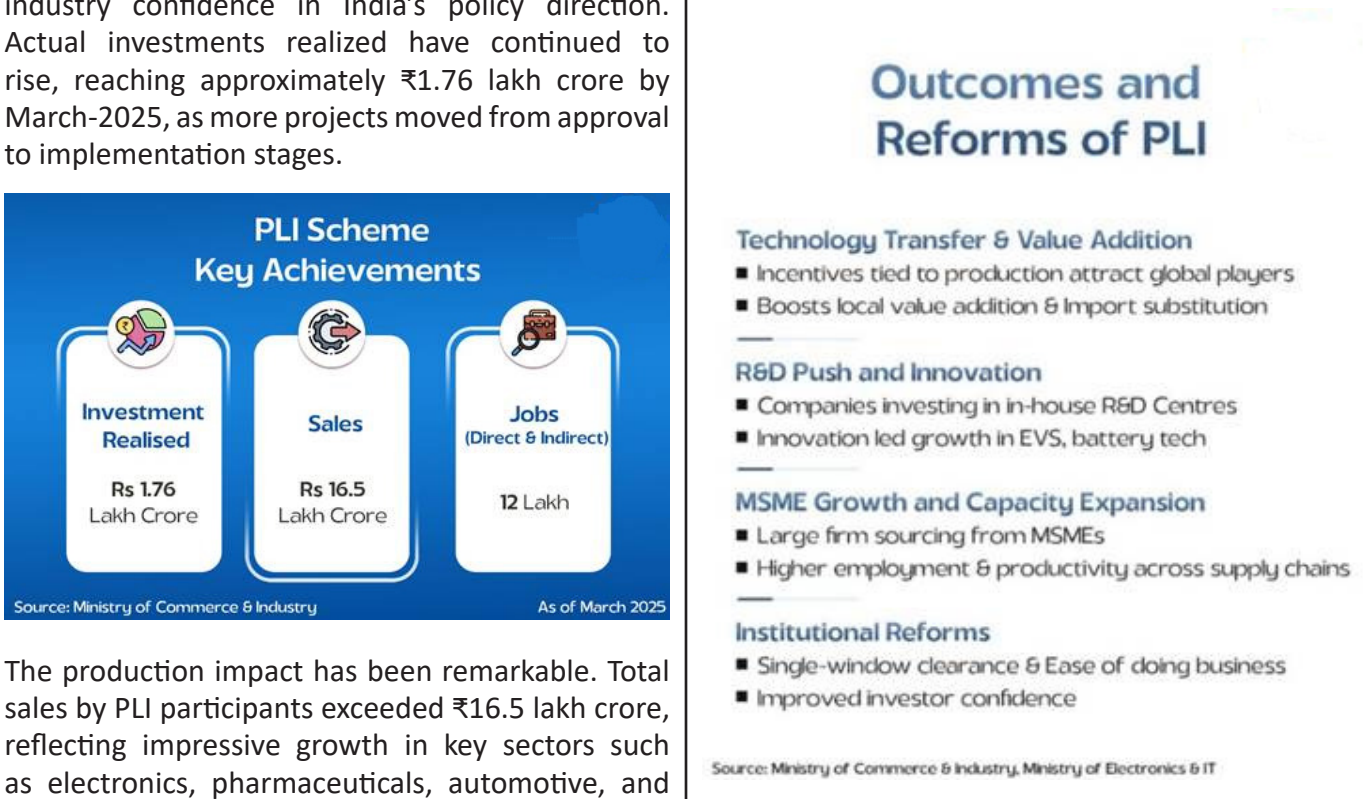
The PLI initiative has also emerged as a major job creator, generating over 12 lakh direct and indirect employment opportunities, while simultaneously fostering additional ecosystem development across Tier-2 and Tier-3 cities. Importantly, the scheme has catalyzed a fresh wave of FDI into the country, endorsing India as a preferred destination for high-value manufacturing in an evolving global scenario.

PLI Schemes with Highest Budget Allocation (2025-26)

Name of Scheme	Budget Estimates 2025-26 (₹ Crores)
PLI Scheme in Electronics manufacturing and hardware	9000.00
PLI Scheme for Automobiles and Auto Components	2818.85
PLI Scheme for Pharmaceuticals	2444.93
PLI Scheme for Textile	1148.00
PLI Scheme for White Goods (Acs and LED Lights)	444.54
PLI Scheme for Speciality Steel	305.00
PLI Scheme for National Programme on Advanced Chemistry Cell (ACC) Battery Storage	155.76

Source: Budget 2025-26

In a strong push to accelerate industrial growth, the Government has significantly increased budget allocations for key sectors under the PLI Scheme in 2025-26, reaffirming its commitment to strengthening domestic manufacturing.



Source: Ministry of Commerce & Industry, Ministry of Electronics & IT

The PLI scheme is expected to create a ripple effect across India's MSME ecosystem. Anchor units in

each sector are expected to develop new supplier and vendor networks throughout the value chain, with a significant share of these ancillary units emerging from the MSME sector.

The scheme has also led to the development of sector-specific clusters such as the display fabs and semiconductor parks in Gujarat, MMF clusters in Surat, and medical device parks in Andhra Pradesh and Tamil Nadu.

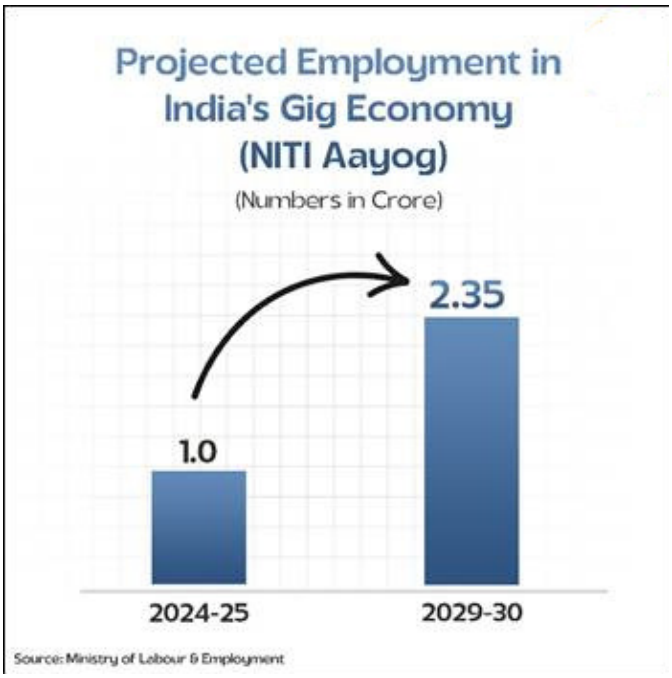
CONCLUSION

From once being heavily reliant on imports to now emerging as a serious contender in global manufacturing, India's industrial journey has entered a transformative chapter and the PLI scheme is a major part of it. With investments exceeding ₹1.76 lakh crore and tangible gains in output, exports, and employment generation, PLI has evolved from a policy instrument to a catalyst of structural change. By backing sunrise sectors, powering innovation, and anchoring global supply chains closer to home, the scheme is doing more than just reshaping factories, it's reshaping the future of India's economy. By supporting key industries, encouraging export-oriented production, and promoting the adoption of advanced technologies, the PLI schemes are strategically strengthening India's manufacturing base.

SOCIAL SECURITY FOR GIG AND PLATFORM WORKERS IN INDIA: CODE ON SOCIAL SECURITY, 2020 AND BEYOND

WHY IN THE NEWS?

India's rapidly growing gig workforce is driving a new wave of economic change across the world. With its half-a-billion-strong labour force, the world's youngest population, fast-paced urbanisation, and the widespread use of smartphones and digital tools, the country is emerging as a key hub for this transformation. The gig and platform economy is creating fresh opportunities in areas such as ridesharing, delivery services, logistics, and professional work. According to NITI Aayog, the sector is expected to employ over 1 crore workers in 2024–25, with the number projected to grow to 2.35 crore by 2029–30.



SOCIAL SECURITY AND SUPPORT FOR GIG AND PLATFORM WORKERS

Code on Social Security, 2020, and Platform Workers

The Code on Social Security, 2020, passed by Parliament, marks a landmark step by defining "gig workers" and "platform workers" for the first time and extending provisions of social security to them.

Gig workers: Individuals earning their livelihood outside the traditional employer–employee setup.

Platform workers: A subset of gig workers whose employment depends on online applications or digital platforms run by aggregator companies.

SOCIAL SECURITY PROVISIONS

The Code envisages a broad framework of benefits for gig and platform workers, such as:

Life and disability cover

Accident insurance

Health and maternity benefits

Old age protection

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UNION BUDGET 2025–26 ANNOUNCEMENTS FOR PLATFORM WORKERS

Acknowledging their significant contribution to the economy, the Government announced new provisions:

1. Registration of online platform workers on the e-Shram portal.
2. Issuance of identity cards to ensure recognition and easy access to welfare benefits.
3. Healthcare coverage under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY).

ABOUT AB-PMJAY FOR PLATFORM WORKERS

1. Provides ₹5 lakh cover per family per year for secondary and tertiary care hospitalization.
2. Available across 31,000+ empanelled hospitals (public & private).
3. The special extension of AB-PMJAY for platform workers is yet to be launched.

THE CODE ON SOCIAL SECURITY, 2020 (SS CODE, 2020)

The Code on Social Security, 2020 is a landmark labour reform law aimed at unifying, rationalising, and expanding social security coverage across the workforce in India. By consolidating nine central labour laws into one framework, the Code simplifies compliance and creates a universal platform for extending social protection, including to groups historically left out, such as unorganised workers, gig workers, and platform workers.

1. Acts Merged under the Code

- The SS Code repeals and merges nine existing laws to streamline the social security system:
- Employees' Compensation Act, 1923
- Employees' State Insurance Act, 1948
- Employees' Provident Funds and Miscellaneous Provisions Act, 1952
- Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959
- Maternity Benefit Act, 1961
- Payment of Gratuity Act, 1972
- Cine Workers Welfare Fund Act, 1981
- Building and Other Construction Workers' Cess Act, 1996
- Unorganised Workers' Social Security Act, 2008

2. Wider Coverage

- Expands social security to cover organised, unorganised, self-employed, gig, and platform workers.
- Extends benefits to sectors with previously minimal coverage such as construction, domestic work, and app-based services.
- Enables the Central and State Governments to frame targeted schemes for specific worker categories.

3. Social Security Schemes under the Code

- The Code provides flexibility for governments to design schemes covering:
- Provident Fund and Pension for long-term financial security.
- Employees' State Insurance (ESI) for health, disability, and accident cover.
- Gratuity for workers on completion of continuous service.
- Maternity Benefits ensuring wage security during maternity leave.
- Other benefits like life cover, old-age protection, and crèche facilities.

4. Recognition of Gig and Platform Workers

- One of the most progressive features of the Code is the legal recognition of gig and platform workers.
- **Gig workers:** Those working outside the traditional employer–employee relationship.

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- **Platform workers:** Gig workers earning via digital platforms/aggregator apps (e.g., ride-hailing, food delivery, e-commerce).

Eligible for social security schemes funded jointly by:

- Government,
- Aggregators/platforms, and
- Sometimes the workers themselves.

E-SHRAM PORTAL: A DATABASE FOR UNORGANISED WORKERS

The Ministry of Labour and Employment launched the e-Shram portal on 26 August 2021 to build a comprehensive National Database of Unorganised Workers (NDUW), includinga platform workers, migrant workers, agriculture workers, etc.

The e-Shram portal is meant to register and support the unorganised workers by providing themwith a Universal Account Number (UAN) on a self-declaration basis.

As of 3 August 2025, more than 30.98 crore unorganised workers have registered, including over 3.37 lakh platform and gig workers.

STEPS TO PROMOTE E-SHRAM REGISTRATION

The Ministry of Labour and Employment has taken various steps to promote registrations on eShram portal and increase awareness among unorganised workers, such as:

TOPSTATESREPORTINGTHEHIGHEST NUMBER OF REGISTRATIONS

The portal has recorded the highest number of registrations from Uttar Pradesh (8.39 crore), followed by Bihar (3.00 crore) and West Bengal (2.64 crore). These numbers reflect the unorganised workforce in these states and the government's efforts to register and support workers across the country.

Women form a significant portion of these registrations, with Uttar Pradesh leading at 4.41 crore female registrants, followed by Bihar (1.72 crore) and West Bengal (1.44 crore).



CONCLUSION

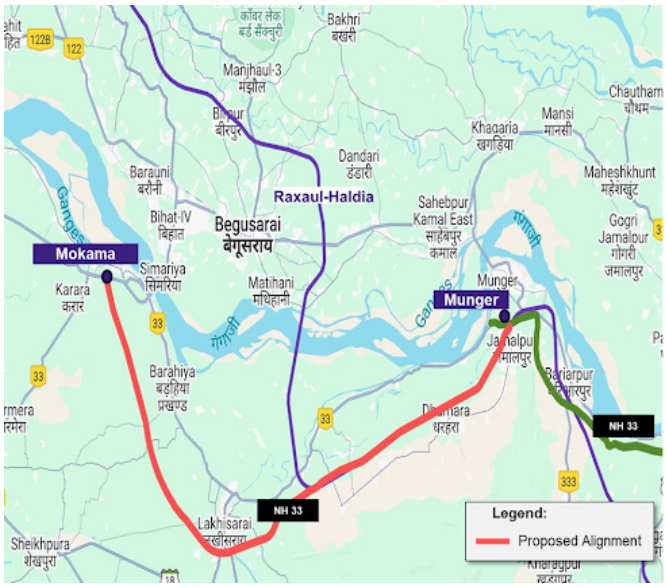
India's gig and platform economy is rapidly transforming the labour market, creating new opportunities while presenting unique challenges in terms of social security and welfare. Through initiatives like the Code on Social Security (2020) and the e-Shram portal, the government is taking concrete steps to recognise, protect, and empower gig and platform workers. By facilitating registration, providing health and accident coverage, and ensuring easy access to benefits, these measures aim to bring platform workers into the mainstream and strengthen the nation's workforce. As the sector grows, continued support, awareness, and innovative policy interventions will be crucial in ensuring that every gig worker can work with dignity, security, and opportunity.

BOOST TO CONNECTIVITY: CABINET APPROVES MOKAMA–MUNGER GREENFIELD HIGHWAY AS PART OF INDIA'S HIGH-SPEED CORRIDOR EXPANSION

WHY IN THE NEWS?

The Union Cabinet has approved the construction of a 4-lane greenfield access-controlled Mokama–Munger section of the Buxar–Bhagalpur High-Speed Corridor in Bihar.

- The project will be implemented on the Hybrid Annuity Mode (HAM).
- Total length: 82.4 km
- Estimated outlay: ₹4447.38 crore



THE ROLE OF ROADS IN OVERALL MULTI-FACETED DEVELOPMENT:

1. Economic Development

- **Trade & Commerce Expansion:** Roads reduce transportation costs, making goods cheaper and markets more accessible.

  Example: The Golden Quadrilateral improved freight movement, boosting India's GDP growth in the 2000s.

- **Industrial Growth & Investment:** Better roads attract industries by ensuring smooth logistics.

  Example: Delhi–Mumbai Industrial Corridor (DMIC) thrives on expressway connectivity.

- **Employment Generation:** Highway projects create direct jobs (construction) and indirect jobs (hospitality, logistics).

  Example: PMGSY rural roads created lakhs of man-days of employment during execution.

2. Social Development

- **Education Access:** Roads connect remote villages to schools/colleges.

  Example: In tribal Jharkhand, PMGSY roads led to higher school attendance.

- **Healthcare Reach:** Ambulance and health outreach depend on road networks.

  Example: Janani Express Yojana in Madhya Pradesh reduced maternal mortality through road-linked ambulance service.

- **Social Inclusion & Mobility:** Roads reduce isolation, enabling women and marginalized communities to access opportunities.

  Example: Improved connectivity in Northeast India brought tribal communities closer to mainstream markets and institutions.

3. Regional & Connectivity Development

- **Balanced Regional Growth:** Roads integrate backward regions with growth hubs.

  Example: Bharatmala Pariyojana focuses on reducing regional logistics gaps.

- **Boost to Tourism:** Better road access enhances regional economy.

  Example: Char Dham Highway Project in Uttarakhand facilitates pilgrimage tourism.

- **Strategic & Cross-Border Connectivity:** Roads strengthen defense and trade links.

Example: India–Myanmar–Thailand Trilateral Highway promotes regional integration under Act East Policy.

4. Rural Development

- **Market Access for Farmers:** Roads help farmers sell produce directly, reducing middlemen.

  Example: Rural haats in Maharashtra flourished after road connectivity under PMGSY.

- **Non-farm Opportunities:** Roads bring rural areas into supply chains (dairy, handicrafts).

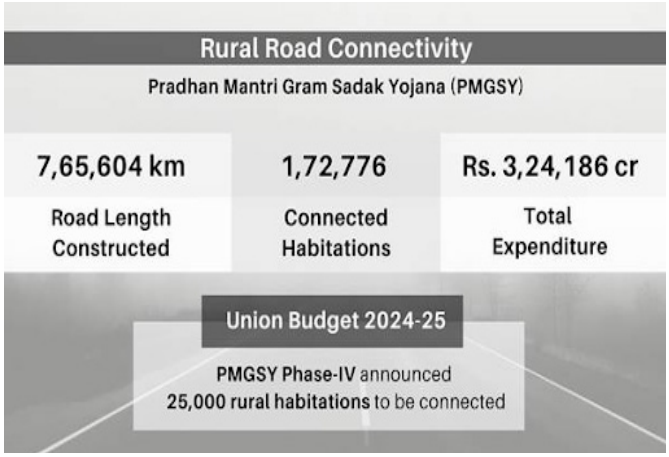
  Example: Amul's dairy model thrives on strong rural road connectivity.

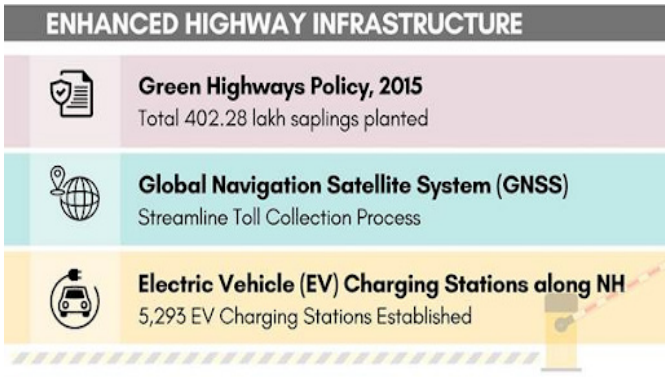
- **Poverty Reduction:** Roads reduce migration pressure by boosting local livelihoods.

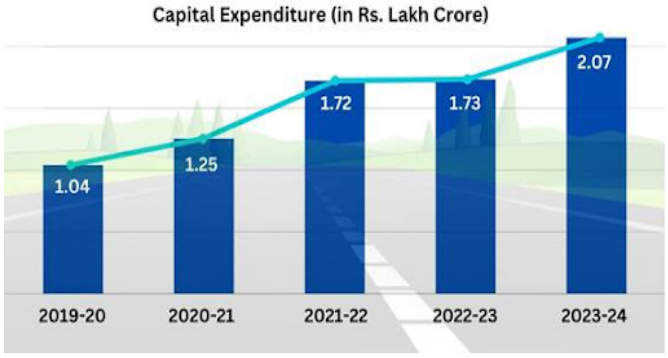
  Example: A World Bank study on PMGSY showed significant poverty decline in connected villages.

TRANSFORMING INDIA'S ROAD INFRASTRUCTURE: KEY SCHEMES & ACHIEVEMENTS









TRANSFORMING INDIA'S ROAD INFRASTRUCTURE: KEY SCHEMES & ACHIEVEMENTS

Scheme / Initiative	Focus Area	Key Achievements
National Highways Expansion (NHAI)	Capital expenditure & NH growth	Expanded NH network from 91,287 km (2014) to 1,46,126 km (2024); significant capital investment surge
Bharatmala Pariyojana	Economic corridors, expressways, port & border connectivity	26,425 km awarded, 17,411 km constructed; expenditure of ₹4.59 lakh crore
Greenfield Corridors & Expressways	High-speed access-controlled corridors	5 Expressways + 22 Highways (total 9,860 km); project cost ₹4,19,130 crore

Employment Generation (via NHAI projects)	Job creation during construction	24,050 km of NHs built in 5 years; created 45 Cr direct, 57 Cr indirect, and 532 Cr induced man-days
North East Road Connectivity (NER)	Regional integration & Act East Policy	9,984 km NHs constructed with ₹1,07,504 crore; 265 ongoing projects worth ₹1,18,894 crore; 10% budget earmarked
PMGSY (Pradhan Mantri Gram Sadak Yojana)	Rural all-weather connectivity	8,10,250 km sanctioned, 7,65,601 km constructed (94%); ₹3.24 lakh crore spent; Phase IV to cover 25,000 more habitations
Green Highways Policy (2015)	Sustainability & eco-balance	402.28 lakh saplings planted along highways
EV Charging Infrastructure	Clean mobility on highways	5,293 EV charging stations set up (4,729 by Petroleum Ministry); expansion under ₹800 crore subsidy
GNSS-based Tolling (Pilot Projects)	Smart toll collection	Pilots on NH-275 (Bengaluru–Mysore) & NH-709 (Panipat–Hisar)
Road & Bridge Maintenance (CRIF & IBMS)	State road projects & structural safety	1,209 projects (14,369 km, ₹37,098 crore); IBMS enables bridge health monitoring
Road Safety (4E's: Engineering, Enforcement, Education, Emergency)	Accident & fatality reduction	Target to reduce road deaths by 50% by 2030; safety audits mandatory; launch of ATMS & Rajmaarg Yatra App

CHALLENGES IN INDIA'S ROAD INFRASTRUCTURE

Category	Key Challenges
1. Financial & Political Challenges	• Funding gap: India needs $1.4 trillion (2022–2040, NITI Aayog) for road infrastructure. • Land acquisition delays: Over 700+ projects stalled (MoRTH 2023) due to legal disputes and resistance. • Corruption & political interference: CAG 2022 flagged irregularities in NH contracts and substandard execution.
2. Environmental & Climate Challenges	• Floods & landslides: Kerala floods (2018) damaged 12,000 km, costing ₹6,000+ crore. BRO lost ₹100 crore in 2025 due to landslides in Uttarakhand. • Pollution: Road transport emits 11% of India's CO_2 (IEA 2023).
3. Planning & Technical Challenges	• Delays: 44% NH projects delayed (MoRTH 2024). • Congestion: 70% of roads are single/intermediate lanes. • Maintenance deficits: Only 40% of PWD roads maintained annually (World Bank 2023); shortage of skilled labor and quality control issues.

REFORMS & SOLUTIONS FOR INDIA'S ROAD INFRASTRUCTURE

Category	Reform / Solution
Strategic Planning & Financial Reform	• Launch Infrastructure Debt Funds (IDFs) to attract long-term private capital. • Revamp PPP models with fairer risk sharing (concessionaire agreements under redesign). • Prioritize maintenance: Current NH maintenance budget is <1% of total; PRS India urges shift in spending. • Digitize land records to streamline acquisition and reduce legal disputes.
Governance & Project Execution	• Improve oversight: As of May 2024, ₹5.71 lakh crore cost overrun across 458 projects; 831 delayed. • Use PM Gati Shakti for integrated clearances across ministries and faster project execution.
Technology & Innovation	• Deploy Intelligent Traffic Systems (ITS) in metros like Delhi & Mumbai for better traffic flow. • Encourage green construction: Use solar, green hydrogen, and low-carbon materials. • Boost multi-modal transport: As of 2024, 945 km metro network in 21 cities serving 1 crore daily commuters.
Social & Safety Measures	• Reduce fatalities from potholes and poor design: 4,446 accidents, 1,856 deaths in 2022 due to potholes. • Enforce black spot redesign and stricter safety audits. • Train workers: MoRTH mandates training + stipends for workers on projects >₹100 crore.

CONCLUSION

Roads are not just a means of transport but also pathways to peace and stability. Adequate road infrastructure fosters economic growth, social cohesion, and regional integration, reducing unrest and instability. If India ensures comprehensive connectivity, situations like Nepal's recent turmoil—caused by isolation and weak access—can be largely mitigated, highlighting the strategic importance of robust road networks in maintaining national and regional stability.

PM VISHWAKARMA SCHEME: HONOURING HERITAGE, POWERING PROGRESS

WHY IN THE NEWS?

In September 2025, the PM Vishwakarma Scheme completed two years, marking a significant milestone in its journey of empowering traditional artisans and craftsmen. Over this period, nearly 30 lakh artisans have been registered under the scheme, of which 86% have received skill training to upgrade their craft and adapt to modern market needs. Additionally, around 4.7 lakh collateral-

free loans have been disbursed, providing crucial financial support for sustaining and expanding their livelihoods. Recognized as a major initiative for both heritage preservation and livelihood empowerment, the scheme has played a pivotal role in safeguarding India's traditional crafts while ensuring the socio-economic upliftment of artisan communities.



VISHVAKARMA

1. **Identity:** Vishvakarma is the divine architect and craftsman of the Hindu universe.
2. **Role in Mythology:** Creator of celestial palaces, mythical cities, divine weapons, and flying chariots for gods.
3. **Symbolism:** Revered as the first engineer, scientist, and craftsman in Hindu tradition.
4. **Worship:** Celebrated on Vishvakarma Jayanti (17 September), especially by artisans, engineers, architects, and industrial workers.
5. **Cultural Importance:** Represents India's age-old respect for skill, innovation, and craftsmanship.

NEED FOR PM VISHWAKARMA

Domain	Why the Need?	Explanation / Example
Economic Empowerment	Traditional artisans face declining income & market access	Handloom & handicraft exports fell from 5% to 2% share in global trade (2010–2022)
Employment Generation	Unorganized crafts sector lacks job security & recognition	13 crore artisans rely on informal work with low wages
Skill Development	Traditional skills are not upgraded to modern demands	Need for training in digital tools, modern machinery
Social Upliftment	Artisan communities often belong to marginalized sections	Scheme ensures social dignity & identity to traditional occupations
Cultural Preservation	Many traditional crafts are disappearing due to industrialization	E.g., Banarasi weavers, metal craftsmen losing livelihood
Inclusivity	Women artisans face double discrimination in skill & finance access	Scheme promotes gender-sensitive credit & training
Technological Upgradation	Lack of tech integration reduces productivity & global competitiveness	Support needed for modern tools, e-commerce, branding
Sustainability & Green Growth	Many crafts use eco-friendly, local materials	Promotion aligns with SDGs & "Make in India" green exports
Institutional Support	Fragmented policies earlier, need for integrated approach	PM Vishwakarma provides credit, training, certification, market linkages under one umbrella

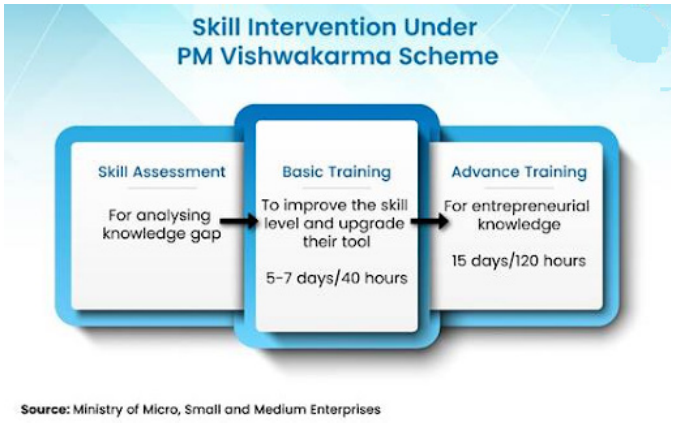
WHAT IS THE PM VISHWAKARMA SCHEME?

- Launched on 17 September 2023 (Vishwakarma Jayanti).
- Financial outlay: ₹13,000 crore (2023–28).
- Supports 18 traditional trades (carpenters, masons, potters, tailors, cobblers, barbers, blacksmiths, goldsmiths, etc.).
- Provides ID recognition, skill training, toolkit incentives, concessional loans, and market linkages.



AIMS & OBJECTIVES

1. **Recognition →** PM Vishwakarma ID & certificate.
2. **Skill Development →** Basic + advanced training.
3. **Financial Support →** Loans up to ₹3 lakh at 5% interest.
4. **Toolkit Incentives →** ₹15,000 e-voucher.
5. **Market Linkages →** GeM, fairs, e-commerce, branding.
6. **Heritage Preservation →** Support guru-shishya tradition



KEY CHALLENGES

Challenge Area	Issues	Data / Example
Economic	Limited global market access; raw material price fluctuations	Many artisans sell only in local markets; handloom exports stagnant at ~₹23,000 crore (2024)
Social	Awareness gaps in remote/tribal areas; gender disparity	Women form <30% of total beneficiaries despite being the majority in the handloom sector
Cultural	Threat from machine-made goods; youth leaving trades	Mass-produced pottery replacing terracotta crafts in West Bengal
Administrative	Uneven DPMU monitoring; duplication across schemes	CAG (2024) flagged overlaps with PMEGP & Mudra
Technological	Low digital literacy; weak e-commerce presence	Only 12% artisans on boarded on GeM despite incentives

WAY FORWARD FOR INCLUSIVE HERITAGE

Domain	Way Forward	Examples / Suggestions
Economic Inclusion	Expand collateral-free loans with flexible repayment; link artisans with Export Promotion Councils	Easier access to finance; connect with global buyers through EPCs
Social Empowerment	Create special women-focused artisan clusters; integrate SHGs with Vishwakarma beneficiaries	Handloom clusters in NE, mat makers in Assam; SHGs providing credit & collective marketing
Cultural Revitalization	Establish Heritage Craft Hubs in each state; promote youth apprenticeships under guru-shishya parampara	Craft hubs showcasing local heritage; apprenticeships blending tradition with innovation
Administrative Strengthening	Digitally integrate Vishwakarma portal with Udyam Assist; strengthen DPMUs with advanced tools	AI-based beneficiary tracking across 497 DPMUs
Technological & Market Linkages	Provide design upgradation via NID/NIFT; boost GeM onboarding, branding & ODOP campaigns	Modern designs, e-commerce penetration, stronger "One District, One Product" branding

CONCLUSION

The PM Vishwakarma Scheme is more than an economic program — it is a civilisational tribute to India's artisans, ensuring their dignity, recognition, and livelihood security. By blending heritage skills with modern technology, and fostering inclusive development across caste, gender, and region, the scheme can make Vishwakarmas true partners in India's march towards Viksit Bharat 2047.

Prelims Questions

Q1. Consider the following statements regarding the Production Linked Incentive (PLI) Scheme:

1. It was launched in 2020 to boost domestic manufacturing across strategic sectors.
2. It covers more than 25 sectors under Make in India.
3. It provides incentives on incremental sales of goods manufactured in India.
4. The India Semiconductor Mission, with an outlay of ₹76,000 crore, is a related initiative.

Which of the statements given above are correct?

(a) 1 and 3 only (b) 1, 3 and 4 only
(c) 2 and 4 only (d) 1, 2, 3 and 4

Q2. With reference to the Code on Social Security, 2020, consider the following statements:

1. It defines gig workers and platform workers for the first time in Indian labour laws.
2. It merges and repeals nine existing central labour laws.
3. Social security schemes under the Code can be funded only by the Central Government.

Which of the statements given above is/are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

Q3. With reference to Bharatmala Pariyojana, consider the following statements:

1. Bharatmala Pariyojana is a Centrally Sponsored Scheme under the Ministry of Road Transport and Highways.

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2. A major component of the scheme is the construction of greenfield expressways to reduce travel time.
3. The scheme is primarily implemented by the National Highways Authority of India (NHAI).

Options:

A. Only one B. Only two
C. All three D. None

Q4. PM Vishwakarma Scheme is aimed at which of the following trades?

1. Carpenter 2. Mason (Raajmistri)
3. Tailor 4. IT Professionals

Options:

(a) 1, 2, and 3 only (b) 2 and 4 only
(c) All four (d) 1 and 4 only

1. (b)	2. (a)	3. (b)	4. (a)

Mains Questions

Q1. The Production Linked Incentive (PLI) Scheme is often described as a game-changer in India's manufacturing landscape. Critically examine how the scheme is transforming domestic industries, while also discussing its challenges and way forward.

(250 words, 15 marks)

Q2. The Code on Social Security, 2020 has brought India's gig and platform workers within the ambit of social protection for the first time. Discuss the significance of this step, the challenges in implementation, and the way forward.

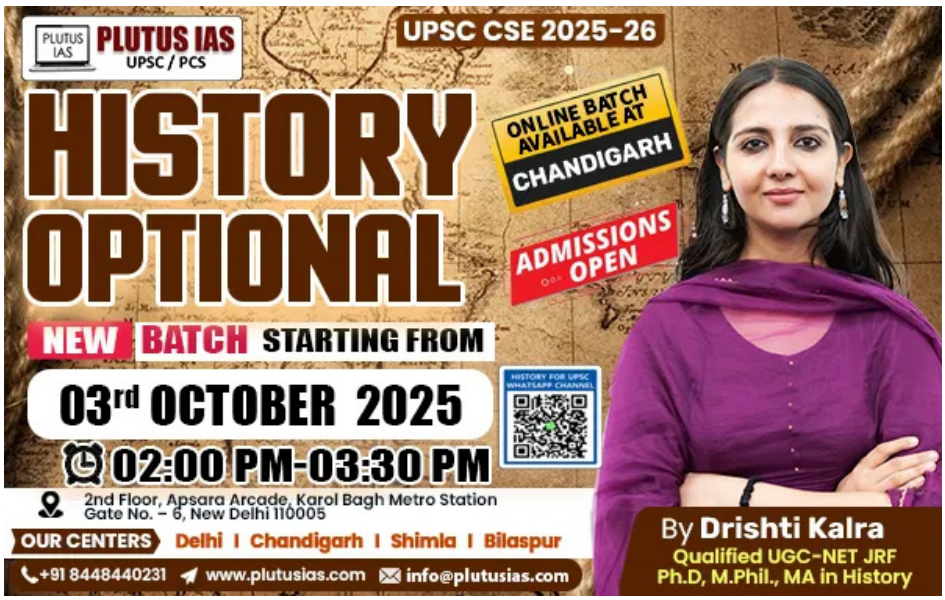
(250 words, 15 marks)

Q3. Discuss how road infrastructure contributes to economic growth, rural development, and social well-being in India. Support your answer with relevant examples

(250 words, 15 marks)

Q4. Discuss the role of traditional artisans (Vishwakarmas) in preserving India's cultural and craft heritage in the age of globalization.

(250 words, 15 marks)

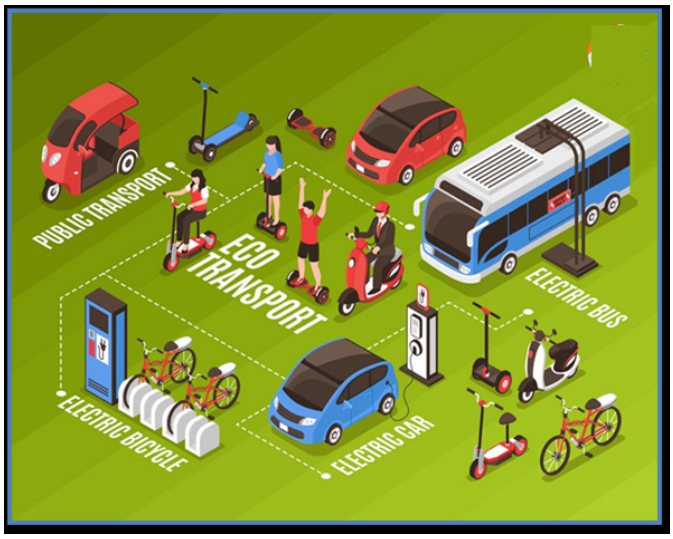




WHEELS OF CHANGE: INDIA'S ELECTRIC LEAP FOR GREEN MOBILITY

WHY IN THE NEWS?

Prime Minister Narendra Modi marked a historic milestone in India's green mobility journey by inaugurating Suzuki's first global strategic Battery Electric Vehicle (BEV), the "e VITARA," at the Hansalpur plant in Ahmedabad today. This marks an important step leading to export of Made-in-India BEVs to over 100 countries. The Prime Minister also inaugurated localized production of hybrid battery electrodes at the TDS Lithium-Ion Battery plant, a joint venture of Toshiba, Denso and Suzuki, ensuring that more than 80 percent of battery value is manufactured within India, helping in achieving the shared goal of "Make in India, Make for the World". These landmark developments not only position India as a major player in the global EV supply chain but also mark a decisive leap towards Aatmanirbhar Bharat and clean energy innovation.



India's electric vehicle market is charging ahead at full speed, with FY 2024–25 posting record-breaking numbers. Electric two-wheeler (e-2W) sales hit 11.49 lakh units, up 21% from the previous year's 9.48 lakh. These figures signal a rapidly accelerating shift towards cleaner, more sustainable mobility on Indian roads.

CHARGED WITH ADVANTAGES



Electric vehicles (EVs) are transforming the way we travel by offering a cleaner, smarter, and more efficient alternative to traditional fuel-based

transport. As India pushes towards sustainable mobility, switching to an electric vehicle is becoming a practical and future-ready choice.

THE GOVERNMENT'S ROADMAP FOR CLEAN MOBILITY

India's green mobility story is not built on a single track but on a network of bold initiatives driving change. India's journey toward green mobility is being powered by a series of forward-looking government schemes that are paving the way for a future where every ride is a step towards a healthier planet

National Electric Mobility Mission Plan and FAME- I

India's electric mobility journey received a major push from the government with the launch of a clear policy: the National Electric Mobility Mission Plan (NEMMP) 2020. This plan was brought into effect to accelerate the adoption and production of electric vehicles (EVs), laying the foundation for a cleaner, greener transport future. As part of this mission, the FAME India Scheme (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) was implemented from 2015 till 2019 to encourage the adoption of electric and hybrid vehicles. FAME-I not only focused on increasing EV uptake but also on building essential charging infrastructure. Around 520 charging stations were approved under the scheme with a total allocation of ₹43 crore to support this infrastructure.

EVs Supported under FAME-I

Category	Number of EVs Supported
e-2 Wheelers	1,51,648
e-3 Wheelers	786
e-4 Wheelers	1,02,446
Electric Buses	425
Total	2,55,305

FAME II (FASTER ADOPTION AND MANUFACTURING OF ELECTRIC VEHICLES) — PHASE II

Building on the momentum of the previous phase, FAME-II shifted the gears, injecting bold investments for the transition to electric mobility. Launched in April 2019, FAME India Phase-II came with a budget of ₹11,500 crore. The scheme focuses on increasing EV adoption, expanding the e-bus network, and strengthening the charging infrastructure.

EVs Supported under FAME-II (as of June 2025)

Category	Number of EVs Supported
e-2 Wheelers	14,35,065
e-3 Wheelers	1,65,029
e-4 Wheelers	22,644
e-Buses	5,165 (6,862 sanctioned)
Total	16,29,600

PRODUCTION LINKED INCENTIVE (PLI) SCHEME FOR AUTOMOBILE AND AUTO COMPONENT INDUSTRY IN INDIA (PLI-AUTO)

The PLI scheme is fueling India's ambition to become a global hub for advanced automotive technologies, putting homegrown innovation in the driver's seat. Launched in September 2021, the Production Linked Incentive (PLI) Scheme for the automobile and auto component industry brings a budget of ₹25,938 crore to boost domestic manufacturing of Advanced Automotive Technologies (AAT). As of March 2025, the scheme has attracted ₹29,576 crore in cumulative investment and created 44,987 (nos.) jobs. Major players like Tata Motors and Mahindra & Mahindra have stepped up with significant EV production investments. A key mandate is that companies must ensure at least 50% domestic value addition (DVA) to qualify for incentives.

PLI SCHEME FOR NATIONAL PROGRAMME ON ADVANCED CHEMISTRY CELL (ACC) BATTERY STORAGE

Batteries are the heartbeat of electric mobility, and with the ACC PLI scheme, India is set to power its future from within, reducing imports and building cutting-edge energy storage capabilities at home. The Production Linked Incentive (PLI) Scheme for Advanced Chemistry Cell (ACC) Battery Storage, launched in 2021, aims to supercharge India's battery manufacturing capacity for 50 GWh of ACC batteries with an investment of ₹18,100 crore. As of February 2025, 40 GWh has been awarded under

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which, within two years, the beneficiaries must achieve a minimum investment of ₹225 crore per GWh of committed capacity and ensure at least 25% domestic value addition (DVA), scaling up to 60% within five years. This initiative is key to strengthening India's electric mobility and energy storage ecosystem.

PM E -DRIVE

Though trucks make up only 3% of all vehicles on the road, they're heavy hitters when it comes to pollution, pumping out 34% of total CO_2 emissions and a staggering 53% of Particulate Matter (PM) emissions like dust, soot, and smoke. Buses, too, account for less than 1% of the fleet, but their environmental footprint is far from small, contributing roughly 15% of all CO_2 emissions. The PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM-E DRIVE), approved in September 2024 and implemented until March 2028, is a focused push to curb such emissions, tackling one of the most pressing challenges in urban air quality. It is a comprehensive ₹10,900 crore initiative to accelerate electric mobility in India. As of July 2025, the scheme Is incentivizing consumers by providing subsidies. 24.79 lakh e-two-wheelers (with ₹1,772 crore subsidy), 3.15 lakh e-three-wheelers (₹907 crore subsidy), 5,643 e-trucks (₹500 crore, the government's first direct incentive plan for electric trucks), e-ambulances (₹500 crore subsidy) have benefitted from the Scheme. The Scheme has further supported 14,028 electric buses with ₹4,391 crore in funding as of July, 2025.

SCHEME FOR PROMOTION OF MANUFACTURING OF ELECTRIC PASSENGER CARS IN INDIA (SPMEPCI)

India's goal to become a global hub for electric car manufacturing has been brought into motion with the SPMEPCI, which was notified in March 2024. Applicants must commit to an investment of at least ₹4,150 crore, achieve 25% domestic value addition (DVA) within three years, and ramp up to 50% DVA by the end of five years. The application portal for SPMEPCI has been launched on 24th June 2025, and it's open until 21st October 2025. To draw global automakers to invest, the scheme grants approved applicants a five-year window to import Completely Built-in Units (CBUs) of electric four-wheelers (e-4W) valued at a minimum CIF (Cost, Insurance, and Freight) of USD 35,000 at a significantly reduced customs duty of 15%, starting from their application approval date. The scheme blends incentives with localization to drive clean-mobility growth along with the 'Make in India' and 'Aatmanirbhar Bharat' initiatives.



PM-EBUS SEWA SCHEME

Taking a giant leap towards cleaner urban travel, the PM eBus Sewa scheme is set to reshape public transport by putting thousands of electric buses on India's roads, bringing comfort, connectivity, and sustainability to every ride. The Government launched this scheme in August 2023 to boost public transport in cities. With a budget of ₹20,000 crore for deploying 10,000 electric buses under the Public-Private Partnership (PPP) model, the scheme focuses on making urban travel cleaner and more efficient. Eligible cities include those with a population between 3 and 40 lakh, as well as State and UT capitals with fewer than 3 lakh residents as per Census 2011. As of August 2025, 7,293 electric buses have been approved across 14 States and 4 Union Territories. To support this expansion,

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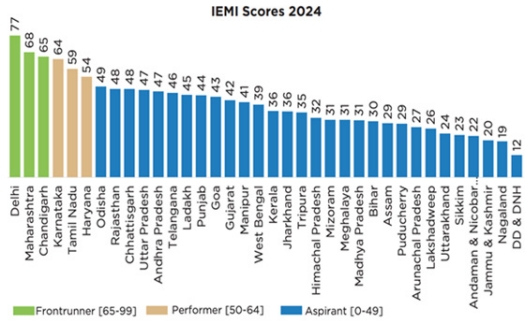
₹1,062.74 crore has been sanctioned for depot and power infrastructure in 12 states and 3 UTs, with ₹475.44 crore already disbursed to 9 states/UTs for creating key facilities.

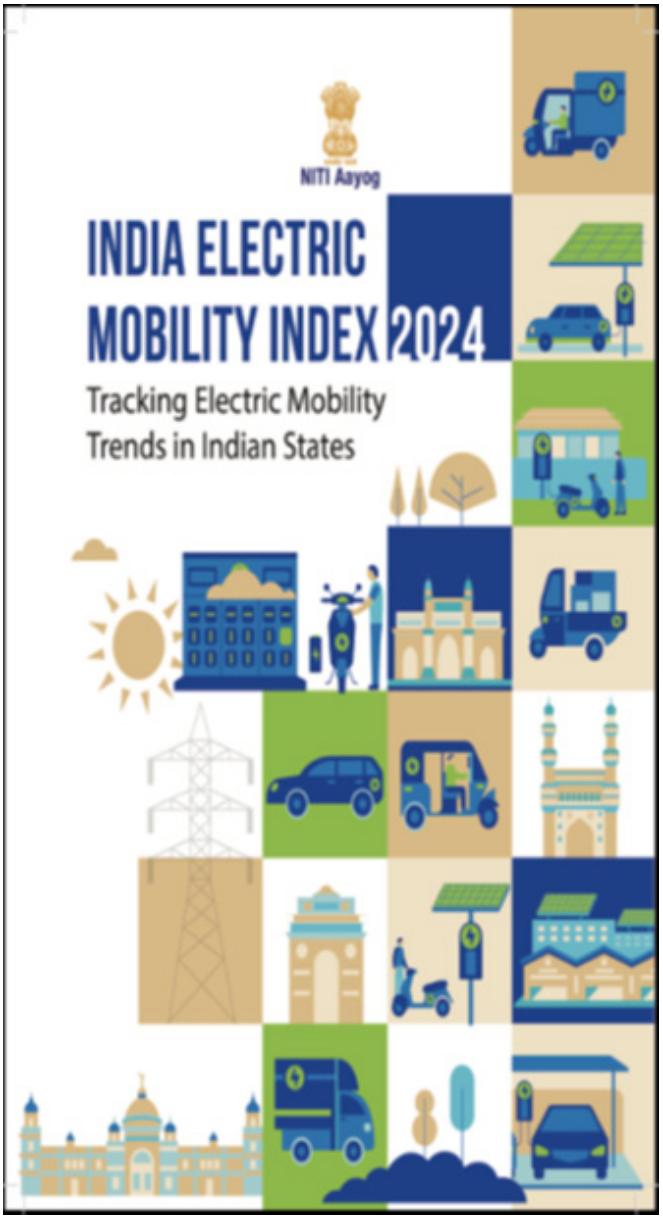
PM E-BUS SEWA-PAYMENT SECURITY MECHANISM (PSM) SCHEME

Keeping the electric wheels rolling, the PM-eBus Sewa-PSM Scheme, a ₹3,435.33 crore initiative approved in October 2024, aims to support the deployment over 38,000 electric buses across India between FY 2024–25 and FY 2028–29, with operations supported for up to 12 years from their date of deployment. The scheme aims to act as a financial safety shield for e-bus operators, offering a payment security mechanism in case of default by Public Transport Authorities (PTAs). The PM e-Bus Sewa scheme continues to drive India's urban mobility into the future by enabling scalable electric bus deployment and addressing operational risks through payment security.

INDIA ELECTRIC MOBILITY INDEX (IEMI)

In a major step towards shaping India's clean transport future, NITI Aayog unveiled the India Electric Mobility Index (IEMI) in August 2025, a pioneering tool designed to track, measure, and compare how States and Union Territories are progressing on their electric mobility ambitions. This first-of-its-kind framework not only benchmarks achievements but also provides a clear picture of where each region stands on the road to an electrified, sustainable transport ecosystem. The IEMI score is calculated by assessing performance across 16 indicators under three core themes — Transport Electrification Progress, Charging infrastructure readiness, and EV Research and Innovation Status.





MILESTONES MADE, TRACK TO TOMORROW

1. India has been making significant progress in the transition to green energy and electrification. With a clear vision and decisive targets, the roadmap ahead charts a course for cleaner air, stronger infrastructure, and a future-ready transit network.

2. The Government of India has set a vision to achieve 30% EV penetration by 2030, aligning with the global EV30@30 initiative.

3. As of February 2025, a total of 56.75 lakh electric vehicles have been registered in India out of

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389.77 million registered vehicles.

4. India has set its sights on an ambitious green horizon, aiming to slash projected carbon emissions by 1 billion tonnes by 2030.

5. In a decisive step towards a low-emission future, India aims to cut the economy's carbon intensity to below 45% by 2030 and ultimately transform into a net-zero nation by 2070.

CONCLUSION

Green mobility in India is no longer just an aspiration, it's a movement reshaping how the nation moves, breathes, and grows. India's green mobility drive is rewriting the story of transportation, replacing the roar of engines with the quiet hum of innovation. From sleek electric buses gliding through city streets to highways lined with charging points, the nation is building a network where speed meets sustainability. It's not just about getting from point A to point B, but about creating a future where every mile travelled leaves a lighter footprint and a lasting legacy of cleaner air, healthier cities, and a planet that can keep pace with our ambitions.

HEALING THE SKIES: OZONE PROTECTION AND GLOBAL ACTION

WHY IN THE NEWS?



World Ozone Day was celebrated on 16 September 2025 with the theme "From Science to Global Action." The UN Secretary-General highlighted that the success of the Montreal Protocol in healing the ozone layer is proof that collective action works. India also showcased its leadership with initiatives like the Cooling Action Plan (2019) and HFC phase-down strategy (2023).

WHAT IS OZONE AND THE OZONE LAYER?

Ozone (O_3) is a molecule made of three oxygen atoms, concentrated in the stratosphere between 15–50 km altitude. It acts as Earth's sunscreen, absorbing harmful UV-B rays that cause skin cancer, cataracts, and crop damage. The ozone layer is a part of the stratosphere, found about 15–50 km above the Earth's surface, where most atmospheric ozone is concentrated. Ozone is a molecule made of three oxygen atoms, and its special property allows the ozone layer to act like Earth's sunscreen. It absorbs most of the Sun's ultraviolet (UV) rays, especially UV-B, which can cause skin cancer, cataracts, damage to crops, materials, and marine life. Without the ozone layer, life on Earth could not have developed as it has.

CAUSES OF OZONE DEPLETION

1. Ozone depletion results from the release of man-made chemicals that persist in the atmosphere and reach the stratosphere, where sunlight breaks them down to release chlorine and bromine atoms that destroy ozone molecules.

2. CFCs, Halons, HCFCs, Carbon Tetrachloride, and Methyl Bromide are the primary ozone-depleting substances (ODS).

3. A single chlorine atom can destroy up to 1,00,000 ozone molecules, creating a chain reaction.

4. 85% of chlorine in the stratosphere is from human activities; natural sources like volcanic eruptions play a smaller role.

5. Events like the 1991 Mount Pinatubo eruption intensified ozone loss by releasing aerosols that enhanced chemical reactions.

OZONE-DEPLETING SUBSTANCES AND THEIR USES

1. **CFCs:** Used in refrigeration, air-conditioning, and aerosol sprays.

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2. **Halons:** Fire extinguishers, particularly in aircraft and sensitive facilities.
3. **HCFCs:** Transitional substitutes for CFCs, still harmful but less potent.
4. **Carbon Tetrachloride:** Solvents, cleaning agents, and fire suppression.
5. **Methyl Bromide:** Soil fumigation in agriculture.



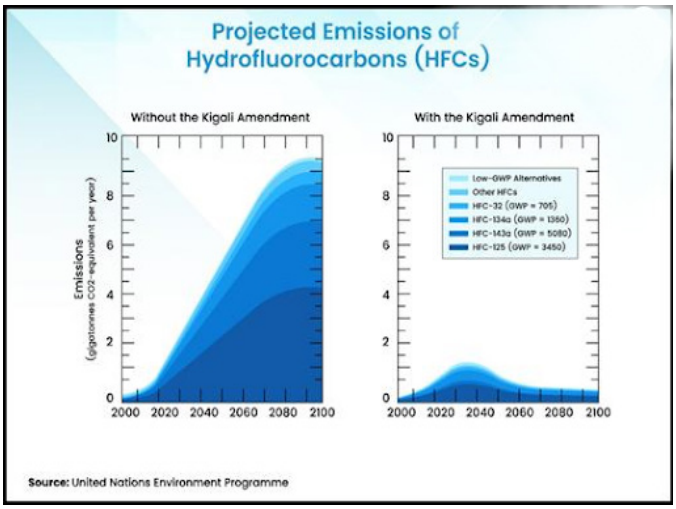
Source: PIB

ENVIRONMENTAL EFFECTS OF OZONE DEPLETION

1. **Human health risks:** WHO estimates that a 1% decrease in ozone increases UV exposure by 2%, causing nearly 2 million cataract cases annually. Higher UV increases skin cancer and immune suppression.
2. **Agricultural impact:** Crops like wheat, rice, and soybeans show reduced photosynthesis under excess UV-B. FAO studies suggest a 1% rise in UV-B reduces global food production by 1%, affecting food security.
3. **Marine ecosystem damage:** Plankton, the base of the aquatic food web, are highly sensitive to UV. Reduced plankton growth affects fisheries and ocean biodiversity.
4. **Animal health:** UV exposure causes eye damage and cancers in livestock and marine animals.
5. **Material degradation:** UV accelerates the breakdown of plastics, fabrics, wood, and paints, raising the economic costs of replacements.

GLOBAL INITIATIVES TO PROTECT THE OZONE LAYER

1. **Vienna Convention (1985):** First global framework to share research and protect ozone.
2. **Montreal Protocol (1987):** Legally binding treaty ratified by all 198 UN members; phased out nearly 99% of ODS.
3. **Kigali Amendment (2016):** Mandates phase-down of HFCs, which are non-ODS but potent greenhouse gases; full compliance could avoid 0.5°C warming.
4. **Global Environment Facility (GEF):** Provided USD 160 million (1996–2000) to help 17 transition economies phase out ODS; an additional USD 60 million earmarked for HCFCs and methyl bromide.



Source: United Nations Environment Programme

INDIA'S INITIATIVES AND ACHIEVEMENTS

1. **ODS Regulation (2000):** Prohibited new equipment using CFCs and halons.

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2. **CFC Phase-Out:** Production stopped on 1st Aug 2008, 17 months ahead of schedule.
3. **HCFC Phase-Out:** Achieved 2013 freeze and 2015 10% reduction under the HCFC Management Plan.
4. **India Cooling Action Plan (ICAP, 2019):** World's first; aims to reduce 20–25% cooling demand by 2037–38.
5. **HFC Phase-Down Strategy (2023):** Prioritizes alternatives in refrigeration, air-conditioning, and cold chains.
6. **Capacity building:** Over 20,000 RAC technicians trained in ODS-free technologies.
7. **Global advocacy:** Since 1989, India has pushed for financial and technical support for developing nations, securing the Multilateral Fund in 1990.

INDIVIDUAL ACTIONS TO PROTECT THE OZONE LAYER

1. **Consumers:** Buy ozone-friendly appliances (labeled CFC-free/eco-friendly).
2. **Homeowners:** Dispose of old fridges/ACs properly; recover gases instead of venting.
3. **Farmers:** Shift to safer alternatives to methyl bromide (e.g., Integrated Pest Management).
4. **Technicians:** Adopt refrigerant recycling and leak checks.
5. **Citizens:** Participate in awareness campaigns, especially around World Ozone Day.

CONCLUSION

World Ozone Day is not just about celebrating past success—it is a reminder that science-driven policies and global unity can solve even the gravest environmental crises. The Montreal Protocol and its amendments remain the most successful environmental treaties, saving millions from disease, protecting ecosystems, and slowing climate change. India's proactive role—early CFC bans, innovative policies like ICAP, and leadership in global negotiations—proves that developing nations can lead from the front. As the ozone layer heals, the real challenge is ensuring that similar urgency is applied to climate change mitigation, so future generations inherit a safer and healthier planet.

SUSTAINABLE AGRICULTURE: POLICIES, PRACTICES, AND CHALLENGES

WHY IN THE NEWS?

Union Agriculture Minister Shivraj Singh Chouhan, while addressing the National Agriculture Conference – Rabi Abhiyan 2025 in New Delhi, announced that India's agriculture sector is growing at 3.7% – the highest in the world. Highlighting the government's commitment to farmer welfare, he assured strict action against spurious seeds, fertilizers, and pesticides, and stressed that only biostimulants meeting set standards would be permitted. The two-day conference, themed "One Nation – One Agriculture – One Team", underlines Centre–State cooperation to boost productivity and ensure the prosperity of farmers.



WHAT IS SUSTAINABLE AGRICULTURE?

Sustainable agriculture is an approach to farming that balances productivity with ecological health, economic viability, and social equity. It ensures that present needs are met without compromising the ability of future generations to meet theirs. This approach integrates traditional wisdom with modern science to conserve resources while ensuring food security. Defined by FAO as farming that "meets

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the needs of present and future generations while ensuring profitability, environmental health, and social equity."

VARIOUS PRACTICES

1. **Organic Farming:** Avoids chemical fertilizers and pesticides, relying on natural inputs to maintain soil fertility and ecological balance. India has 4.4 million organic farmers (largest in the world – FiBL 2023).
2. **Zero Budget Natural Farming (ZBNF):** Reduces cost of cultivation by using local bio-inputs like jeevamrut instead of chemical fertilizers. Popular in Andhra Pradesh, reduces input costs, adopted by 80 lakh farmers nationwide under different models.
3. **Crop Diversification:** Growing multiple crops in the same season to reduce risks of pest attacks and market shocks. India promoted millets in 2023 (International Year of Millets); bajra, ragi, and jowar need less water and improve nutrition.
4. **Agroforestry:** Integrating trees with crops and livestock to improve soil health, biodiversity, and carbon sequestration. National Agroforestry Policy 2014 promotes poplar and eucalyptus cultivation in Haryana and UP.
5. **Water-Smart Techniques:** Drip irrigation, rainwater harvesting; PMKSY covers 13 million hectares under micro-irrigation.

WHY WE NEED SUSTAINABLE AGRICULTURE

1. **Land degradation:** Nearly 30% of India's land is degraded (ISRO 2021).
2. **Water crisis:** Agriculture uses 80% of India's freshwater; Punjab and Haryana face severe groundwater depletion.
3. **Climate change:** IPCC estimates India may face up to 10–40% crop yield losses by 2100 if unsustainable practices continue.
4. **Health concerns:** Pesticide overuse has caused soil toxicity and farmer health issues (e.g., Punjab's "cancer train").
5. **Food security:** With population expected to peak at 1.7 billion by 2060, sustainable farming is essential to feed future generations.

GOVERNMENT POLICIES TO ENHANCE SUSTAINABLE AGRICULTURE

1. **Paramparagat Krishi Vikas Yojana (PKVY):** Promotes organic farming; 7.88 lakh hectares covered.
2. **National Mission on Sustainable Agriculture (NMSA):** Focus on climate-resilient practices.
3. **Soil Health Card Scheme:** Distributed over 23 crore cards since 2015, helping farmers balance fertiliser use.
4. **PM-KUSUM Scheme:** Promotes solar-powered irrigation, reducing diesel/electricity use.
5. **Millet Promotion:** India declared 2023 as the International Year of Millets, boosting global millet trade.
6. **APEDA's MRA (Mutual Recognition Agreement) with Taiwan (2024):** First bilateral pact for organic product trade, boosting exports of rice, tea, and medicinal plants.

ISSUES IN ENHANCING SUSTAINABLE AGRICULTURE

1. **High Transition Costs:** Organic/Natural farming requires initial investment and yields may decline temporarily.
2. **Market Access:** Lack of assured MSP or premium pricing for organic crops.
3. **Awareness Gap:** Only a small fraction of farmers know about schemes like PKVY or ZBNF.
4. **Fragmented Landholdings:** Over 86% farmers are small/marginal, limiting economies of scale.
5. **Certification Hurdles:** Lengthy, expensive certification processes for organic produce.
6. **Dependence on Subsidies:** Chemical fertilisers still heavily subsidised (~₹1.75 lakh crore in 2023–24), discouraging organic adoption.

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WAY FORWARD

1. **Policy Alignment:** Rebalance subsidies to favour organic, bio-fertilizers, and drip irrigation instead of urea.
2. **Market Incentives:** Assured procurement/MSP for sustainable crops like millets, pulses, and oilseeds.
3. **Agri-Tech Integration:** Use drones, IoT, AI for precision farming; e-NAM to connect organic farmers with buyers.
4. **Capacity Building:** Expand Farmer Producer Organizations (FPOs); target 10,000 FPOs by 2027 for collective bargaining.
5. **Global Trade Opportunities:** India already exports USD 1.5 billion worth of organic products (APEDA, 2022); scope to expand to Taiwan, EU, and Gulf markets.
6. **Climate-Smart Practices:** Encourage resilient varieties and carbon credit models, aligning with India's net-zero by 2070 goal.

CONCLUSION

Sustainable agriculture is the backbone of India's food and ecological security. With rising population, shrinking resources, and climate stress, the shift towards eco-friendly, farmer-centric practices is urgent. Government schemes, global partnerships, and grassroots innovations provide momentum, but widespread adoption will depend on strong incentives and awareness. By combining traditional wisdom with modern science, India can ensure farming that not only feeds its people but also safeguards its soil, water, and biodiversity for generations to come.

Prelims Questions

Q1. Which of the following schemes is/are correctly matched with their objectives?

1. FAME-I – Adoption of EVs and charging infra
2. PLI-ACC – Domestic manufacturing of advanced batteries
3. PM e-Bus Sewa – Deployment of e-buses under PPP model

Select the correct answer:

(a) 1 & 2 only (b) 2 & 3 only
(c) 1 & 3 only (d) 1, 2 & 3

Q2. Which of the following are classified as Ozone-Depleting Substances (ODS) under the Montreal Protocol?

1. Hydrochlorofluorocarbons (HCFCs)
2. Halons 3. Carbon Tetrachloride
4. Ammonia

Select the correct answer using the code below:

(a) 1, 2 and 3 only (b) 2 and 4 only
(c) 1, 3 and 4 only (d) 1, 2, 3 and 4

Q3. Consider the following initiatives in India:

1. Paramparagat Krishi Vikas Yojana (PKVY)
2. Soil Health Card Scheme
3. PM-KUSUM Scheme
4. Pradhan Mantri Fasal Bima Yojana

Which of the above are directly aimed at promoting sustainable agriculture practices?

(a) 1 and 2 only (b) 1, 2 and 3 only
(c) 1, 3 and 4 only (d) 2, 3 and 4 only

1. (d)	2. (a)	3. (b)

Mains Questions

Q1. Discuss the role of flagship schemes such as FAME, PLI, and PM E-Drive in transforming India into a global hub of electric mobility. Highlight the challenges that remain in achieving the targets of 30% EV penetration by 2030.

(250 words, 15 marks)

Q2. "The Montreal Protocol is regarded as the most successful global environmental treaty." Discuss its achievements, with

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special reference to India's initiatives and the way forward for linking ozone protection with climate action.

(250 words, 15 marks)

Q3. "Sustainable agriculture is not just an environmental necessity but also an economic and social imperative for India." Discuss in the context of India's agricultural challenges and government initiatives.

(250 words , 15 marks)

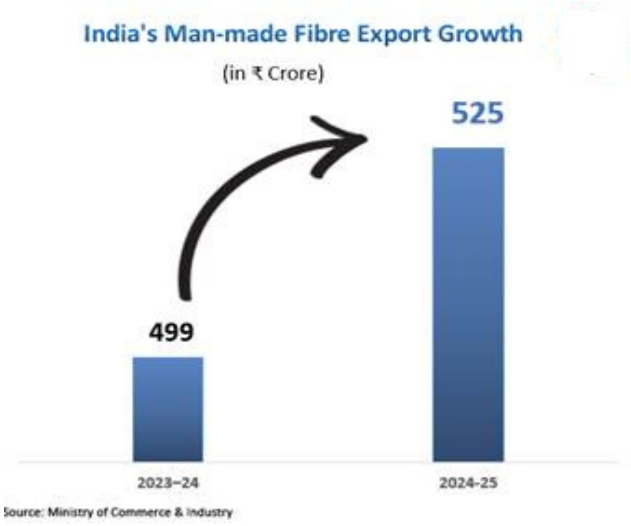




TRANSFORMATION OF INDIA'S DEFENCE AND INTERNAL SECURITY POSTURE

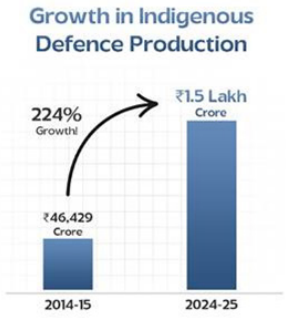
WHY IN THE NEWS?

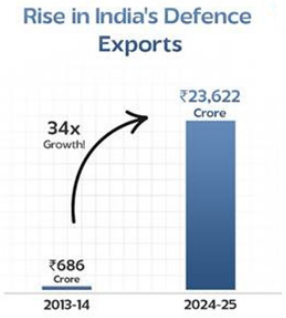
India's defence and internal security posture is in the news as the government under PM Narendra Modi completes eleven years, marking a significant transformation in national security strategy. Over this period, the focus has been on building stronger deterrence, modernising armed forces, and reducing dependence on imports through 'Atmanirbharta' in defence. The government has consistently emphasised that security is non-negotiable, leading to enhanced border infrastructure, indigenous weapons production, and reforms in defence procurement. India's proactive stance has also been evident in counter-terrorism measures, maritime security, and cyber defence preparedness.



STRENGTHENING DEFENCE CAPACITY

India's defence capacity has grown significantly under the present government, with expenditure rising from ₹2.53 lakh crore in 2013–14 to ₹6.81 lakh crore in 2025–26. The focus has shifted from mere procurement to building domestic capabilities, with defence production hitting a record ₹1.50 lakh crore in 2024–25—over three times the 2014–15 level. India now manufactures fighter jets, missile systems, warships, artillery, and even aircraft carriers. Defence exports have also surged 34 times in a decade, reaching ₹23,622 crore in 2024–25, with Indian equipment now supplied to over 100 countries, including the U.S., France, and Armenia—reflecting a robust push for self-reliance and strategic deterrence.





SELF-RELIANCE THROUGH DEFENCE ACQUISITION & INDIGENISATION REFORMS

India's defence policy in the last decade has been guided by the principle of Atmanirbharta. Prime Minister Modi led government has pushed through structural reforms to reduce import dependence, boost indigenous production, and build a globally competitive defence ecosystem. The reforms span procurement, research, industry participation, and foreign investment.

DEFENCE ACQUISITION PROCEDURE (DAP) 2020 AND INDIAN-IDDM

The Defence Acquisition Procedure 2020, revised from DPP 2016, aligned fully with the Aatmanirbhar Bharat Abhiyan spearheaded by PM Modi. It prioritises the Buy (Indian – Indigenously Designed, Developed and Manufactured) category for acquisitions, ensuring maximum reliance on local design, development, and manufacturing. This shift places Indian-IDDM projects at the top of the procurement pyramid.

So far, 146 projects of Army, Navy, Air Force & HQ IDS have been accorded 'Approval in Principle' under various 'Make' categories.

LIBERALISED FDI

To boost capital and advanced technology inflow, FDI in defence was liberalised—74% is now permitted through the automatic route, while up to 100% is allowed with government approval in cases involving advanced technology.

INNOVATION PUSH: IDEX AND TDF

The iDEX initiative (2018) supports start-ups, MSMEs, and academia with grants for defence innovations, while the Technology Development Fund (TDF) provides up to ₹10 crore for MSMEs and start-ups to develop advanced defence and aerospace technologies.

INDIGENISATION PORTALS AND POSITIVE LISTS

The SRIJAN Portal (2020) promotes local development of items earlier imported, with 46,798 items listed so far. Meanwhile, Positive Indigenisation Lists by DPSUs have phased out imports of 5,012 items across five tranches—First (2,851), Second (107), Third (780), Fourth (928), and Fifth (346).

OFFSETS AND STRATEGIC PARTNERSHIPS

The Offset Portal (2019) has improved transparency in contracts, encouraging global OEMs to invest in Indian manufacturing and source defence products from India. Similarly, the Strategic Partnership (SP) Model (2017) enables Indian firms to collaborate with foreign OEMs for technology transfer and joint infrastructure creation, boosting indigenous capacity.

INTERNATIONAL DEFENCE COOPERATION

India has expanded defence ties globally, with the 2019 Inter-Governmental Agreement with Russia enabling joint production of spares for Russian-origin platforms in India—reducing import dependence and strengthening operational readiness.

EASE OF DOING BUSINESS IN DEFENCE

Procedural reforms have simplified defence manufacturing. Industrial licence requirements for many components were removed, licence validity extended from 3 to 15 years (plus a 3-year extension), and R&D opened to industry, start-ups, and academia. Notably, 25% of the defence R&D budget is earmarked for them, ensuring wider participation in innovation.

TECHNOLOGY AND AI ADOPTION

The government has set up the Defence AI Council (DAIC) and Defence AI Project Agency (DAIPA) to integrate artificial intelligence into defence systems, with each DPSU finalising an AI roadmap. DRDO has also identified nine thrust areas, ranging from weapon platforms and strategic systems to cyber security, robotics, and soldier support.

RESPONDING TO CROSS-BORDER TERROR

India's counter-terror strategy has grown more decisive. After the Uri attack (2016) and Pulwama attack (2019), India conducted surgical strikes and the Balakot air strikes. The defining moment came in May 2025 with Operation Sindoor, when Indian forces, using drones and precision munitions, destroyed nine terrorist camps in Pakistan and PoJK, eliminating over 100 terrorists, including key figures behind the IC-814 hijacking and Pulwama attack. Pakistan's retaliatory drone and missile strikes were neutralised by Indian systems. Declaring this a "new normal," PM Modi affirmed in his 2025 Independence Day address that India will respond with full force against any terrorist threat.

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PRIME MINISTER MODI'S FIVE 'NEW NORMALS' ON PAKISTAN

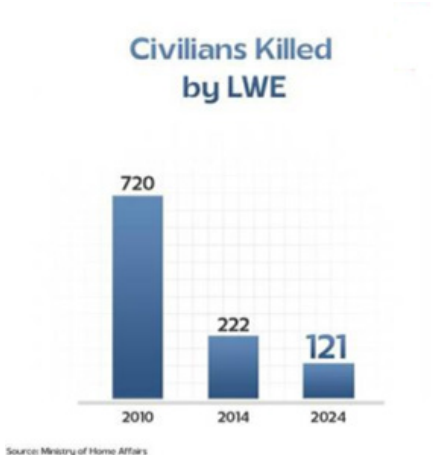
PM Modi has outlined five clear red lines that now define India's Pakistan policy: a firm and decisive response to terror attacks; rejection of nuclear blackmail; no distinction between terrorists and their state sponsors; engagement with Pakistan, if any, limited to terrorism or Pakistan-occupied Kashmir; and zero compromise on sovereignty, with the principle that "terror and talks, terror and trade, and blood and water cannot go together."

THE SUDARSHAN CHAKRA MISSION

Looking ahead, the government has launched the Sudarshan Chakra Mission, announced in 2025, as a futuristic defence programme. Its threefold aim is to develop a fully indigenous system, anticipate future warfare scenarios using predictive technologies, and build precise counter-action capabilities. By 2035, it seeks to create a comprehensive national security shield for both strategic and civilian assets, ensuring long-term deterrence.

SECURING THE HOME FRONT

On the internal security front, Left-Wing Extremism has been sharply curtailed. The number of affected districts has dropped to fewer than twenty, and over 8,000 Naxalites have surrendered in the last decade. Extremist violence incidents fell from 1,936 in 2010 to 374 in 2024, while civilian and security force casualties have declined by 85 percent—marking a major consolidation of internal stability.



These results reflect not just security operations but also the focus on development and governance in areas once cut off from growth. Roads, communication, schools, and welfare measures have reduced the ground for extremist mobilisation.

ATMANIRBHARTA BEYOND DEFENCE

India's drive for self-reliance has expanded beyond defence into food, health, energy, technology, and financial inclusion. PM Modi has repeatedly stressed that national security now covers these critical sectors, ensuring resilience against global shocks while moving towards the goal of becoming the world's third-largest economy by 2030.

FINANCIAL INCLUSION

India has made remarkable gains in financial inclusion. The RBI's FI-Index rose to 67.0 in March 2025, a 24.3% jump since 2021, and is recognised as vital for achieving 7 of the 17 SDGs. According to Global Findex 2025 (World Bank), account ownership in India has reached 89% since 2011, with active usage steadily increasing. The Pradhan Mantri Jan Dhan Yojana (PMJDY) has opened 56.04 crore accounts with deposits of ₹2.64 lakh crore (as of Aug 2025), with women comprising nearly 55% of account holders.

FOOD SECURITY AND FARMER WELFARE

Foodgrain production has grown from 246.42 MT in 2013–14 to 353.96 MT in 2024–25 (3rd AE). Farmers are supported through PM-KISAN (2019), which provides ₹6,000 annually; by Aug 2025, ₹3.90 lakh crore had been transferred across 20 installments. Meanwhile, the PM Garib Kalyan Anna Yojana ensures free foodgrain supply to 81 crore people, cementing India's food security net.

DAIRY SECTOR

India remains the world's largest milk producer, contributing 25% of global output. Milk production rose from 146.30 MT in 2014–15 to 239.30 MT in 2023–24—a 63.57% jump, with an annual growth of 5.7% against the global average of 2%.

TECHNOLOGY & INNOVATION

India's semiconductor push under the India Semiconductor Mission (ISM) (2021, ₹76,000 crore

outlay) has gained traction. Between 2023–25, 10 projects worth ₹1.60 lakh crore were approved across six states. In 2025, India inaugurated its first 3-nanometer chip design centres in Noida and Bengaluru, with its first indigenous semiconductor chip set for production this year.

BLUE REVOLUTION (FISHERIES)

Fish production has doubled from 96 lakh tonnes in 2013–14 to 195 lakh tonnes in 2024–25, with inland fisheries rising 142% to 147.37 lakh tonnes. The Union Budget 2025–26 allocated a record ₹2,703.67 crore for the fisheries sector, reflecting its growing importance to rural livelihoods and exports.

CONCLUSION

India's defence and internal security posture under the Modi government reflects a decisive shift towards strength, clarity, and self-reliance. With record investments in defence, rapid growth in indigenous production, bold reforms, and the adoption of emerging technologies, India has transitioned from being a major importer to a rising global exporter of defence equipment. Firm responses to terrorism, the clear articulation of new normal with Pakistan, and futuristic initiatives like the Sudarshan Chakra Mission underscore a forward-looking security doctrine. At the same time, progress in internal stability, food and energy security, financial inclusion, and technology innovation demonstrates that Atmanirbharta is not confined to defence alone but forms the foundation of a resilient and confident India prepared to meet both traditional and non-traditional challenges on its path to becoming a global leader.

NCB ISSUES FIRST SILVER NOTICE AGAINST PAWAN THAKUR FOR 82 KG COCAINE SEIZURE

WHY IN THE NEWS?

The Narcotics Control Bureau (NCB), in coordination with INTERPOL, has issued its first-ever Silver Notice against Pawan Thakur, the alleged mastermind of a major international narcotics and money laundering syndicate. He is wanted in connection with the seizure of 82 kg of cocaine in Delhi (November 2024). Investigations revealed that he not only arranged the import and transport of the consignment through Indian ports but also runs a hawala network with hubs in Dubai and Delhi to launder drug proceeds into the formal financial system. Currently based in Dubai, he continues to operate his syndicate from abroad.

WHAT ARE ORGANIZED CRIMES?

Organized crime is a continuing criminal enterprise by a structured group that engages in illicit activities for profit or power, often using violence, corruption, and cross-border linkages. It differs from ordinary crime in its scale, sophistication, and ability to challenge state authority.

KEY CHARACTERISTICS OF ORGANIZED CRIME

1. **Continuity:** It is not a one-time offence but an ongoing criminal enterprise.

   Example: Drug cartels in Punjab consistently smuggling heroin across the border.

2. **Structure & Hierarchy:** Involves a well-defined chain of command, with leaders, middlemen, and foot soldiers.

   Example: Mafia-like networks controlling smuggling and trafficking.

3. **Illicit Goods & Services:** Engages in illegal trades such as:

- Drug trafficking
- Arms smuggling
- Human trafficking & prostitution
- Money laundering
- Cybercrimes

4. **Use of Violence & Intimidation:** Maintains dominance through murders, extortion, threats.

   Example: Rival drug gangs killing competitors (like in the Cheyyar case).

5. **Political & Bureaucratic Corruption:** Criminals often collude with politicians, police, or bureaucrats to safeguard operations.

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6. **Transnational Dimension:** Many groups operate across borders, taking advantage of weak enforcement and porous boundaries.

   Example: Golden Crescent (Afghanistan, Iran, Pakistan) → narcotics into India.

DIMENSIONS OF DRUG TRAFFICKING IN INDIA

1. Production & Cultivation

Cannabis cultivated illegally in hilly/forest regions (e.g., Himachal, Odisha).

Poppy grown illicitly in parts of Madhya Pradesh, Rajasthan.

2. Cross-Border Smuggling

Golden Crescent (Afghanistan–Iran–Pakistan): Source of heroin into Punjab, J&K.

Golden Triangle (Myanmar–Laos–Thailand): Synthetic drugs & methamphetamine into North-East India.

Maritime smuggling via Arabian Sea and Bay of Bengal.

3. Domestic Distribution Networks

Interstate movement (e.g., ganja from Andhra Pradesh to Tamil Nadu in the Cheyyar case).

Street-level peddling in urban areas targeting students/youth.

4. Emerging Trends

Darknet & cryptocurrencies being used for online sale and payments.

Misuse of prescription drugs (Tramadol, cough syrups, sedatives).

LEGAL & INSTITUTIONAL FRAMEWORK IN INDIA

1. **NDPS Act, 1985:** stringent punishments for production, possession, and trafficking.
2. **Narcotics Control Bureau (NCB):** nodal agency for drug law enforcement.
3. **Border agencies** (BSF, Assam Rifles, Coast Guard) for interdiction.
4. **PMLA, 2002:** to choke financial flows.
5. **International:** India is a signatory to the UN Convention against Illicit Traffic in Narcotic Drugs, 1988.

ORGANIZED CRIMES AS A THREAT TO INTERNAL SECURITY

1. **Social disruption:** addiction among youth, health burden, breakdown of families.
2. **Violence and law & order issues:** gang wars, murders, extortion.
3. **Terror-financing linkages:** narco-terrorism (e.g., Afghan heroin routes).
4. **Weakening institutions:** corruption among enforcement agencies, as seen in the suspension of a local inspector in this case.
5. **Cross-border challenges:** India's proximity to the Golden Crescent and Golden Triangle makes it vulnerable.

CHALLENGES IN TRACKING ORGANIZED CRIME

1. Structural Challenges

- **Networked Nature:** Unlike ordinary crimes, organized crimes operate in loosely connected, decentralized cells, making it difficult to pin down leadership.

  Example: Drug cartels in Punjab often operate through multiple layers of middlemen.

- **Inter-state & Transnational Spread:** Criminal networks cut across state and national boundaries; jurisdictional limits of police make investigation cumbersome.

  Example: Ganja moving from Andhra Pradesh → Tamil Nadu in the Cheyyar case.

2. Technological Challenges

- **Darknet & Encryption:** Use of darknet markets and end-to-end encrypted apps makes surveillance harder.
- **Cryptocurrency & Hawala:** Digital payments and informal channels conceal financial trails.

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- **Fake IDs & Forged Documents:** Criminals use technology to evade detection (SIM cards, bank accounts).

3. Legal & Institutional Challenges

- **Jurisdictional Overlaps:** Multiple agencies (state police, NCB, ED, CBI) create coordination gaps.
- **Inadequate Forensic & Cyber Capabilities:** Many state police forces lack expertise in financial investigation and cyber forensics.
- **Weak Witness Protection:** Victims and witnesses often fear retaliation, leading to low conviction rates.

4. Socio-Political Challenges

- **Corruption & Local Collusion:** Criminals often bribe officials or politicians, weakening enforcement.

  Example: Inspector suspended in Cheyyar case for failing to check drug peddling.

- **Public Fear & Silence:** Victims often avoid reporting due to intimidation.
- **Demand-driven Market:** High demand for drugs, trafficking, or illegal arms sustains these networks.

5. International Challenges

- **Porous Borders:** India's location between Golden Crescent and Golden Triangle makes it vulnerable to drug trafficking.
- **Lack of Global Cooperation:** Extradition delays, differing laws, and limited intelligence sharing hinder action.
- **Narco-terror Linkages:** Organized crime overlaps with terrorist financing, adding a security dimension.

MEASURES TAKEN BY THE GOVERNMENT

1. Institutional:

- **Narcotics Control Bureau (NCB)** – apex body to coordinate action against drug trafficking.

  Example: NCB-led Operation Samudragupt (2023) seized ~2,500 kg of methamphetamine and 500 kg of heroin in the Indian Ocean.

- Border Security Forces, Coast Guard, and state police involvement in interdiction.

  Example: BSF seized heroin worth ₹700 crore along the Punjab border in 2022.

2. Legislative:

- NDPS Act, 1985 (Narcotic Drugs and Psychotropic Substances Act) – strict penalties for drug-related crimes.

  Example: In 2022, ED attached assets worth ₹1,400 crore under NDPS & PMLA in drug-linked cases.

- Prevention of Money Laundering Act (PMLA), 2002 – to track proceeds of drug trade.

  Example: In the recent Punjab drug-cartel cases, PMLA used to freeze accounts of peddlers.

3. Regulatory:

- National Policy on Narcotic Drugs and Psychotropic Substances – balancing supply reduction with demand reduction.

  Example: Nasha Mukt Bharat Abhiyan (2020) launched in 272 districts to reduce demand among youth

- Awareness programs under the Ministry of Social Justice & Empowerment.

4. International:

- India is a party to the UN Convention against Illicit Traffic in Narcotic Drugs (1988).
- Bilateral cooperation with neighboring countries (Nepal, Myanmar, Bangladesh).
- Collaboration with Interpol and UNODC for intelligence sharing.

CONCLUSION

The case of Pawan Thakur highlights the growing sophistication and transnational nature of organized crime in India, where drug trafficking is

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closely interlinked with hawala networks, money laundering, and foreign safe havens. The issuance of an INTERPOL Silver Notice marks a significant step in India's fight against global narcotics syndicates, but it also underlines the urgent need for stronger international cooperation, financial intelligence sharing, and proactive extradition mechanisms to dismantle such networks that undermine internal security and economic stability

ORGANIZED CRIME IN INDIA: A GROWING THREAT TO STABILITY

WHY IN THE NEWS?

Police agencies in Maharashtra have intensified their crackdown on organised crime, leading to a high-profile controversy involving Deputy Chief Minister Ajit Pawar and IPS officer Anjana Krishna.

Action Against Organised Crime

IPS officer Anjana Krishna, posted in Pune, has been actively leading operations against organised criminal syndicates, disrupting illegal activities and networks.

Her bold and independent policing has reportedly targeted groups with political links or influence, bringing law enforcement face-to-face with powerful interests.

Controversy



Deputy CM Ajit Pawar allegedly pressured the IPS officer over her investigation, raising concerns of political interference in police operations.

This has sparked widespread debate about the autonomy of police agencies and the risks officers face when confronting crime backed by political patronage.

INDIA'S VARIOUS CLASSES OF ORGANIZED CRIME:

In India, organized crime encompasses a wide range of illegal activities undertaken by criminal syndicates to gain power, amass wealth, and expand their operations. These activities exploit systemic weaknesses and create significant social, economic, and environmental challenges.

Crime Type	Definition
Drug Trafficking	Smuggling, distribution, and production of illegal drugs like heroin, cocaine, and synthetic substances.
Human Trafficking	Exploitation of vulnerable individuals for forced labor, sexual abuse, and organ trafficking.
Extortion and Protection Rackets	Forcing businesses and individuals to pay "protection money" under threats or intimidation.
Illegal Wildlife Trafficking	Poaching, smuggling, and trading of wildlife and wildlife products, threatening biodiversity.
Cybercrime	Crimes involving digital systems, including hacking, phishing, and online fraud.
Financial Fraud and Money Laundering	Fraudulent schemes like Ponzi scams and laundering criminal proceeds to hide illegal origins.
Illegal Arms Trafficking	Smuggling and trading of illicit firearms, contributing to violence and insecurity.

Counter-feiting and IP Theft	Production and distribution of fake goods, including luxury items and pharmaceuticals, and intellectual property violations.
Illegal Gambling and Bet-ting	Operating clandestine gambling and betting platforms tied to corruption and money laundering.
Smuggling	Transporting contraband goods such as gold, electronics, and counterfeit currency across borders.
Contract Killing and Assassina-tions	Targeted killings carried out by hired hitmen for personal or financial motives.
Illegal Trade in Timber and San-dalwood	Exploiting forestry loopholes to traf-fic valuable timber, causing environ-mental harm.

INITIATIVES AND LAWS IN INDIA TO COMBAT ORGANIZED CRIME

Act / Initiative	Purpose / Role in Combating Organized Crime
MCOCA (1999)	Targets organized crime syn-dicates; allows interception of communications, seizure of property.
PMLA (2002)	Prevents money laundering; empowers Enforcement Direc-torate (ED) to confiscate illicit assets.
UAPA	Declares individuals/groups as terrorists; preventive detention and property seizure.
NDPS Act (1985)	Strictly penalizes drug traffick-ing and narcotics offenses.
BNS Section 111	Defines major organized crime (kidnapping, extortion, cyber-crime, etc.).
BNS Section 112	Defines petty organized crimes (e.g., group theft, pickpocket-ing in public areas).
Arms Act	Regulates firearms; curbs illegal weapons used by crime syndicates.
Wildlife Protec-tion Act (1972)	Targets wildlife trafficking net-works and illegal trade.
Anti-Trafficking & Labor Laws	Immoral Traffic (Prevention) Act, Bonded Labor Act, Child Labour Act — combat human trafficking networks.
Companies Act (2013)	Regulates shell companies, insider trading, and money laundering operations.
POCSO Act (2012)	Protects children from sexual crimes and trafficking by orga-nized syndicates.
NCRB (National Crime Records Bureau)	Maintains crime data to help agencies track patterns and plan operations.
Enforcement Directorate (ED)	Investigates financial crimes under PMLA related to orga-nized crime.
State Anti-Or-ganized Crime Units	Specialized police wings (e.g., Maharashtra AOCU) targeting local syndicates.
Surveillance Technology	Wiretapping, electronic mon-itoring, GPS — used to track and dismantle networks.
Cybercrime Cells	Monitor cyber frauds, online trafficking, and organized hack-ing groups.

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THREATS POSED BY ORGANIZED CRIME TO INDIA'S NATIONAL SECURITY

Domain	Threats
Political	• **Instability:** Undermines democratic institutions via corruption, election manipulation, and coercion. • **Law & Order Breakdown:** Disrupts peace in states like Manipur. • **State Power Disruption:** Criminal-insurgent nexus weakens sovereignty, especially in border regions.
Economic	• **Black Money Generation:** From extortion, trafficking, and illegal mining, distorting legitimate markets. • **Tax Evasion:** Large-scale evasion impacts development funding. • **Money Laundering:** Distorts financial systems and legal economy.
Social	• **Human Trafficking:** Especially women and children; deep social harm and exploitation. • **Loss of Lives:** Due to violence, contract killings, and drug-related crimes. • **Women's Insecurity:** Organized crime raises gendered threats. • **Youth Radicalization:** Criminal groups recruit and radicalize vulnerable youth. • **Social Disharmony:** Fuels communal tensions, mistrust, and violence, weakening national unity.

CHALLENGES IN TACKLING ORGANIZED CRIME IN INDIA

1. **National Security vs. Human Security:** Balancing national security and human security often leads to conflicts, especially when countering organized crime through surveillance and power-enhancing laws.

2. **Excessive Police Brutality:** The fight against organized crime sometimes results in police brutality, undermining trust in law enforcement. For example, in Uttar Pradesh and Punjab, cases.

3. **Transnational Nature of Crimes:** Organized crime increasingly operates across borders, with syndicates exploiting international routes for activities like drug trafficking and human trafficking.

4. **State-Sponsored Crimes in Border Areas:** In border regions such as West Bengal and Punjab, organized crime thrives with tacit political support, complicating efforts to curb illegal activities.

5. **Gray Zone Warfare Using Cyber Technology:** The use of advanced cyber technologies by organized criminals has blurred the lines between traditional and digital crimes. Cyber-enabled terrorism, like the rise in ransomware attacks on Indian government institutions, demonstrates the increasing threat posed by this new form of warfare.

6. **Use of Advanced Technology by Criminals:** Criminals are using high-tech methods to evade detection, making it difficult for law enforcement to keep up. In the gold smuggling case in Kerala, criminals used hidden compartments and sophisticated tools to smuggle gold, demonstrating the evolving nature of organized crime.

7. **Lack of Effective Police Training:** Law enforcement agencies often lack specialized training and equipment to handle specific crimes such as cybercrime, human trafficking, and money laundering. Many state police forces struggle with the growing threat of cybercrime due to outdated skills and technology.

8. **Lack of Cooperation Among Agencies:** Cooperation among agencies like the CBI, Enforcement Directorate, and state police is often fragmented, which weakens efforts to tackle organized crime. In some high-profile cases, this lack of coordination has resulted in delays and missed opportunities to dismantle criminal networks.

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9. **Political Patronage to Criminals:** Political figures sometimes protect organized criminals, allowing them to operate with impunity. Reports from Uttar Pradesh and Bihar reveal how local politicians have been alleged to shelter criminals in exchange for support, complicating efforts to combat crime effectively.

10. **Delayed Prosecution:** Delayed legal proceedings often prevent swift justice in organized crime cases, reducing the deterrent effect. The slow pace of trials, as seen in the 1993 Bombay bombings, allows criminals to continue their operations without facing timely legal consequences, thereby weakening law enforcement efforts.

WAYS TO STRENGTHEN THE SECURITY STRUCTURE AGAINST ORGANIZED CRIME

1. **National Security Council (NSC):** The NSC, formed in 1998, guides national security decisions. The Strategic Policy Group, led by the National Security Advisor, ensures coordinated action against organized crime across various agencies.

2. **Internal Security Ministry:** A dedicated ministry can streamline internal security responses, focusing on internal disturbances and coordinated crime prevention under Article 355 of the Constitution.

3. **Improved Cooperation Among Agencies:** Enhanced coordination among security agencies like CBI, ED, and state police will improve intelligence sharing and response times to organized crime activities.

4. **Bharatiya Nyaya Sanhita (BNS):** The BNS defines organized crime, as enabling law enforcement to tackle crimes like kidnapping, extortion, and human trafficking effectively.

5. **Strengthening Police Forces:** Providing regular training in areas such as cybercrime and money laundering will improve the capability of state police to combat organized crime.

6. **Balancing Security and Human Rights:** National security measures should respect human rights, ensuring that anti-crime actions do not infringe on civil liberties.

7. **Border Fencing and Surveillance:** Strengthening border security, like along the Myanmar-India border, will help prevent smuggling, trafficking, and other cross-border crimes.

8. **Support for Border Communities:** Socio-economic development in border areas reduces vulnerabilities and prevents exploitation by criminal syndicates.

9. **Advanced Technology Against Cybercrime:** Utilizing technologies like AI and blockchain for tracking cybercriminals and setting up specialized cybercrime units will enhance India's digital security.

10. **Legal and Judicial Reforms:** Speeding up prosecutions and establishing fast-track courts for organized crime cases will deter criminal syndicates and strengthen the justice system.

CONCLUSION

In conclusion, organized crime poses a significant threat to India's security, especially in the current technological era. Over the past decade, India has implemented various measures to combat organized crime, from strengthening legal frameworks to enhancing border security. However, sustained efforts, continuous monitoring, and adaptable strategies are essential to keep organized crime at bay and protect national security in the long term.

CROSS-BORDER DRUG DRONES FROM PAKISTAN: RISING INTERNAL SECURITY CHALLENGE FOR INDIA

WHY IN THE NEWS?

The NCB Annual Report 2024 highlighted a sharp rise in cross-border narcotics smuggling, especially through drones from Pakistan. Drone-related cases spiked to 179 in 2024 from just 3 in 2021, mainly along the Punjab border, with Rajasthan and J&K

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also affected. Seizure of synthetic drugs rose six-fold between 2019–24 (11,994 kgs in 2024), while maritime trafficking surged with 10,564 kgs seized. Released by Union Home Minister Amit Shah at the 2nd National Conference of ANTFs, the report also flagged new synthetic drugs like mescaline and a rise in injectable drug abuse, posing a serious internal security challenge.



SECURITY IN BORDER AREAS

1. **Porous Borders and Monitoring Challenges:** India shares long land borders with Pakistan, Bangladesh, Nepal, Myanmar, and China, making them difficult to monitor fully. Example: The Indo-Nepal border allows free movement, often exploited for smuggling and human trafficking.
2. **Cross-Border Smuggling & Narco-Terrorism:** Trafficking of drugs, arms, and fake currency fuels internal security threats. Example: Drone-based heroin smuggling from Pakistan into Punjab has risen sharply (179 cases in 2024).
3. **Geographical Vulnerabilities:** Difficult terrain such as deserts in Rajasthan, riverine borders in Assam, and dense forests in the Northeast complicates patrolling and fencing. Coastal belts are vulnerable to maritime smuggling.
4. **Technological and Surveillance Gaps:** Limited deployment of anti-drone systems, AI-based surveillance, radars, and night-vision equipment. Smugglers use GPS-enabled drones, encrypted communications, and maritime routes to bypass detection.
5. **Coordination Among Agencies:** Multiple agencies—BSF, Coast Guard, NCB, Customs, and State Police—operate along borders but coordination is often weak, delaying joint operations. Example: Drug consignments along the Gujarat coast in 2023 were intercepted late due to coordination gaps.
6. **Local Community and Youth Involvement:** Vulnerable local populations in border districts are sometimes recruited by cartels for drug transport or smuggling due to unemployment. Example: Punjab youth often act as receivers of drone-dropped consignments

WHY IS BORDER SECURITY IMPORTANT?

1. **Prevents Narco-Terrorism and Extremist Financing:** Drug trafficking across borders funds militant and extremist activities. Example: In J&K, heroin smuggling is used by terror outfits to finance operations.
2. **Safeguards National Sovereignty and Territorial Integrity:** Strong borders deter infiltration and encroachment by hostile neighbors. Prevents illegal settlements and encroachments in sensitive zones.
3. **Ensures Internal Stability and Law & Order:** Prevents spillover of insurgency and separatist movements into hinterland. Helps reduce communal tensions and organized crime linked to cross-border cartels.
4. **Protects Youth from the Drug Menace:** Narco-smuggling targets vulnerable border youth as consumers and carriers. Leads to rising addiction, health crises, and loss of productive workforce.
5. **Secures Border Communities and Local Economies:** Border villages often face infiltration, smuggling, and violence. Strong border security boosts trust, livelihood opportunities, and regional development.
6. **Prevents Illegal Trade and Economic Losses:** Smuggling of drugs, fake currency, gold, and arms destabilizes the economy. Undermines formal trade, customs revenues, and financial security.
7. **Strengthens India's Global Image and Regional Security Role:** Effective border management

shows India's capability to handle transnational crime. Enhances cooperation with neighbors and global bodies (e.g., UNODC, BIMSTEC, Colombo Security Conclave).

MAJOR BORDER AREAS THREATENING INTERNAL SECURITY

1. **Punjab–Pakistan Border:** Drone drops of heroin and arms fuel narco-terrorism; Amritsar and Tarn Taran are hotspots.
2. **Western Rajasthan:** Smugglers exploit vast desert terrain in Barmer and Jaisalmer for infiltration.
3. **Jammu & Kashmir:** Terror outfits fund operations through heroin smuggling ("narco-terrorism").
4. **Northeast (India–Myanmar Border):** Part of the 'Death Triangle', the border sees methamphetamine and yaba tablets smuggled into Mizoram and Manipur.
5. **Coastal States (Gujarat, Kerala, Tamil Nadu):** Large consignments (over 3,000 kg heroin seized off Gujarat coast in 2021) show vulnerability of sea routes.
6. **Indo-Nepal & Indo-Bangladesh Borders:** Free movement agreements often aid illegal trade, fake currency, and drug trafficking.
7. **Andaman & Nicobar Islands:** Its location in the Indian Ocean Region (IOR) makes it attractive for international drug syndicates.

GOVERNMENT INITIATIVES / POLICIES

1. **NCORD (Narco Coordination Centre):** Created in 2016 to strengthen coordination; holds state and district-level meetings to plug gaps.
2. **National NDPS Policy (2012):** Balances supply reduction with rehabilitation of addicts.
3. **Anti-Drone Systems:** DRDO-developed systems now deployed in Punjab and Rajasthan sectors.
4. **Awareness Programs:** Nasha Mukt Bharat Abhiyan covers over 270 districts to reduce demand.
5. **Maritime Security:** Coastal radar chains (46 stations) linked with Navy & Coast Guard; post-2008 Mumbai attacks, surveillance was upgraded.
6. **PITNDPS Act:** Use expanded in 2024—531 detention orders issued, compared to just 93 in 2020.
7. **International Cooperation:** India works with UNODC, Colombo Security Conclave, and BIMSTEC to monitor regional narcotics routes.

CHALLENGES IN BORDER AREAS

1. **Technological Gap:** Drones with long-range payloads often go undetected due to lack of 24×7 AI surveillance grids.
2. **Difficult Terrain:** Patrolling Indo-Myanmar's hilly forests or Brahmaputra riverine border is resource-intensive.
3. **Cross-Border Cartels:** Cartels in Pakistan and Myanmar are directly linked to terror financing in India.
4. **Local Youth Involvement:** Punjab's rising drug addiction provides a ready network for smugglers.
5. **Corruption & Collusion:** Some lower-level security personnel have been caught assisting smugglers.
6. **Judicial Delays:** NDPS cases drag for years; conviction rate remains low (~30%).
7. **Geopolitical Factors:** Instability in Afghanistan (Golden Crescent) pushes heroin into Indian markets.s

WAY FORWARD

1. **Technology-Driven Security:** Deploy AI-based radars, anti-drone systems, satellite monitoring in vulnerable states like Punjab and Rajasthan.
2. **Strengthening Forces:** Increase BSF and Coast Guard manpower; provide night-vision drones and armored vehicles.
3. **Integrated Coastal Security Scheme:** Engage fishing communities as "eyes and ears" of coastal policing.

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4. **Regional Cooperation:** Enhance joint operations under Colombo Security Conclave and share intelligence with BIMSTEC partners.

5. **Community Engagement:** Launch rehabilitation programs in Punjab and Northeast to cut demand and reduce local support for traffickers.

6. **Legal Reforms:** Fast-track NDPS cases with special courts to create deterrence.

7. **Employment Schemes:** Expand skill development and jobs in border districts (e.g., Punjab's border belt, NE states) to curb youth recruitment by cartels.

CONCLUSION

Border security is not merely about protecting territorial integrity but also about ensuring internal stability. The alarming rise of narco-terrorism through drones and maritime routes highlights a dangerous shift in the nature of cross-border threats. To counter this, India requires a whole-of-government as well as a whole-of-society approach, where technology-driven surveillance, inter-agency coordination, and international partnerships play a central role. At the same time, addressing socio-economic vulnerabilities in border districts is essential to reduce local facilitation of smuggling networks. A balanced strategy that integrates supply reduction, demand reduction, and rehabilitation measures is crucial to tackle the drug menace holistically.

BALANCING POWER IN WEST ASIA: INDIA'S RESPONSE TO THE SAUDI–PAKISTAN DEFENSE PACT

WHY IN THE NEWS?

Saudi Arabia and Pakistan signed a Strategic Mutual Defense Agreement in Riyadh, marking a significant shift in the security dynamics of West Asia. The pact has been announced at a time when Gulf nations are increasingly concerned about Israel's recent military strikes and the possibility of Iran acquiring nuclear weapons, both of which pose serious threats to regional stability. The agreement is viewed as a strategic move that combines Saudi Arabia's vast financial resources with Pakistan's nuclear-capable military strength, thereby altering the balance of power and raising wide-ranging implications not only for the Gulf but also for South Asia and the broader global security architecture.



WHAT IS THE DEAL?

- **Official name:** Strategic Mutual Defense Agreement (SMDA).
- Signed between Pakistan and Saudi Arabia to strengthen defense ties and ensure joint deterrence.
- **Core principle:** "An aggression against one shall be considered an aggression against both."
- Seen as a shift away from dependence on the U.S. security umbrella in West Asia.

PROVISIONS OF THE DEAL

1. **Mutual Defense Clause:** Both countries pledge to respond jointly to any external aggression.
2. **Military Cooperation:** Expansion of training, joint exercises, and stationing of Pakistani forces in Saudi Arabia.
3. **Potential Gulf Expansion:** Pact may extend to cover other Gulf states under Saudi leadership.

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4. **Nuclear Ambiguity:** Pakistan officially denies a nuclear dimension, but Saudi hints suggest a de facto nuclear shield.

5. **Economic–Security Linkage:** Saudi financial support (loans, investments) expected to bolster Pakistan's economy and defense modernization.

6. **Defense Industrial Collaboration:** Possible joint ventures in defense production, arms procurement, and technology sharing between Saudi Arabia and Pakistan.

7. **Counterterrorism Cooperation:** Strengthening intelligence-sharing, border security, and coordinated operations against non-state armed groups that threaten either country.

IMPLICATIONS ON INDIA'S WEST ASIA DIPLOMACY

1. **Security Concerns:** The Possibility of Pakistan's nuclear deterrence indirectly projecting into West Asia. Adds to India's strategic worries, already balancing ties with Israel, Iran, and the Gulf states.

2. **Regional Balancing:** India has built strong defense and energy ties with Saudi Arabia, UAE, and Israel. A Saudi–Pakistan military bloc could dilute India's strategic influence in the Gulf.

3. **Iran Angle:** India's Chabahar port project with Iran could face greater scrutiny if Gulf–Pakistan–Saudi ties harden against Tehran.

4. **Geopolitical Polarisation:** Risk of emerging blocs- Saudi–Pakistan–Gulf vs India–Israel–U.S. (potential alignment). India may be forced to navigate complex trilateral rivalries.

5. **Economic Interests:** The Gulf hosts 9 million+ Indian diaspora and is India's top energy supplier. Any regional instability could affect remittances, energy security, and trade.

INDIA'S WAYS TO MANAGE IMPLICATIONS

1. **Strategic Balancing:** Continue balancing ties with Saudi Arabia, UAE, Israel, and Iran, avoiding taking sides.

2. **Defense Diplomacy:** Expand India's role in Gulf security through naval exercises, defense exports, and technology sharing.

3. **Energy Diplomacy:** Secure long-term oil and LNG deals to insulate against political shocks.

4. **Diaspora Safety:** Strengthen evacuation and protection frameworks for Indian workers in Gulf states.

5. **Multilateral Engagement:** Use forums like IORA, SCO, and BRICS+ to promote regional stability and dialogue.

6. **Backchannel Diplomacy:** Quietly engage with Riyadh to ensure the pact does not undercut India's security or energy interests.

CONCLUSION

The Saudi–Pakistan defense pact marks a strategic shift in West Asia's security landscape, reflecting Gulf distrust of U.S. protection and growing reliance on Pakistan's military. For India, it poses challenges by enhancing Pakistan's regional role and complicating its delicate balance between Iran, Israel, and Arab states.

India must adopt a multi-vector strategy—deepening economic interdependence, leveraging diaspora ties, and enhancing defense diplomacy—to safeguard its national security and sustain influence in West Asia.

Prelims Questions

Q1. Consider the following statements regarding India's recent defence reforms:

1. The Defence Acquisition Procedure (DAP) 2020 places Buy (Indian–IDDM) at the top of its procurement priorities.
2. The SRIJAN Portal lists indigenisation opportunities for items earlier imported.
3. The iDEX initiative provides funding support only to large defence PSUs.

Which of the statements given above is/are correct?

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(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

Q2. With reference to Organized Crime, consider the following statements:

1. It is a continuing criminal enterprise run by structured groups for profit or power.
2. It usually operates only within national boundaries and does not have a transnational dimension.
3. Organized crime often relies on violence, corruption, and illicit trade.

Which of the statements given above is/are correct?

(a) 1 and 3 only (b) 1 only
(c) 2 and 3 only (d) 1, 2 and 3

Q3. Which of the following laws or initiatives in India focuses on organized crime?

1. MCOCA (Maharashtra Control of Organised Crime Act)
2. PMLA (Prevention of Money Laundering Act)
3. NDPS Act (Narcotic Drugs and Psychotropic Substances Act)
4. Wildlife Protection Act 1972.

Select the correct answer using the code given below:

A. Only one B. Only two
C. Only three D. All four

Q4. Which of the following natural heritage sites from India were recently added to UNESCO's Tentative List of World Heritage Sites in 2025?

1. Deccan Traps 2. Varkala Cliffs
3. Tirumala Hills 4. Kaziranga National Park

Options:

(a) 1, 2 and 3 only (b) 2 and 4 only
(c) 1 and 4 only (d) 1, 2, 3 and 4

1. A	2. A	3. D	4. A

Mains Questions

Q1. India's defence and internal security posture under PM Modi has transformed with a decisive focus on self-reliance, deterrence, and modernisation. Discuss the key reforms and initiatives that have shaped this transformation.

(250 words, 15 marks)

Q2. Organized crime, particularly drug trafficking, has emerged as a grave threat to India's internal security. Discuss with reference to recent developments.

(250 words, 15 marks)

Q3. Discuss the various laws and initiatives in India aimed at combating organized crime. How effective are these measures in addressing the multifaceted nature of organized crime?

(250 words, 15 marks)

Q4. "The inclusion of seven new natural heritage sites in UNESCO's Tentative List reflects India's growing heritage diplomacy. Discuss the significance of this achievement, the challenges in heritage conservation, and the policy measures needed for sustainable management."

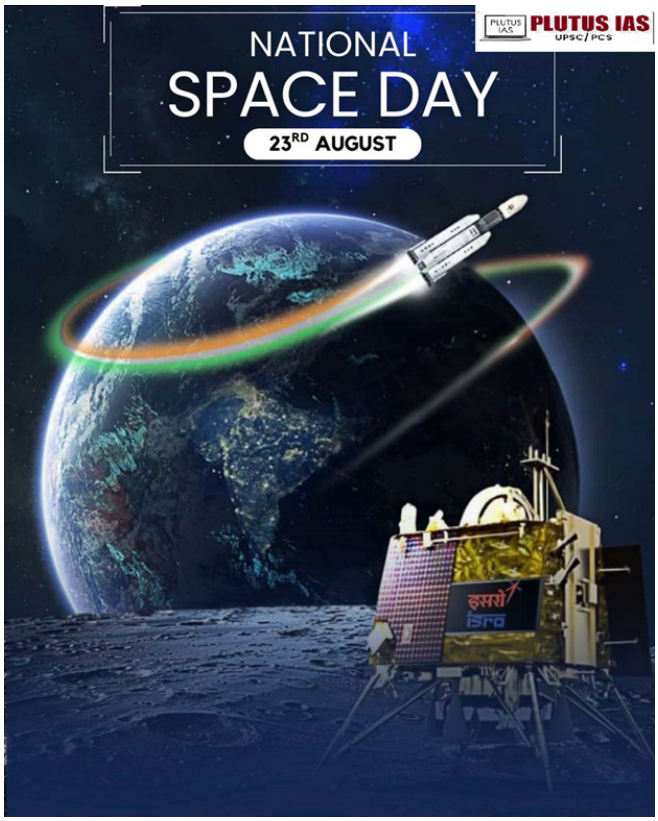
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NATIONAL SPACE DAY 2025: BRIDGING ANCIENT ASTRONOMY AND MODERN SPACE TECHNOLOGY

WHY IN THE NEWS?



National Space Day is celebrated on 23 August each year to commemorate India's remarkable achievements in space exploration. The day holds special significance as it marks the Chandrayaan-3 soft landing on the Moon on 23 August 2023, at the historic site named 'Shiv Shakti Point', making India the first country to land near the Moon's southern polar region. The mission also deployed the Pragyan Rover, adding a significant milestone to India's lunar exploration journey. National Space Day aims to inspire young minds, promote national pride, and showcase how space technologies benefit everyday life, from weather forecasting and agriculture to disaster management.

THEME 2025

The theme for National Space Day 2025 is:

"Bridging the Past and Future: Honoring Traditional Astronomy and Showcasing Modern Space Achievements."

The celebrations emphasize India's ancient astronomical wisdom while highlighting contemporary accomplishments in space technology. Students are central to the festivities, with science fairs, planetarium shows, competitions, and interactive sessions with ISRO scientists across schools and colleges, fostering curiosity and interest in space research.

WHY IS AUGUST 23 CELEBRATED AS NATIONAL SPACE DAY?

On August 23, 2023, ISRO's Chandrayaan-3 mission successfully landed near the lunar south pole, a region unexplored by any other nation. With this, India:

Became the first country to land near the Moon's south pole.

Joined the elite group of nations—USA, Russia, and China—to achieve a lunar landing.

Showcased its low-cost yet highly effective space technology to the world.

In honor of this historic achievement, the Indian government declared August 23 as National Space Day to recognize ISRO's achievements and

encourage young minds to pursue careers in science and technology.

INDIA'S SPACE ACHIEVEMENTS

1. **Expanding Private Sector Participation:** Since the establishment of IN-SPACe (Indian National Space Promotion and Authorization Centre) in 2020, India's space sector has witnessed unprecedented growth. Over 300 start-ups have registered, with six private entities launching 14 satellites with ISRO support. Additionally, two sub-orbital test flights by Indian start-ups were successfully conducted, reflecting a vibrant ecosystem for innovation and entrepreneurship.

2. **Human Spaceflight – Gaganyaan Mission:** The Gaganyaan programme is a flagship initiative in India's human spaceflight journey. The first uncrewed mission, scheduled for December 2025, will carry Vyommitra, a half-humanoid robot, to test critical systems for human spaceflight. The future crewed mission aims to send astronauts, including IAF Group Captain Shubhanshu Shukla, the first Indian to complete a mission to the International Space Station, marking a historic leap in India's capabilities.

3. **Other Milestones:** India continues to achieve global recognition through missions like the NASA-ISRO Synthetic Aperture Radar (NISAR) satellite, which is functioning optimally. The nation is also leveraging space technology for citizen-centric applications, including telecommunication in remote areas, precision agriculture, and disaster warning systems, ensuring that space progress translates into tangible benefits for society.

NATIONAL SPACE MEET 2.0

- **Date & Venue:** 22 August 2025, New Delhi.
- **Participants:** Ministries, start-ups, academia, experts.
- **Purpose:**

  Shape India's space roadmap for the next decade.

  Identify hundreds of practical and futuristic use cases through 10 breakout sessions.

- **Key Highlight:**

  P.K. Mishra (Principal Secretary to PM): Space technology aims to improve life on Earth – enhancing agriculture, building climate resilience.

- **Start-up Growth:**

  From 2 space start-ups in 2014 to 350+ today.

  Reflects success of reforms in promoting private sector participation.

ISRO'S MAJOR ACHIEVEMENTS CELEBRATED ON SPACE DAY

On National Space Day 2025, the nation looks back at ISRO's inspiring milestones:

1. **Aryabhata (1975):** India's first satellite.
2. **PSLV & GSLV Development:** Reliable launch vehicles for satellites.
3. **Mangalyaan (2013):** First Asian mission to Mars orbit, achieved on a low budget.
4. **Chandrayaan-1 (2008):** Discovered water molecules on the Moon.
5. **Chandrayaan-2 (2019):** Orbiter continues to study the Moon.
6. **Chandrayaan-3 (2023):** Historic soft landing near the lunar south pole.
7. **NAVIC Satellites:** India's indigenous navigation system.
8. **Commercial Launches:** Making India a global hub for satellite launche

INDIA'S SPACE JOURNEY: PAST TO PRESENT

1. **1963:** Sounding rockets launched from Thumba.
2. **1975:** Launch of Aryabhata, India's first satellite.
3. **2023:** Chandrayaan-3 Moon landing.
4. **2025:** Upcoming Gaganyaan mission – human spaceflight.

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5. **Vision:** Linking ancient astronomy with modern space technology.

6. **Goal:** Achieve Viksit Bharat 2047 – global recognition, technological excellence, and leadership in space exploration.

SIGNIFICANCE OF NATIONAL SPACE DAY 2025

1. **Agriculture and Food Security:** Leveraging satellite-based remote sensing to monitor crop health, predict yields, and support precision farming.

2. **Disaster Management:** Using satellite imagery for early warning systems, real-time tracking of floods, cyclones, and earthquakes, aiding timely relief efforts.

3. **Weather Forecasting & Climate Monitoring:** Enhancing accuracy of weather predictions, monitoring climate change impacts, and supporting sustainable environmental planning.

4. **Communication Systems:** Strengthening national telecommunication networks, internet connectivity, and satellite-based communication in remote areas.

5. **Navigation & Transport:** Improving GPS and satellite navigation systems for transportation, logistics, and urban planning.

6. **Space Research & Technology Development:** Promoting innovation in space science, satellite technology, and scientific exploration, positioning India as a global space leader.

7. **National Security & Strategic Applications:** nhancing defense capabilities, surveillance, and strategic monitoring through space-based assets.

CONCLUSION

National Space Day 2025 is a celebration of India's extraordinary achievements in space science and technology while envisioning the future of human space exploration. It underscores the importance of youth engagement, scientific innovation, and private sector participation, highlighting how space exploration contributes to national development, global recognition, and improved quality of life. By bridging the past and future, India continues its journey from Aryabhata to Gaganyaan, inspiring generations to dream beyond the skies.

INDIAN PATENT SYSTEM: BALANCING INNOVATION, PUBLIC INTEREST, AND GLOBAL STANDARDS

WHY IN THE NEWS?

The Indian Council of Medical Research (ICMR) licensed nine cutting-edge technologies to industry partners under its Medical Innovations- Patent Mitra initiative at India MedTech Expo 2025 in New Delhi today.



WHAT IS A PATENT?

A patent is a legal right given by the government to an inventor for a new invention. It lets the inventor stop others from making, using, selling, or importing the invention without permission—for a limited time. In return, the inventor must fully explain the invention in the patent application.

WHAT CAN BE PATENTED?

You can patent a new product or process if it:

Is New (Novelty):

- The invention must be original and not disclosed anywhere in the world (before the filing date) in any form—publication, public use, or prior patent.

Has an Inventive Step (Non-obviousness):

- It must involve a technical advancement or an economic significance that is not obvious to a person skilled in that field.

Is Capable of Industrial Application:

- The invention must be practically usable in any kind of industry (can be made or used in a useful way).

Is Not Excluded under Sections 3 & 4 of the Patents Act:

- **Section 3** lists what is not considered an invention, such as:

  Discoveries of scientific principles or abstract theories

  Mathematical methods or business methods

  Computer programs per se

  Plants and animals (except microorganisms)

  Mere admixtures (simple mixtures with no new property)

  Methods of agriculture or medical treatment

- **Section 4** excludes inventions relating to **atomic energy.**

KEY GOVERNMENT POLICY ASPECTS ON PATENTS IN INDIA

Key Policy Aspect	Policy Support & Description	Relevant Data / Example
Legal Framework	Patents Act, 1970 provides the legal structure for patent rights, defines patentable subject matter, and regulates the patent life cycle.	- Patent term: 20 years - Defines non-patentable items (Section 3 & 4)
International Compliance	National laws harmonized with TRIPS Agreement (WTO) ensuring global IP standards.	- India amended patent law in 2005 to include product patents as required by TRIPS.
Patentability Standards	Specifies novelty, inventive step, and industrial application. Prevents evergreening via Section 3(d).	- Section 3(d) blocks patents on mere modifications unless enhanced efficacy is shown (e.g., Novartis case).
Procedural Streamlining	Reforms under Patent Rules, 2024 introduced new forms, e-filing, reduced compliance, and faster examination.	- Examination timeline cut from 48 to 31 months - Working statements now once every 3 years
Compulsory Licensing	Enables government-authorized use of patents for public interest (e.g., health emergencies, affordability issues).	- 2012: Natco Pharma received India's first compulsory license for Nexavar (cancer drug).
Government Use Provisions	Allows government to use patented inventions in national interest under Section 100 of the Patents Act.	- Used in defense & public health sectors (e.g., during pandemics).
Funding Schemes	Financial aid for inventors/startups to encourage filings & IP commercialization.	- National Research Foundation (NRF) provides IP management & legal support for biotech startups. - MSME schemes also support IP costs.

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Awareness and Training	Programs through Patent Facilitating Cells (PFCs) & NIPAM for IP education.	- NIPAM trained 1 million+ students & faculty under IP awareness missions by 2024.
Recognition of Inventors	New tools for acknowledgment such as Certificate of Inventorship (Patent Rules 2024).	- Inventors now receive a formal certificate as proof of contribution to a granted patent.
Access to Patent Information	Free & transparent access to IP laws, rules, forms, and status of patents.	- IP India Portal - WIPO databases for global comparisons.

PROGRESS IN THE INDIAN PATENT SYSTEM:

1. **Record High Patent Applications:** In 2023, India received over 90,300 patent applications, the highest in its history.
2. **Massive Increase in Patent Grants:** In 2023–24, the Indian Patent Office granted over 1 lakh (100,000) patents — a 201.91% increase over the previous year.
3. **Rise in Domestic Innovation:** For the first time, Indian residents filed 55.2% of total patent applications in 2023, up from just 24.8% in 2013.
4. **Improved Global Position:** India climbed to 6th place globally in patent application rankings in 2023, improving from 9th in 2020 (WIPO data).
5. **Policy Reforms for Faster Processing:** The Patent Amendment Rules 2024 and 2025 reduced the time to request examination from 48 months to 31 months.
6. **Support for Sustainability:** Green technology patents now benefit from incentives and fast-track examination, promoting eco-innovation.
7. **Technological & Operational Advancements:** Full digitization of the patent system enables 24/7 e-filing, real-time tracking, and online hearings, improving transparency and efficiency.

CHALLENGES IN THE INDIAN PATENT SYSTEM

A. Systemic and Operational Issues

1. **Examination Backlog:** Despite reforms, the average time for a first office action remains nearly 50 months (as of 2024).
2. **Hiring Controversy:** In May 2025, the All India Patent Officers Association demanded a Supreme Court probe into hiring third-party contract examiners, raising questions about the legal validity of their decisions.
3. **Quality Concerns:** Experts warn that the surge in patent grants may have affected examination quality, as the pace of application reviews slowed in 2024.
4. **Training and Capacity Gaps:** While hiring has increased, there are still concerns about insufficient training and validation for newly recruited examiners.

B. Innovation and R&D Ecosystem Challenges

1. **Low Private Sector R&D Investment:** India's overall R&D spending remains low, particularly in the private sector, when compared to global innovation leaders.
2. **Overreliance on Academic Filings:** A large portion of resident filings comes from government institutes and academia, with limited industry participation.

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3. **Lag in High-Tech Patents:** Despite CRI Guidelines 2025, India still lags behind in patents for AI, ML, and blockchain, compared to nations like the US and China.

4. **Lack of International Patent Expansion:** Few Indian inventors follow up with international filings (e.g., via PCT), limiting global commercial potential.

POLICY MEASURES IN THE INDIAN PATENT SYSTEM

Domestic-Level Measures Supporting the Patent System

Category	Measure	Impact on Patent System	Supporting Data
Legislative	Patent (Amendment) Rules, 2024	Improved efficiency, reduced delays, incentivized digital compliance.	- Examination time cut 48 → 31 months - 10% discount for advance e-renewal - Working statement once every 3 years
	Draft Patent (2nd Amendment) Rules, 2024	Strengthened enforcement and compliance.	- Penalty raised to ₹10 lakh - ₹1,000/day for continued violation - Any person can file IP complaints
Institutional / Initiative-Based	National IP Promotion Schemes (NIPAM, SIPP, KAPILA, PFP)	Boosted IP awareness, startup support, and academia's role in patents.	- NIPAM: 1000s of awareness programs - KAPILA: IP cells in 700+ colleges
	Centre of Excellence in IP & Patent Analysis (2023)	Enabled big data use, analytics-based patent decisions.	- Supported by MeitY - Assists research institutions & IPO
	National Innovation Foundation (NIF–India)	Supported grassroots inventors and indigenous knowledge.	- 3.45 lakh innovations documented - 1,377 patents filed (domestic & global)
	Traditional Knowledge Digital Library (TKDL)	Prevented biopiracy; protected Ayurveda/ agriculture knowledge.	- 34 million pages digitized - Shared with EPO, USPTO & others
	Panjab University IDP 2025	Focus on commercializing university research.	- Includes incubators, faculty training & seed funding
	IIT Indore (KAPILA Programme)	Boosted academic filings and global outreach.	- 112% rise in filings (2024–25) - 70 patents filed, 102 granted (incl. US & China)

INTERNATIONAL-LEVEL MEASURES SUPPORTING THE PATENT SYSTEM

Category	International Measure	Impact on Indian Patent System	Supporting Data
Legislative	TRIPS Agreement (WTO, 1995)	India amended its Patents Act (2005) to allow product patents in pharma/biotech.	- 1+ lakh patents granted in 2023–24; TRIPS compliance boosted pharma filings.
	Patent Cooperation Treaty (PCT, 1998)	Single international filing route for 150+ countries.	- 3,946 PCT applications (2023) - 12% YoY growth - India in top 10 PCT filers
Institutional	WIPO Technical Cooperation	Strengthened examiner training, digitization, IT infra (IPAS).	- IPO fully digitized by 2024 - Enabled 24/7 e-filing, online hearings, real-time tracking
	WIPO–India Cooperation Agreement (2020)	Established TISCs (Technology and Innovation Support Centers).	- India has 100+ TISCs - Hosts WIPO Summer Schools
Initiatives	WIPO GREEN Partnership (2023)	Linked Indian innovators with global green-tech partners.	- Led to fast-track examination for green patents (2024 rules).
	Global Innovation Index (GII)	Benchmarked India's IP & innovation ecosystem.	- India ranked 40th in 2023 (up from 81st in 2015) due to stronger IP output.

ADDITIONAL GOVERNMENT MEASURES SUPPORTING THE PATENT ECOSYSTEM

Category	Initiative / Measure	Description & Supporting Data
Education & Research	**National Research Foundation (NRF)**	- Proposed under NEP 2020 to strengthen research culture across universities. - Budget: ₹50,000 crore over 5 years. - Focus: Interdisciplinary research and patentable outcomes.
	Integration of IP in Higher Education	- UGC & AICTE directives: IP education integrated in curricula. - KAPILA scheme promotes IP literacy in 700+ institutions. - Encourages patent filing by students & faculty.
Funding & Innovation	**Startup India Seed Fund & DPIIT Support**	- ₹945 crore fund to help early-stage innovators with prototype and IP-related costs. - Startups eligible for up to ₹50 lakh support for product development & IP filings.
	BIRAC & Atal Innovation Mission (AIM)	- BIRAC: Supports biotech startups with IP, legal, and tech transfer assistance. - AIM (NITI Aayog): Funds incubators & IP hubs. - 10,000+ startups supported as of 2024.

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Government Support & Simplification	**Increasing GERD (Gross Expenditure on R&D)**	- Current GERD: 0.7% of GDP; target: 2%. - Focus on public-private partnerships. - National R&D Policy promotes collaborative research & patents.
	Simplified Patent Filing & Fast-Track Mechanisms	- Expedited examination for startups, women, MSMEs, green technologies. - Online IP filing, real-time tracking & 24/7 access via IP India portal.

CONCLUSION

India's evolving patent ecosystem, driven by strong legal reforms, institutional initiatives, and global alignment, underscores the nation's resolve to promote innovation while protecting public interest. With rising patent filings, increased support for startups and academia, and streamlined processes, India is fast becoming a global leader in innovation.

FROM LIFT-OFF TO LETDOWNS: INDIA'S SPACE RACE FACES ITS TOUGHEST TEST YET

WHY IN THE NEWS?

ISRO Chief V. Narayanan recently stated that all Indian satellites performed round-the-clock during Operation Sindoor, successfully meeting mission requirements and showcasing India's advanced space capabilities. At a defence and technology event in New Delhi, he highlighted how ISRO is: Strengthening India's technological edge, Promoting localisation and technology transfer, Enabling space entrepreneurship, And positioning India as a global space leader.



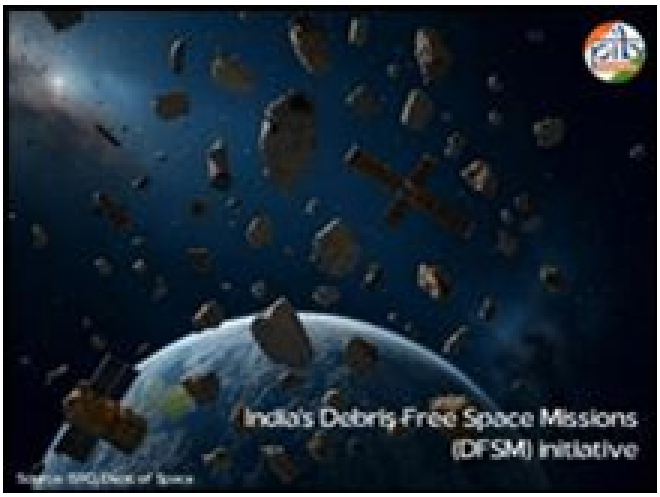


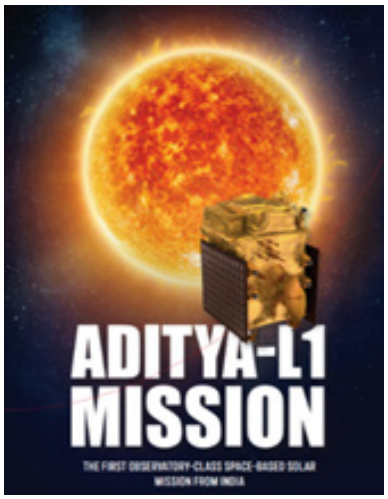
APPLICATIONS OF SPACE TECHNOLOGY IN KEY DOMAINS

Domain	Applications & Key Schemes
Economy	- FASAL Scheme: Satellite-based crop forecasting improves agricultural planning. - BHUVAN platform: Geospatial data supports mining, fisheries, and infrastructure.
Society	- e-Vidya & Telemedicine: Satellite communication bridges education and health gaps in rural areas. - SANCHAR Portal: Monitors telecom infrastructure for rural connectivity.

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Urban Development	- AMRUT & Smart Cities Mission: Satellite data for monitoring water supply, waste management, and infrastructure. - GIS-based master planning and remote sensing to detect illegal encroachments.
Political Domain	- MGNREGA Geo-tagging: Satellite-based tracking of asset creation ensures transparency. - Digital India Initiatives: Space tech enables e-governance and better service delivery.
National Security	- Cartosat Satellites: Provide high-resolution imagery for border surveillance and counter-insurgency. - Mission Shakti (2019): Showcased India's anti-satellite (A-SAT) capability.
Disaster Management	- ISRO's Decision Support Centre (DSC): Real-time satellite data for early warning (floods, cyclones, forest fires). - JAL SHAKTI & FloodNET: Space data monitors droughts, groundwater levels, and flood zones





GOVERNMENT POLICY AND INITIATIVES IN THE SPACE SECTOR

Key Aspect	Details
100% FDI Allowed	Liberalized FDI policy allows 100% foreign direct investment in the space sector with specified caps under automatic and government routes.
India Space Policy 2023	Promotes holistic growth by encouraging greater private sector participation across the entire space economy value chain.
Space Vision 2047	Long-term roadmap includes Bharatiya Antariksh Station (BAS), future lunar missions, next-gen launch vehicles, and Venus exploration.
Central Public Sector Enterprises	Antrix Corporation (ISRO's commercial arm) and New Space India Limited (NSIL) drive commercialization and industry collaboration.

IN-SPACe	Indian National Space Promotion and Authorization Center: Autonomous body promoting private sector participation in satellites, launch vehicles, and services.
Growing Investments	ISRO has completed 100 launch missions in 11 years; the space budget has grown from ₹5,615 crores (2013–14) to ₹13,416 crores (2025–26).
Space Debris Experimental Mission (Spa DeX)	New initiative to monitor, manage, and reduce space debris in Earth's orbit.
Startup Ecosystem Growth	Over 328 space startups have emerged, fostering innovation and collaboration with ISRO and global partners.

KEY CHALLENGES IN INDIA'S SPACE SECTOR

Category	Challenges
Technological Challenges	- Developing reusable launch vehicles, human-rated spacecraft, and long-duration life support systems for space stations. - Limited indigenous capability in deep space propulsion, advanced robotics, and AI-based space systems.
Infrastructure Limitations	- Need for more spaceports and advanced launch pads to meet growing demand. - Insufficient ground station networks for deep-space communication and real-time monitoring.
Private Sector Ecosystem	- Nascent startup ecosystem with limited access to capital and skilled talent. - Weak industry-academia collaboration and insufficient R&D funding.
Policy and Regulation	- Despite India Space Policy 2023, gaps remain in liability norms, space insurance, and satellite licensing. - Delays in FDI clearances and export approvals for critical technologies.
International Competition	- Tough competition from SpaceX, CNSA, Blue Origin, etc., who lead in reusable rockets, mega constellations, and crewed missions. - India must balance cost-efficiency with speed of innovation.
Sustainability & Debris Management	- Rising space debris threatens operational satellites and missions. - Post-mission disposal enforcement is in early stages despite ISRO's DFSM initiative.
Human Capital	- Shortage of skilled professionals in aerospace engineering, space law, and mission operations. - Brain drain to foreign agencies and private companies.

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Mission Risk & Failures	- Setbacks like Chandrayaan-2 lander failure highlight vulnerability. - Budget constraints restrict high-risk, high-reward missions.
Cybersecurity & Space Assets	- Growing cyber threats to satellites and ground infrastructure. - Lack of robust cybersecurity frameworks and encryption standards.

MEASURES TO STRENGTHEN INDIA'S SPACE PROGRAM

Major Measure	Key Subpoints
Technological Advancements	- Development of Next-Gen Launch Vehicles (NGLV) with 30,000 kg LEO capacity. - Success of SpaDeX for satellite docking & servicing, paving the way for future space stations.
Policy & Regulatory Reforms	- India Space Policy 2023 launched to boost private sector participation. - Debris-Free Space Missions (DFSM) initiative aims for zero debris by 2030.
Institutional Support	- IN-SPACe acts as a single-window agency to support private space ventures. - NSIL drives global commercialization of ISRO technologies and services.
Private Sector Growth	- 100% FDI permitted in satellite, ground infrastructure, and component segments. - Support for 328+ startups via funding access and policy incentives.
International Collaborations	- Ongoing joint missions: NISAR (NASA), LUPEX (JAXA), TRISHNA (CNES). - Collaboration with ESA, Starlink, Jio, and Airtel for launch and communication services.
Strategic & Civil Applications	- NavIC used for navigation, transport logistics, and disaster management. - GSAT-N2 enhances rural internet, e-learning, and digital governance.

CONCLUSION

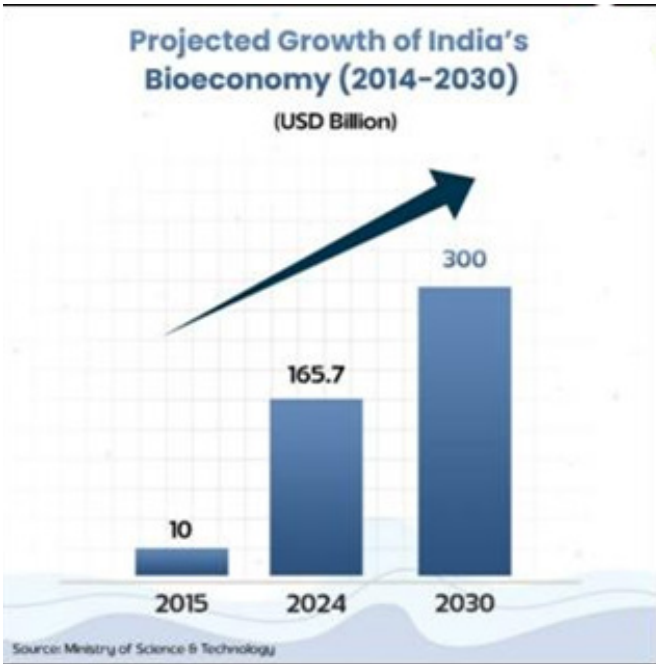
India's space program is entering a new era of leadership and innovation. Milestones like Group Captain Shubhanshu Shukla's mission highlight the nation's growing capabilities. With initiatives like Gaganyaan and the Bharatiya Antariksh Station, India is advancing toward sustained human space presence. Strong policy support and private sector growth fuel scientific progress and economic development. India is now poised to be a major player shaping the future of space exploration.

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BIOTECH POWERHOUSE: HOW INDIA IS RESHAPING THE GLOBAL BIOECONOMY

WHY IN THE NEWS?

India's bio economy has witnessed a remarkable transformation, growing from USD 10 billion in 2014 to USD 165.7 billion in 2024, now contributing 4.25% to the national GDP of USD 3.89 trillion. With a bold target of reaching USD 300 billion by 2030, this sector is drawing national and global attention. The surge is being driven by significant strides in biotechnology, agricultural innovation, biomanufacturing, and healthcare—positioning India as a global leader in sustainable and innovation-driven growth. The sector's rapid expansion and strategic importance make it a focal point in current economic and policy discussions.



Marking the first anniversary of the BioE³ Policy (Biotechnology for Economy, Environment and Employment), on 25th August 2025, Union Minister of Science and Technology Dr Jitendra Singh launched the BioE³ Challenge for Youth and the country's first National Bio foundry Network, calling these initiatives vital to making biotechnology a driver of India's economy, environment, and employment.

KEY DRIVERS OF INDIA'S BIO-ECONOMY SUCCESS

India's Bio Economy, valued at $165.7 billion in 2024, is driven by four major subsectors that highlight the country's strengths in science, innovation, and sustainability.

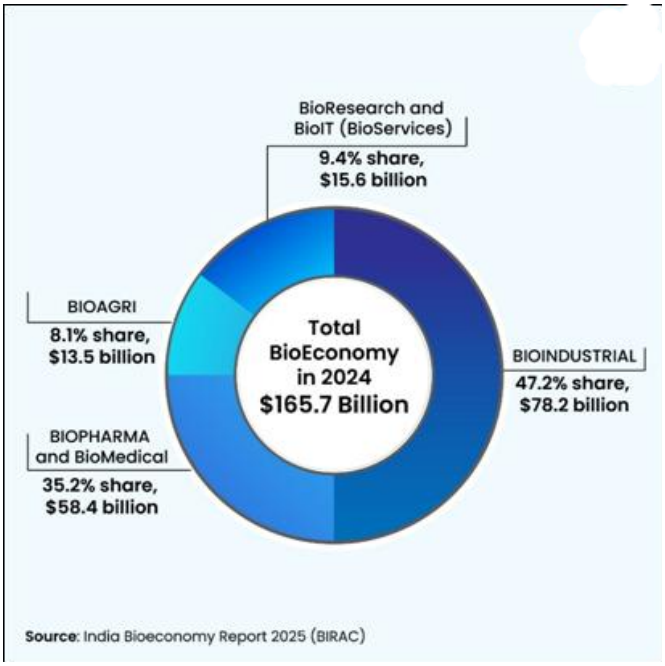
Bio Industrial

Valued at $78.2 billion, this segment accounts for nearly half of the bioeconomy. It includes biofuels, bioplastics, green chemicals, and enzymatic applications across industries. Powered by biosynthetic processes and recombinant DNA technology, it reflects India's strong push toward a green and circular economy.

Bio Pharma & Bio Medical

Contributing $58.4 billion (35.2%), this sector leads in pharmaceuticals, diagnostics, biologics, and medical devices. With a focus on gene editing, precision medicine, and cancer therapies, India is globally recognized for delivering affordable and innovative healthcare solutions.

Bio Agri

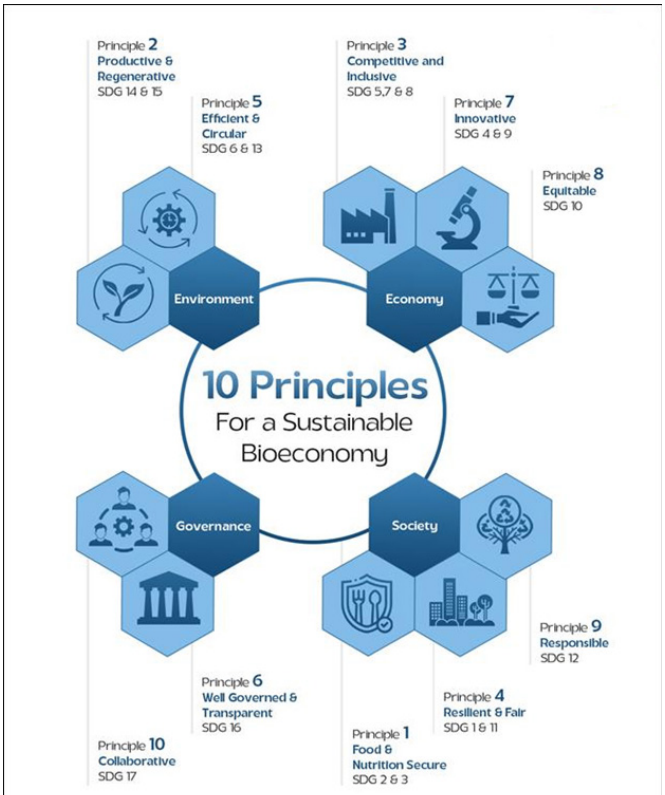


Contributing 8.1% to the total Bio Economy, valued at $13.5 billion, Bio Agri centres on agricultural bio technology. This subsector drives agricultural biotechnology. It covers genetically modified crops,

precision farming, and bio-based products. A key success story is Bt Cotton, which has boosted yields and improved sustainability.

BIO RESEARCH AND BIO IT (BIO SERVICES)

The Bio IT and Research Services segment holds a 9.4% share of India's Bio Economy, with a value of $15.6 billion. It covers contract research, clinical trials, bioinformatics, biotech software, and bio education. This segment highlights India's growing position as a global hub for research and development services, providing cost-effective solutions in drug discovery, data management, and related fields.

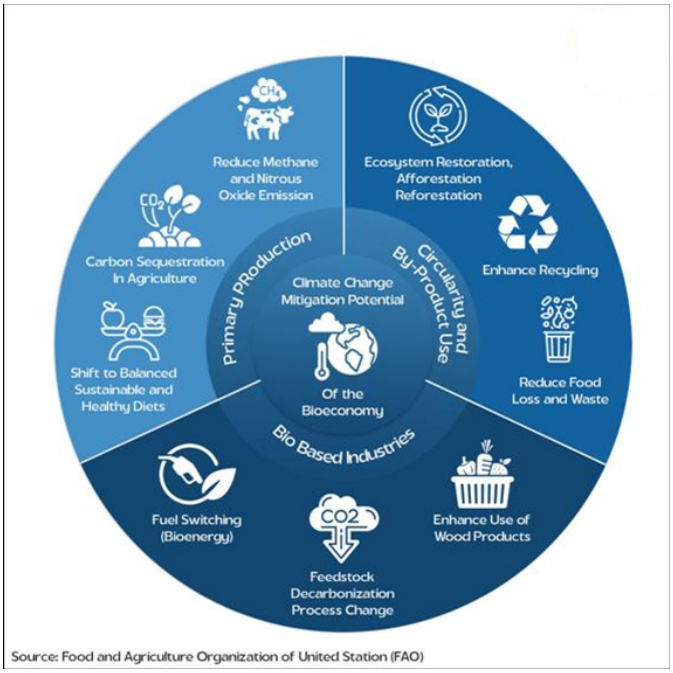


Source: Food and Agriculture Organization of United Station (FAO)

Together, these subsectors showcase how India's Bio Economy is expanding rapidly—linking healthcare, agriculture, industry, and research to create jobs, boost sustainability, and provide affordable solutions for the world.

CLIMATE CHANGE MITIGATION POTENTIAL OF THE BIO ECONOMY

The bio economy has strong potential to mitigate climate change by reducing greenhouse gas emissions and promoting sustainable practices. It supports cleaner farming methods, carbon storage in agriculture, balanced diets, and forest restoration. At the same time, it encourages recycling, reduced food waste, bioenergy use, and greener industrial processes. By combining these approaches, the bio economy helps lower emissions while advancing sustainability and resource efficiency.



Source: Food and Agriculture Organization of United Station (FAO)

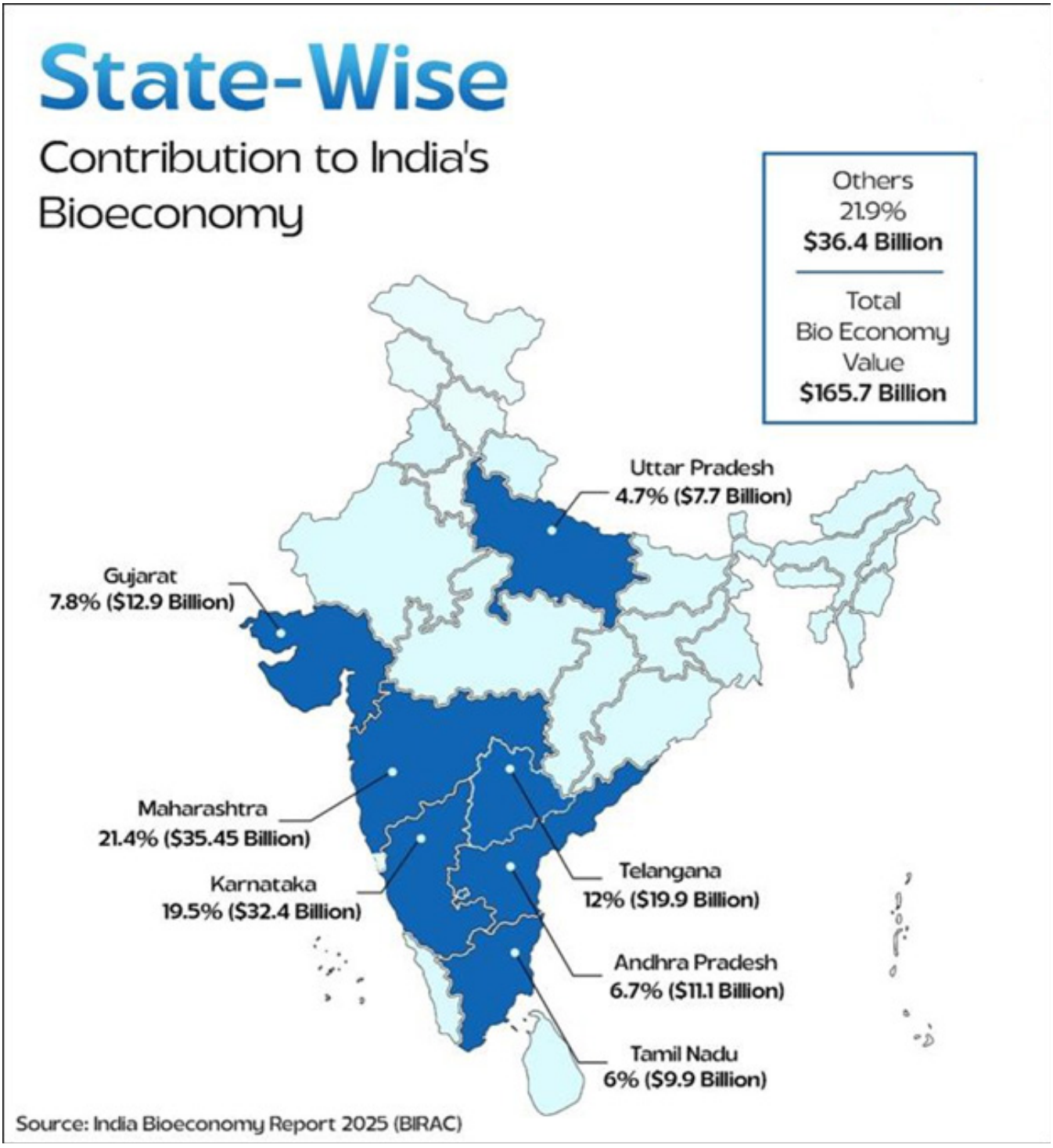
CONTRIBUTION OF KEY STATES

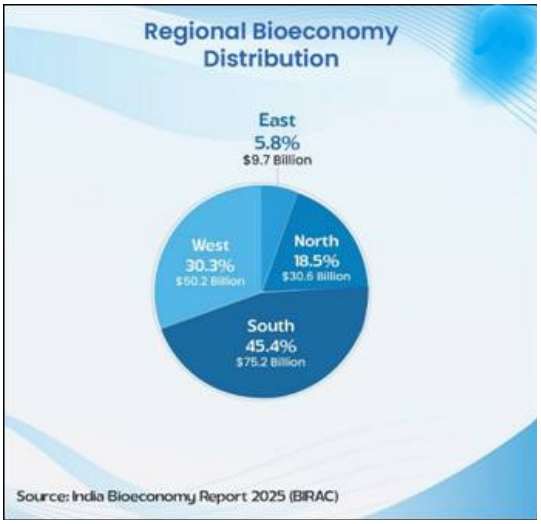
As in 2024, Maharashtra leads India's Bio economy with a value of $35.45 billion, representing 21.4% of the total Bio economy value of $165.7 billion. Karnataka follows closely with $32.4 billion (19.5%), while Telangana contributes $19.9 billion (12%). Gujarat adds $12.9 billion (7.8%), Andhra Pradesh $11.1 billion (6.7%), Tamil Nadu $9.9 billion (6%) and Uttar Pradesh contributes $7.7 billion (4.7%) respectively. The "Others" category, which includes various smaller states, totals $36.4 billion, accounting for 21.9% of the Bio economy value.

The regional distribution of India's Bio Economy highlights the dominance of the Southern region, which contributed 45.4% ($75.2 billion), reflecting its strong biotechnology base and innovation ecosystem. The Western region followed with 30.3% ($50.2 billion), supported by major industrial hubs. The Northern region accounted for 18.5% ($30.6 billion), showcasing steady growth in

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biotech enterprises. Meanwhile, the Eastern region contributed 5.8% ($9.7 billion), indicating emerging opportunities and potential for expansion. This regional spread underscores the pivotal role of the South and West, while also pointing towards the growing significance of the North and East in shaping India's Bio economy.





BIOE3 POLICY TO BOOST BIOMANUFACTURING

The Union Cabinet approved the proposal of the Department of Biotechnology (DBT) on 24 August 2024 for India's first biotechnology policy, the BioE3 Policy (Biotechnology for Economy, Environment and Employment). The policy focuses on fostering high-performance biomanufacturing and lays down the framework for the Biomanufacturing and Bio foundry Initiative. This initiative aims to promote green growth by shifting from consumptive manufacturing to regenerative and sustainable practices.

At an interactive meet of DBT and Biotechnology Industry Research Assistance Council (BIRAC) with industry stakeholders, Dr. Jitendra Singh noted that India now accounts for 21 of the 121 Bio-Companies globally, positioning the country among the early movers in institutionalizing biomanufacturing policy. He emphasized that biomanufacturing is central to India's vision of self-reliance, adding that "BioEnablers are the foundation of India's next wave of biotechnology-led growth."

To drive this growth, 21 advanced Bio Enabler facilities have been launched across the country, offering shared infrastructure for startups, SMEs, industries, and academic institutions. Their focus areas include microbial biomanufacturing, smart proteins, sustainable agriculture, functional foods, carbon capture, marine biotechnology, and next-generation cell and gene therapies.

THE KEY QUESTIONS: WHY, HOW, WHAT

Question	Context/Challenge	Biotechnology Solution	Impact/Outcome
Why?	- Climate change - Unsustainable material consumption - Excessive resource utilization - Waste generation	Biotechnology offers sustainable alternatives to traditional industrial processes	Addresses global environmental threats through innovative, regenerative solutions
How?	- Need for scalable, efficient, and eco-friendly systems	- Use of living factories and biological machines - Engineering flexible designs - Reclaiming resources from waste - Utilizing in situ resources	Enables biological manufacturing with reduced environmental impact
What?	- Shift to bio-based, sustainable manufacturing	- Manufacturing using living systems - Development of bio-based products - Advancements in medical treatments - Support for industrial innovation	Creation of versatile, cost-effective, and scalable processes driving economic and environmental sustainability



NATIONWIDE BIOE3 CHALLENGE TO DRIVE YOUTH-LED BIOTECH SOLUTIONS

The BioE3 Challenge for Youth is a nationwide programme launched by Dr. Jitendra Singh to encourage young innovators under the theme "Design Microbes, Molecules and More". Organised by the Department of Biotechnology, it invites participation from school students (Classes 6-12) and university students, researchers, faculty, startups and Indian nationals. The focus is on developing safe biological solutions to address challenges in health, agriculture, environment and industry.

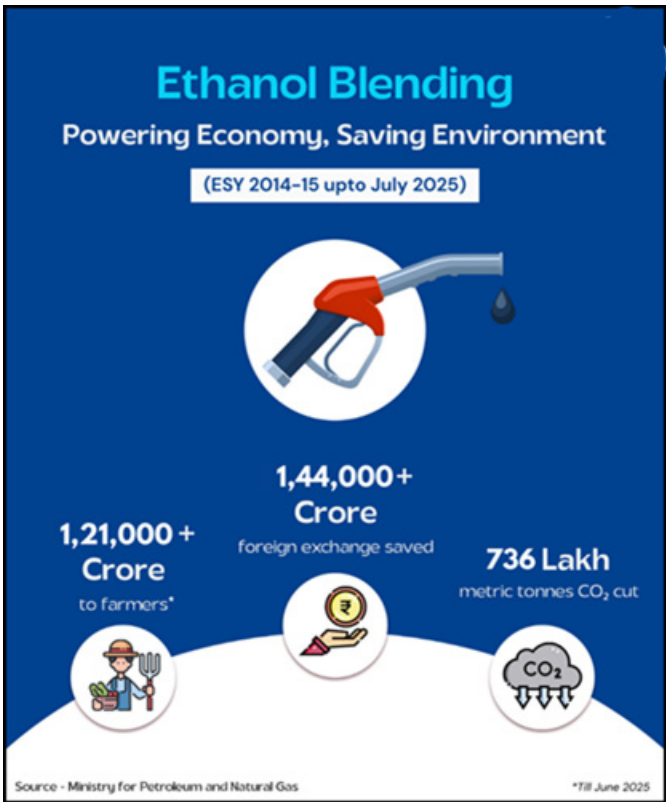
Starting from October 2025, the challenge will be announced on the first of every month. The ten best entries each month will receive a cash prize of ₹1 lakh along with recognition and mentoring. In addition, 100 participants will be selected for funding support of up to ₹25 lakh through BIRAC to convert their ideas into proof-of-concept solutions. These participants will also get access to incubation facilities and infrastructure at BRIC+ institutions across India.

By empowering young talent and promoting grassroots innovation, the BioE3 Challenge aims to build a culture of problem solving and creativity while contributing to India's journey towards a sustainable and self-reliant bioeconomy.

BIOTECH MILESTONES OF 2025: INDIA'S LEAP FORWARD

1. **Global Vaccine Leadership:** India has solidified its position as a global vaccine powerhouse. The Serum Institute of India increased its share of the global vaccine market (excluding COVID-19 vaccines) from 19% in 2021 to 24% in 2024, reflecting its expanding production capacity and global reach. The country is now home to three of the top ten global vaccine manufacturers—Serum Institute, Bharat Biotech, and Biological E. Indian vaccine manufacturers supplied 40% of the World Health Organization's (WHO) total vaccine procurement, with 20% of exports directed to the WHO African Region, underscoring India's critical role in global health equity.

2. **Ethanol Blending Success:** India achieved 20% ethanol blending in 2025, five years ahead of the 2030 target. Farmers earned ₹1.21 lakh crore (2014–2025); ₹40,000 crore expected in 2025 alone. Blending saved ₹1.44 lakh crore in forex by replacing 245 LMT of crude oil.

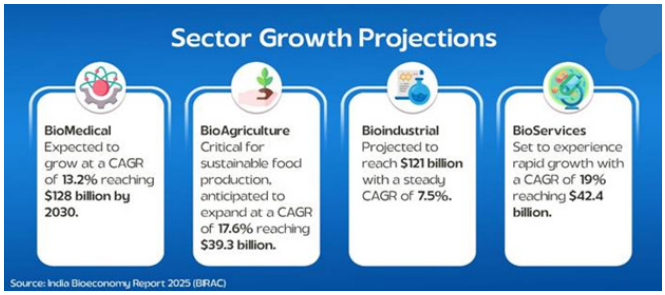


3. **Precision Medicine & Preventive Healthcare:** India launched Nafithromycin, a homegrown antibiotic to combat AMR.

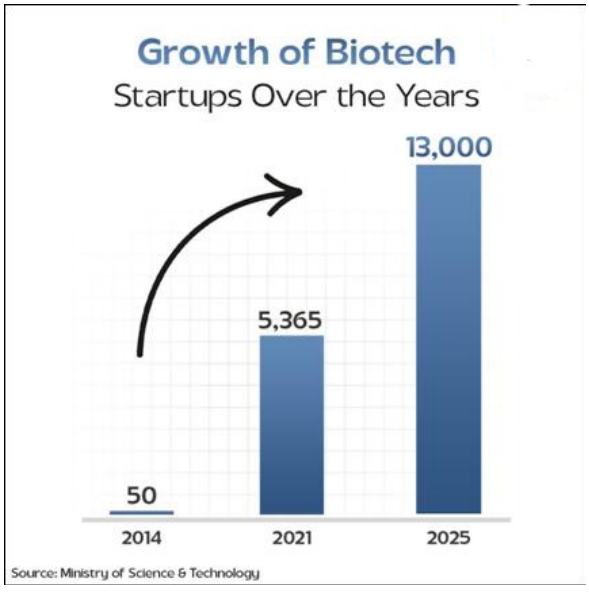
New vaccines introduced: Quadrivalent influenza and 14-valent PCV. CAR T-cell therapy, AI diagnostics, and gene-based treatments are transforming healthcare.

4. **Bio economy's Global Impact by 2050:** Global bio economy projected to grow to $30 trillion, ~12% of world GDP by 2050. India's bioeconomy may reach $1.4–2.7 trillion, contributing up to 12% of GDP. This growth supports net-zero targets, green jobs, and sustainable development.

5. **Target: $300 Billion by 2030:** India's bioeconomy set to grow from $151B (2023) to $300B (2030) at 12.3% CAGR. Projected contributions: BioMedical ($128B), BioIndustrial ($121B), BioAgri ($39.3B), BioServices ($42.4B). Growth reflects India's focus on innovation, sustainability, and self-reliance.



6. **Startup & MedTech Surge:** Biotech startups surged 142%, from 5,365 (2021) to 13,000 (2025). Over 800 products developed and $600M raised in follow-on funding. FDI in MedTech rose to $618M in 2024, boosting innovation and global partnerships



FDI in MedTech sector rose from $370 million in 2022 to $618 million in 2024. Although funding fluctuated, the ecosystem remains vibrant. Domestic innovation and global collaborations position India as a key player in biotech and health-tech.

CONCLUSION

As a dynamic and rapidly expanding sector, India's bioeconomy reflects the country's preparedness to lead in the era of sustainable growth. From ethanol blending and vaccine leadership to breakthroughs in precision medicine and biomanufacturing, the sector reflects the nation's ability to turn challenges into opportunities. With an ambitious target of reaching USD 300 billion by 2030 and projected growth of up to USD 2.7 trillion by 2050, India is set to emerge as a global bioeconomy powerhouse. The continued focus on biotechnology, green energy, and youth-led innovation ensures that the bioeconomy will play a central role in achieving the twin goals of economic prosperity and environmental stewardship, making India a model for the world in building a sustainable future.

Prelims Questions

Q1. Consider the following statements regarding National Space Day:

1. It is celebrated on 23 August every year.
2. The day commemorates India's Chandrayaan-3 soft landing near the Moon's south pole.
3. India became the first country to land on the Moon with Chandrayaan-3.

Which of the statements given above are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2, and 3

Q2. With reference to the Indian Patent Act, 1970, consider the following statements:

1. The term of every patent granted in India is 20 years from the date of filing.
2. Patents are granted only for novel inventions, involve inventive steps and have industrial applicability.

3. The Act allows product patents in all fields of technology, including pharmaceuticals and agro-chemicals.

Which of the above statements is/are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

Q3. With reference to Axiom Mission-4 (Ax-4), consider the following statements:

1. Axiom Mission-4 was the first fully private mission to dock with the International Space Station (ISS).
2. Group Captain Shubhanshu Shukla became the first Indian citizen to conduct a spacewalk during the mission.
3. The mission was jointly conducted by ISRO and NASA as a part of India's Gaganyaan programme.

How many of the above statements are correct?

(a) Only one (b) Only two
(c) All three (d) None

Q4. With reference to India's bioeconomy, consider the following statements:

1. BioIndustrial is the largest contributing subsector.
2. India achieved 20% ethanol blending in petrol by 2030.
3. The BioE^3 Policy was launched to promote regenerative manufacturing practices.

Which of the above statements are correct?

A. 1 and 2 only B. 1 and 3 only
C. 2 and 3 only D. 1, 2 and 3

1. (a)	2. (d)	3. (a)	4. (b)

Mains Questions

Q1. National Space Day 2025 celebrates India's achievements in space science and its societal applications." Discuss the significance of this day and India's journey from Aryabhata to Gaganyaan.

250 words, 15 marks)

Q2. India's patent ecosystem is witnessing significant growth, yet faces systemic and innovation-related challenges. Discuss

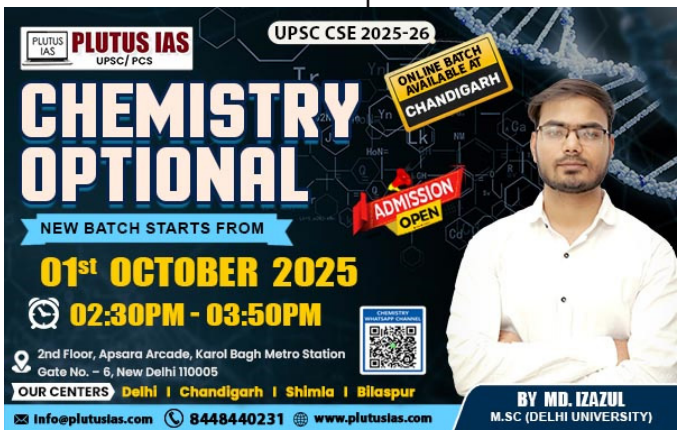
(250 words, 15 marks)

Q3. India's space program is transforming from a state-led scientific venture into a dynamic ecosystem driven by technology, policy, and private sector participation." Discuss the major challenges faced by India's space sector and the measures taken to strengthen it.

(250 words , 15 marks)

Q4. India's bio economy is emerging as a key driver of sustainable and inclusive growth. Discuss the major achievements, policy interventions, and future potential of the sector. Also highlight its role in addressing climate and developmental challenges.

(250 words , 15 marks)



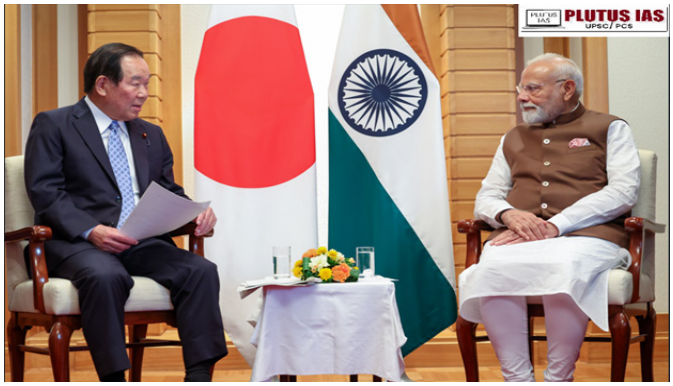
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INDIA–JAPAN FRIENDSHIP: POWERING GROWTH AND SECURITY TOGETHER

WHY IN THE NEWS?

India and Japan share a deep-rooted historical connection built on Buddhism, cultural exchanges, and post-war economic cooperation. Japan played a supportive role in India's economic reforms in the 1990s, becoming a leading development partner. The partnership was elevated to a Global and Strategic Partnership in 2006, further upgraded to a Special Strategic and Global Partnership in 2014. Over the years, Japan has been among India's largest ODA (Official Development Assistance) providers, backing critical infrastructure projects like the Delhi Metro and Mumbai–Ahmedabad High-Speed Rail (Bullet Train).



RECENT HIGH-LEVEL VISITS AND DIALOGUES

1. In recent years, top-level exchanges have accelerated:
2. PM Modi's frequent visits to Japan (2014, 2016, 2018, 2022, and 2025).
3. Former Japanese PMs Shinzo Abe, Fumio Kishida, and Yoshihide Suga have all actively strengthened ties with India.
4. The 2025 visit reinforced continuity, with Modi meeting Japan's current PM Shigeru Ishiba, former PMs Kishida and Suga, and parliamentary leaders.

JAPAN'S IMPORTANCE IN ACT EAST POLICY & INDO-PACIFIC STRATEGY

Japan is a linchpin in India's Act East Policy and a central partner in promoting a Free, Open, and Inclusive Indo-Pacific. Both nations collaborate within the QUAD (with the U.S. and Australia), ensuring maritime security and supply chain resilience. Japan's advanced technology and India's demographic advantage together form a natural synergy in shaping regional order.

PARLIAMENTARY DIPLOMACY

Significance of Meeting with Speaker Fukushiro Nukaga and MPs

PM Modi's meeting with the Speaker of Japan's House of Representatives and MPs underscores the role of parliamentary diplomacy in strengthening bilateral ties. Such interactions enhance cross-party support for long-term cooperation, beyond government-level engagement.

ROLE OF PARLIAMENTARY EXCHANGES

Regular exchanges between lawmakers build trust, improve people-to-people linkages, and encourage broader collaboration in governance, policy formulation, and socio-cultural understanding. This provides durability to the partnership even during leadership transitions in either country.

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ECONOMIC COOPERATION

Traditional Areas: Automobiles, Infrastructure, Investment

1. Japan's investments in automobiles (Suzuki, Toyota, Honda) and infrastructure projects have been cornerstones of the bilateral economic partnership.
2. Japanese FDI in India has crossed $40 billion, making Japan the 5th largest investor.

New Areas: Batteries, Robotics, Semiconductors, Shipbuilding, Nuclear Energy

1. PM Modi's 2025 Economic Forum address emphasized replicating the automobile sector's success in EV batteries, robotics, semiconductors, shipbuilding, and nuclear energy.
2. These sectors are vital for India's Atmanirbhar Bharat and Make in India initiatives.

Trade and Investment Flows

1. Bilateral trade crossed $21 billion in 2023–24, but potential remains underutilized.
2. Japan is a major contributor to flagship projects like Dedicated Freight Corridors, Smart Cities, and Industrial Corridors.

ROLE IN INDIA'S MANUFACTURING PUSH

Japan's expertise, combined with India's large market and labor force, positions the partnership to drive India's ambition to become a global manufacturing hub.

TECHNOLOGY AND INNOVATION

1. **Collaboration in AI, Science, Critical Technologies, and Semiconductors**

   Both nations are investing in AI research, semiconductor ecosystems, and critical technologies like quantum computing and 5G/6G.

2. **India–Japan Digital Transformation Partnership**

   The two countries signed digital cooperation agreements, enhancing cybersecurity, e-governance, and next-gen digital public infrastructure.

3. **Tech–Talent Synergy**

   With India's young skilled workforce and Japan's technological leadership but aging population, human resource mobility programs can create a win–win model.

GREEN AND SUSTAINABLE DEVELOPMENT

1. Green Energy and Clean Technologies: Japan has supported India's National Solar Mission, energy-efficient technologies, and low-carbon transport.
2. Climate Change Cooperation: Both countries are aligned on Paris Agreement goals and collaborate on green hydrogen, offshore wind, and carbon-neutral pathways.
3. Japan's Role in India's Energy Transition: Japan is helping India expand its renewable energy capacity, especially through financing and technology transfer for hydrogen and nuclear energy projects.

HUMAN RESOURCE AND CULTURAL LINKAGES

1. **Mobility Partnerships and Skill Development:** The India–Japan Skill Partnership aims to train thousands of Indian youth to work in Japan, addressing labor shortages while providing opportunities for Indian professionals.
2. **Cultural and Civilizational Links:** Shared values, Buddhism, and cultural exchanges strengthen civilizational ties. Festivals, yoga, and Japanese language learning are expanding mutual understanding.

STUDENT EXCHANGES, TOURISM, AND DIASPORA ROLE

1. Educational collaborations between universities are rising.
2. Tourism flows are increasing, with Buddhist circuits attracting Japanese visitors.

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3. The Indian diaspora in Japan serves as a bridge between societies.

STRATEGIC AND GEOPOLITICAL SIGNIFICANCE

Japan as a Key Indo-Pacific Partner

- Both countries advocate a Free and Open Indo-Pacific (FOIP) to ensure freedom of navigation and rule-based maritime order.

Defence and Maritime Cooperation

- Regular Malabar Naval Exercises (QUAD).
- Joint development of defence technologies.
- Security dialogues to counterbalance regional threats.

Balancing China

- With rising Chinese assertiveness, India and Japan coordinate strategies to maintain stability and reduce risks in the Indo-Pacific.

CHALLENGES AND CONCERNS

1. **Trade Imbalance:** India's exports to Japan remain limited compared to imports, leading to an imbalance that constrains equitable economic ties.
2. **Low FDI Utilization:** Despite Japan being a top investor, India has struggled to absorb investment efficiently due to bureaucratic delays and regulatory hurdles.
3. **Project Delays:** Flagship projects like the Mumbai–Ahmedabad Bullet Train face delays due to financing issues, land acquisition bottlenecks, and execution challenges.
4. **Technology Transfer Constraints:** Japan is cautious about sharing cutting-edge technologies, limiting India's ambition for technological self-reliance.
5. **Labour and Language Barriers:** Indian professionals face difficulties integrating into Japan's workforce due to linguistic and cultural gaps.
6. **Regional Security Risks:** Both countries must navigate sensitive regional challenges, particularly China's assertiveness, maritime disputes in the East China Sea, and instability in the wider Indo-Pacific.
7. **Geopolitical Divergences:** While broadly aligned, India and Japan occasionally differ on specific global issues (e.g., Russia–Ukraine war stance), which can complicate coordination.

WAY FORWARD

1. **Deepen Economic Partnership:** Expand trade in goods and services, reduce non-tariff barriers, and encourage Japanese firms to invest in India's manufacturing hubs.
2. **Technology and Innovation Collaboration:** Prioritize cooperation in semiconductors, EV batteries, robotics, green hydrogen, and AI, ensuring tech transfer and joint R&D.
3. **Skill Development and Mobility:** Scale up India–Japan skill partnership programs to train Indian youth for Japan's labor market, addressing Japan's aging population needs.
4. **Strengthen People-to-People Ties:** Promote student exchanges, tourism, cultural diplomacy, and diaspora engagement to create stronger social linkages.
5. **Accelerate Infrastructure Projects:** Fast-track pending projects like the bullet train and industrial corridors through better land acquisition, policy clarity, and timely financing.
6. **Enhance Multilateral Cooperation:** Coordinate positions in forums like QUAD, G20, SCO, and UN to push shared agendas in security, trade, and climate change.
7. **Long-Term Vision:** Build a future-oriented partnership anchored in next-gen infrastructure, digital economy platforms, clean energy ecosystems, and mutual trust in human capital.

CONCLUSION

India and Japan today stand at a crucial juncture in their partnership—bound not just by shared history and cultural affinities but also by a common vision

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for the future. Japan has been a reliable partner in India's economic modernization, infrastructure building, and capacity development, while India offers Japan a vast market, a young workforce, and a trusted strategic ally in Asia. The relationship has steadily moved beyond developmental assistance to encompass cutting-edge technology, clean energy, supply chain resilience, and Indo-Pacific security cooperation.

FROM TRUST TO TRANSFORMATION: 60 YEARS OF INDIA–SINGAPORE PARTNERSHIP



WHY IN THE NEWS?

Singapore's Prime Minister Lawrence Wong is paying his first official visit to India from 2–4 September 2025 at the invitation of Prime Minister Narendra Modi. The visit comes at a historic moment, coinciding with the 60th anniversary of diplomatic relations between India and Singapore and Singapore's 60th year of independence (SG60). Beyond the ceremonial importance, the visit is expected to add new momentum to the strategic partnership between the two nations.

HISTORICAL DIMENSION

1. **1965–2025:** 60 Years of Ties – India was one of the first countries to recognize Singapore after its independence in 1965.
2. The two nations have since evolved from limited trade partners into comprehensive strategic partners (2015).
3. Over decades, Singapore has emerged as a gateway for India to ASEAN and a trusted partner in global forums.

POLITICAL & DIPLOMATIC DIMENSION

1. PM Wong will call on President Droupadi Murmu and hold talks with PM Modi.
2. High-level meetings with Finance, External Affairs, Education, Health Ministers, and NSA Ajit Doval underline the multi-sectoral engagement.
3. The visit reinforces political trust and provides continuity, as Wong succeeds former PM Lee Hsien Loong in maintaining Singapore's India policy.

ECONOMIC & TRADE DIMENSION

1. **FDI Inflows from Singapore:** Singapore is among the largest FDI sources for India, with investments in finance, logistics, real estate, and technology, serving as a gateway for global capital.
2. **Bilateral Trade Growth:** India is Singapore's top South Asian trade partner, with bilateral trade crossing USD 35 billion in 2023–24.
3. **Digital Economy & Fintech:** Partnerships in digital payments and fintech are growing, highlighted by the UPI–PayNow link for seamless cross-border transactions.
4. **Startups & Innovation:** Singapore's regulatory strength supports India's startup ecosystem, enabling joint R&D, incubators, and venture capital flows.
5. **Green Transition:** Both nations are exploring renewables, clean tech, and climate finance, leveraging Singapore's role in green finance and carbon markets.
6. **Urban Infrastructure:** Singapore's expertise in smart cities and water management aligns with India's Smart Cities Mission and Gati Shakti projects.

STRATEGIC & SECURITY DIMENSION

1. **ASEAN Partnership:** Singapore remains India's most reliable security partner within ASEAN, acting as a regional anchor for trust and stability.
2. **Defence Cooperation:** Bilateral defence agreements enable training, logistics, and technology sharing, strengthening mutual defence preparedness.
3. **Military Exercises:** Regular exercises like SIMBEX (naval), and trilateral drills with other partners, improve operational interoperability.
4. **Indo-Pacific Stability:** Both nations support a free, open, and inclusive Indo-Pacific, aligned

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with India's Act East Policy and Singapore's ASEAN centrality.

5. **Counterterrorism & Cybersecurity:** Growing cooperation in counterterrorism intelligence, cyber defence, and digital infrastructure protection strengthens security frameworks.
6. **Maritime Security:** Shared interest in safe sea lanes, anti-piracy patrols, and naval capacity-building ensures trade and energy security in the Indian Ocean.
7. **Strategic Dialogue Platforms:** Institutionalized platforms like Defence Ministers' Dialogue and Strategic Partnership Meetings ensure long-term cooperation.

CULTURAL & PEOPLE-TO-PEOPLE DIMENSION

1. **Overseas Singaporean Community:** PM Wong's interaction with Singaporeans in Delhi reinforces the emotional connect and diaspora outreach.
2. **Indian Diaspora in Singapore:** The Indian-origin community (9% of Singapore's population) acts as a cultural and economic bridge between the two nations.
3. **Shared Heritage:** Centuries of maritime and cultural exchanges provide a foundation of trust and historical bonding.
4. **Rajghat Tribute:** Wong's homage at Rajghat underlines shared values of peace, non-violence, and Gandhian ideals.
5. **Educational Exchange:** Student mobility, scholarships, and cultural exchange programs foster youth-level engagement.
6. **Tourism & Connectivity:** Direct air connectivity boosts tourism, pilgrimage circuits, and cultural tourism flows.
7. **Celebrating 60 Years of Ties:** Joint cultural events, exhibitions, and receptions mark six decades of diplomatic and cultural partnership.

EDUCATION & SKILL DEVELOPMENT DIMENSION

1. **Policy Dialogue:** Talks with Education Minister Dharmendra Pradhan highlight a shared vision for human capital development.
2. **NEP 2020 Cooperation:** Singaporean institutions align with India's NEP 2020, promoting global campuses and flexible education models.
3. **Vocational Training:** Emphasis on technical and vocational training to prepare youth for emerging industries.
4. **Frontier Technologies:** Collaborations in AI, robotics, biotechnology, and frontier tech ensure future-ready skills.
5. **Research Collaboration:** Joint R&D projects encourage academic research, faculty exchange, and innovation incubators.
6. **Workforce Mobility:** Policies to facilitate movement of skilled professionals benefit both economies in IT, healthcare, and engineering.
7. **Digital Training:** Partnerships in online learning platforms, digital literacy, and e-skills programs support inclusive development.

GLOBAL & REGIONAL DIMENSION

1. **Indo-Pacific Vision:** Both countries advocate a rules-based, inclusive Indo-Pacific, balancing strategic interests in Asia.
2. **Trade Architecture:** Shared commitment to free trade agreements and open economic frameworks strengthens regional prosperity.
3. **Supply Chain Resilience:** Efforts to diversify supply chains beyond China create new opportunities in manufacturing and logistics.
4. **Multilateral Forums:** Close coordination in G20, East Asia Summit, IORA, and UN platforms amplifies joint influence.
5. **Maritime Cooperation:** Focus on freedom of navigation, anti-piracy, and maritime resource security in the Indian Ocean.
6. **Digital Connectivity:** Discussions on regional digital frameworks, fintech integration, and cross-border e-commerce enhance connectivity.

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7. **RCEP & ASEAN Linkages:** Singapore plays the role of a bridge for India's deeper ASEAN and RCEP engagement, supporting India's Act East vision.

CONCLUSION

Lawrence Wong's maiden visit to India is not merely symbolic but a strategic reaffirmation of a 60-year-old partnership. It highlights the convergence of political trust, economic complementarity, security cooperation, and cultural affinity. As both countries look ahead, the visit could pave the way for a future-ready partnership, with focus on digital innovation, green growth, education, and Indo-Pacific security. In many ways, this visit captures the spirit of "shared history, shared destiny", ensuring that India and Singapore remain natural partners in Asia's evolving landscape.

10 MEETINGS, 5 MONTHS: WHAT TO LOOK OUT FOR IN RUN-UP TO INDIA-EU TRADE DEAL, SUMMIT

WHY IN THE NEWS?

India and the European Union (EU) have launched an intensive diplomatic engagement plan leading up to the India–EU Leaders' Summit (Jan/Feb 2026). Over the next five months, at least 10 structured dialogues are scheduled, covering trade, technology, security, defence, mobility, and global issues. This renewed engagement comes amid strain in India–US ties over trade tariffs, signaling that India and the EU seek to project strategic stability, trust, and mutual respect in their partnership.



EVOLUTION OF INDIA–EU RELATIONSHIP SINCE 1991

The India–EU relationship has evolved from a narrow trade focus to a multi-dimensional strategic partnership. Liberalisation in the 1990s opened new avenues, and successive summits have deepened cooperation.

- **1994:** India–EU Cooperation Agreement laid the foundation for political and economic ties.
- **2000:** First India–EU Summit institutionalised annual dialogue.
- **2004:** EU recognised India as a "Strategic Partner."
- **2007:** Negotiations on the Broad-based Trade and Investment Agreement (BTIA) began (stalled later).
- **2016:** Adoption of the Agenda for Action 2020 to revitalise partnership.
- **2021:** Relaunch of FTA talks alongside cooperation on climate change and digital governance.
- **2023:** EU's support for the IMEEC corridor marked renewed strategic alignment.

SIGNIFICANCE OF THE EU FOR INDIA

The European Union is not just a major economic bloc but also a normative power that shapes global standards in trade, technology, and governance. For India, the EU is both an important market and a like-minded partner in upholding multilateralism, democracy, and rules-based order. At a time when global politics is witnessing fragmentation and rising protectionism, deeper India–EU engagement adds balance and stability to India's foreign policy matrix.

1. **Economic Importance:** EU is India's third-largest trading partner (11% of India's trade in 2023–24). Bilateral trade stood at USD 155 billion (2022–23). EU companies have invested over USD 100 billion in India since 2000.
2. **Technology and Innovation:** The EU is a leader in AI, semiconductors, clean energy, biotechnology, and pharma. Collaboration complements India's

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talent base and digital economy. Example: India–EU Trade and Technology Council (TTC), 2023.

3. **Climate and Energy Cooperation:** Both sides are committed to the Paris Agreement. EU's expertise in renewable energy and India's climate goals create scope for joint projects in green hydrogen and electric mobility.
4. **Mobility and Education:** Europe's ageing population and India's skilled youth can be bridged through mobility partnerships. Example: India–EU Common Agenda on Migration and Mobility (2016).
5. **Security and Defence:** EU's Indo-Pacific Strategy (2021) identifies India as a crucial partner. Maritime security dialogues, cyber cooperation, and defence procurement are emerging areas.
6. **Global Governance:** India and the EU share values of democracy, multilateralism, and a rules-based order. They coordinate in the UN, G20, and WTO. Example: EU's support for India's G20 Presidency in 2023.

CONSTRAINTS IN INDIA–EU RELATIONSHIP

While India and the EU share broad complementarities, their partnership has often been constrained by differences in priorities and approaches. These challenges have prevented the relationship from reaching its full potential despite the strategic convergence on many global issues.

1. **Stalled Trade Negotiations:** The Broad-based Trade and Investment Agreement (BTIA), initiated in 2007, remains unresolved. The EU seeks market access in automobiles, wines, and dairy products, while India demands flexibility to protect domestic industries and agriculture. Disagreements also exist over data protection standards (GDPR compliance) and intellectual property rights, which affect sectors like pharmaceuticals and IT services.
2. **Political Sensitivities:** The EU has occasionally raised concerns on India's domestic policies, including the Citizenship Amendment Act (2020), Jammu & Kashmir situation (2019), and farmers' protests (2020–21). While framed as human rights issues, India perceives these as interference, creating diplomatic friction and slowing consensus on bilateral initiatives.
3. **Strategic Divergence:** The EU's firm alignment with the US and NATO on the Russia–Ukraine conflict contrasts with India's policy of strategic autonomy, which includes continued engagement with Russia for energy and defence supplies. This divergence limits joint actions in security, defence, and Indo-Pacific affairs.
4. **Institutional Complexity of the EU:** With 27 member states, each with its own national interests, the EU's consensus-based decision-making slows negotiations. For example, achieving unanimity on trade, defence, or climate issues often takes months, making India–EU agreements less agile compared to bilateral deals.
5. **Differing Perceptions of China:** India views China as a strategic and security threat, while the EU treats it primarily as an economic competitor and partner, balancing trade interests with geopolitical caution. This difference affects cooperation on regional security, supply chains, and maritime strategy in the Indo-Pacific.
6. **Other Challenges:** Issues like mobility of skilled workers are constrained due to EU immigration rules. Similarly, cooperation in emerging technologies like AI, semiconductors, and green energy is slowed by differing regulatory standards and investment norms.

FUTURE COURSE OF ACTION TO STRENGTHEN INDIA–EU TIES

The next five months leading up to the 2026 India–EU Leaders' Summit offer a golden opportunity to translate dialogue into tangible outcomes. To make the partnership more strategic, resilient, and future-ready, India and the EU can pursue the following measures:

1. **Deepen technology and innovation collaboration:** Establishing joint research hubs in AI, semiconductors, green hydrogen, and biotechnology can accelerate innovation. The India–EU Trade and Technology Council (TTC),

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launched in 2023, can serve as a platform to operationalize collaborative projects and knowledge transfer.

2. **Strengthen strategic and defence cooperation:** Expanding counter-terrorism dialogues, joint naval exercises, and cyber security collaboration will enhance India's security architecture. Coordinated defence procurement and technology sharing can also reduce dependence on external actors.

3. **Operationalise connectivity projects:** The India–Middle East–Europe Economic Corridor (IMEEC) can provide an alternative to China's Belt and Road Initiative, ensuring resilient transport, trade, and digital connectivity. These corridors can also boost regional economic integration and energy security.

4. **Enhance mobility and skill partnerships:** Structured agreements to facilitate the movement of students, researchers, and skilled professionals can address Europe's labour shortages while providing Indian talent with international exposure. Expansion of frameworks like the Blue Card scheme and education partnerships can institutionalize mobility.

5. **Collaborate on global governance and climate action:** Jointly driving reforms in the WTO, UN, and COP processes can amplify influence on trade rules, climate mitigation, and sustainable development. India and the EU can also co-develop green finance mechanisms and renewable energy initiatives to meet climate targets.

6. **Leverage emerging sectors for shared growth:** The EU and India can collaborate in areas like digital economy, biotechnology, fintech, and AI governance, creating a "positive-sum game" where both partners gain economic, technological, and strategic dividends.

7. **Fast-track the Free Trade Agreement (FTA):** Concluding the India–EU FTA can unlock access to high-value EU markets and attract foreign investment. For example, trade in goods reached USD 155 billion in 2022–23, and an FTA could push it beyond USD 200 billion by 2030, while also strengthening supply chain resilience against global disruptions.

CONCLUSION

India–EU relations have traversed a long journey from being trade-centric to evolving into a comprehensive partnership covering strategic, technological, and security dimensions. Yet, the relationship remains underleveraged compared to its potential. The next few months, leading up to the 2026 Leaders' Summit, provide a crucial window to translate trust and political will into substantive outcomes. In a global environment marked by rising protectionism, shifting alliances, and technological disruptions, a stronger India–EU partnership can serve as a pillar of stability, shaping an inclusive and rules-based global order.

CRISIS IN KATHMANDU: OLI RESIGNS AMID VIOLENCE, PARLIAMENT AND SUPREME COURT VANDALISED

WHY IN THE NEWS?

Nepal is in the spotlight due to large-scale protests triggered by government corruption and social media restrictions. The unrest escalated into violence, causing at least nineteen deaths, hundreds of injuries, and the resignation of Prime Minister K.P. Sharma Oli. Significant property damage, including attacks on the parliament, Supreme Court, government offices, and the President's residence, has highlighted the severe breakdown of law and order in the country.



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CHAOS IN NEPAL:

Reasons for Protests:

1. **Social Media Ban:** The Government blocked 26 platforms, including Facebook, Instagram, WhatsApp, and X, sparking youth unrest.
2. **Corruption and Nepotism:** Public outrage over political elites and lack of accountability fueled anger.
3. **Economic Inequality:** Youth unemployment, at around 20% increased frustration among young people.
4. **Violent Government Response:** At least 19 protesters killed on 8th September 2025, escalating tensions.

KEY EVENTS:

1. **Prime Minister Resigns:** K.P. Sharma Oli stepped down amid mounting pressure.
2. **Parliament Torched:** Protesters set fire to the building in Kathmandu, demanding systemic change.
3. **Flight Disruptions:** International flights diverted to Lucknow and Delhi.



WHY NEPAL'S STABILITY IS IMPORTANT FOR INDIA

Reason	Explanation / Example
Strategic Location	Nepal shares a 1,758 km open border with India. Political stability ensures that external influences, particularly from China, do not affect India's security or strategic interests.
Trade and Connectivity	Political unrest or blockades, like the 2015 Nepal blockade, can disrupt trade and supply routes to India's northeastern states, affecting economic and social stability.
Hydropower Cooperation	Stability is crucial for bilateral projects such as the Pancheshwar Multipurpose Project. Unrest can delay construction, energy generation, and mutual benefits.
Cultural and People-to-People Ties	Shared festivals such as Dashain, free movement across borders, and cultural exchanges strengthen social harmony and bilateral goodwill.
Border Security and Terrorism	Instability can increase smuggling, arms trafficking, and infiltration in the Terai region, impacting India's internal security.
Economic and Investment Interests	Indian investments in infrastructure, hydropower, and tourism projects depend on a stable political environment in Nepal for smooth operations and returns.

INDIA'S ROLE:

Short Run Options:

1. **Diplomatic Engagement:** India can mediate political disputes through dialogue to stabilize Nepal.
2. **Humanitarian and Trade Support:** Ensure uninterrupted supply of essential goods and emergency aid.
3. **Security Cooperation:** Strengthen border monitoring to prevent cross-border infiltration and unrest.

Long Run Options:

1. **Infrastructure Investment:** Develop roads, railways, and energy projects to integrate markets and boost connectivity.
2. **Economic Partnership:** Promote joint ventures and foreign investment in Nepal's hydropower, tourism, and industrial sectors.

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3. **Cultural and Educational Ties:** Expand scholarships, cultural exchanges, and people-to-people programs to build long-term goodwill.

CONCLUSION

Maintaining Nepal's stability ensures smooth trade, secure borders, and regional peace. By combining short-term diplomatic and humanitarian measures with long-term economic and cultural engagement, India can foster a resilient and cooperative relationship with Nepal.

INDIA'S VOTE AT THE UNGA ON PALESTINE: STRATEGIC AUTONOMY IN ACTION

WHY IN THE NEWS?

India recently voted in favour of a United Nations General Assembly resolution endorsing the 'New York Declaration,' a framework aimed at resolving the Israeli–Palestinian conflict through the two-state solution. Introduced by France, the resolution garnered overwhelming support with 142 countries backing it, 10 voting against, and 12 abstaining. It reflects a renewed global push to end the ongoing Gaza war and to establish a sovereign Palestinian state existing peacefully alongside Israel.



BILATERAL

1. **Security:** Joint military drills counter-terrorism; intelligence sharing; cyber & maritime security; defence tech transfer.
2. **Agriculture:** Best practices in irrigation & farming; climate-resilient crop research; agri-tech innovation; food processing & cold-chain development.
3. **Economy Trade:** expansion; investment opportunities; infrastructure & energy collaboration; digital economy; connectivity & technology partnerships.

REGIONAL

1. **West Asia:** Vital for India's energy security (oil & gas imports); large Indian diaspora; maritime security in Arabian Sea; balancing ties with Israel, Palestine, Gulf states, and Iran.
2. **Strategic Autonomy:** Independent foreign policy; balancing US, Russia, and regional powers; flexibility in global forums (UN, BRICS, G20); avoiding alignment while securing national interest.
3. **I2U2 (India–Israel–UAE–USA):** Promotes food security, clean energy, digital innovation; boosts West Asian connectivity; new investment opportunities; complements India's Act West policy.

GLOBAL LEVEL

1. **UNSC:** Push for permanent membership; advocacy of reforms for fair representation; active role in peacekeeping & global security.
2. **Global Power:** Emerging as voice of Global South; balancing relations with US, Russia, EU, China; leadership in G20 and BRICS.
3. **Global Initiatives:** Champion of climate action (ISA, LiFE, CDRI); promoting multilateralism; leadership in digital public goods and development partnerships.
4. **Terrorism:** Strong voice for UN Comprehensive Convention on International Terrorism (CCIT); global cooperation on counter-terrorism financing, cyber threats, and extremist networks.

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KEY ISSUES

Level	Key Issues
Bilateral	- Security cooperation (defence, cyber, maritime) - Agricultural technology & food security - Trade imbalance and market access - Investment flows & technology transfer
Regional	- West Asia instability (Israel–Palestine, Iran–Saudi tensions) - Balancing ties amid rivalries - Maintaining strategic autonomy in shifting alliances - I2U2 cooperation in food security, energy, and connectivity
Global	- UNSC reforms and India's bid for permanent seat - Balancing global power equations (US–China rivalry, Russia conflict) - Global initiatives on climate, energy & digital commons - Counter-terrorism cooperation through CCIT and FATF

WAY FORWARD

1. **Strengthen Dialogue & Diplomacy:** Promote consistent high-level engagements to resolve disputes and build trust.
2. **Deepen Economic Integration:** Expand trade, investment, and technology partnerships for mutual growth.
3. **Enhance Security Cooperation:** Joint action on counter-terrorism, cyber threats, and maritime security.
4. **Promote Multilateralism:** Push for UNSC reforms, climate action, and equitable global governance.
5. **Balance Strategic Autonomy:** Maintain independent foreign policy while building constructive regional and global coalitions.

CONCLUSION

India's support for the New York Declaration underscores its commitment to a peaceful two-state solution, while carefully balancing ties with both Israel and Arab nations. As West Asia remains volatile, India's strategic autonomy allows it to pursue national interests without aligning rigidly with any bloc. Bilateral cooperation in Defence, agriculture, and trade remains key to India's development. Regionally, India must sustain engagement through platforms like I2U2, while globally, it continues to push for UNSC reforms, lead on climate and digital commons, and advocate strong counter-terrorism measures.

INDIA & AMP; MAURITIUS: UNITED BY OCEAN, BOUND BY HERITAGE

WHY IN THE NEWS?

Mauritius Prime Minister Navinchandra Ramgoolam is on an eight-day visit to India. His offering of prayers at the Kashi Vishwanath Temple in Varanasi and the scheduled visit to the Shri Ram Janmabhoomi Temple in Ayodhya have been hailed as symbols of the deep civilisational and cultural bonds between India and Mauritius. The visit also witnessed the signing of multiple agreements to strengthen strategic, economic, and maritime cooperation.



KEY HIGHLIGHTS:

1. MEA described the Kashi Vishwanath visit as a "testament of deep civilisational ties."
2. Announcement of a USD 680 million Special Economic Package for Mauritius.

3. Seven MoUs signed in areas like science & technology, oceanography, power, hydrography, small development projects, and space cooperation.
4. Major pact: Space collaboration for telemetry, tracking, and communication stations.
5. Bilateral talks reaffirmed partnership in infrastructure, healthcare, digital tech, energy, and maritime security

KEY AREAS OF INDIA–MAURITIUS COOPERATION

Key Area	Highlights
Economic Cooperation	- India is Mauritius' largest trading partner (~25% of imports). - Bilateral trade: USD 742 million (2023). - Major FDI source to India: USD 160+ billion (2000–2023) via DTAA.
Strategic & Defence	- India building airstrip & jetty on Agalega Island for maritime security. - Gifted patrol vessels, Dornier aircraft, radar systems. - Cooperation in EEZ mapping & hydrography.
People-to-People Ties	- 68% of Mauritians are of Indian origin. - IIT Madras & IIPM signed MoUs with University of Mauritius.
Historical & Cultural Links	- Shared Girmitiya (indentured labour) legacy. - India restored Aapravasi Ghat (UNESCO World Heritage Site).
Regional & Global Dimensions	- Key to Neighbourhood First & SAGAR. - Collaboration in ISA and IORA for climate and maritime governance.
Africa Factor	- Mauritius as a gateway for India's Africa outreach. - Supports IAFS, promotes Indian fintech/IT in Africa.
China Factor	- Chinese investments in ports and real estate raise concerns. - India counters with Agalega project and USD 680 million aid package (2025).

CHALLENGES IN INDIA–MAURITIUS RELATIONS

1. **Strategic Balancing:** Mauritius treads a fine line in its ties with India, China, France, and the U.S. India's Agalega airstrip project, while strategic, has triggered domestic concerns over militarisation.
2. **Chagos Archipelago Dispute:** India supports Mauritius' sovereignty over Chagos, but the UK–U.S. base on Diego Garcia remains a geopolitical hurdle.
3. **Economic Vulnerability:** Mauritius depends heavily on tourism and offshore finance, making it prone to global shocks and limiting scope for trade diversification with India.
4. **Climate Risks:** As a Small Island Developing State (SIDS), Mauritius is highly vulnerable to rising sea levels, cyclones, and coastal erosion—requiring long-term external support.
5. **Trade Imbalance:** India's exports (USD 745 million) far exceed its imports (USD 128 million) from Mauritius, leading to economic asymmetry.

WAY FORWARD: BUILDING A FUTURE-READY PARTNERSHIP

1. **Blue Economy & Climate Action:** Enhance collaboration in fisheries, marine ecosystems, and ocean-based renewables. Scale up joint efforts under ISA and CDRI for climate resilience.
2. **Maritime Security:** Boost joint patrols, EEZ monitoring, and hydrography. Position Agalega

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as a regional hub for HADR and maritime surveillance in the Indian Ocean.

3. **Connectivity & Trade Corridors:** Lin4. k Mauritius to India's Sagarmala and the India–Middle East–Europe Corridor (IMEEC) to strengthen its role as a gateway to Africa.

4. **Diaspora & Cultural Engagement:** Leverage the deep diaspora links through youth exchanges, cultural tourism (e.g., Ramayana circuit), and digital heritage to keep ties vibrant and intergenerational.

CONCLUSION

India and Mauritius are more than strategic partners—they are bound by history, culture, and people-to-people ties. As PM Modi rightly said, the relationship is like a family. With shared priorities in security, development, and global governance, the India–Mauritius partnership is set to deepen, becoming a model for South–South cooperation and a pillar of stability in the Indian Ocean.

CROSS-BORDERTERRORISM: A GLOBAL CONCERN RAISED AT UNHRC

WHY IN THE NEWS?

At a photo exhibition in Geneva coinciding with the UN Human Rights Council (UNHRC) session, Indian human rights activist Javed Ahmed Beigh strongly criticized Pakistan's role in supporting terrorism. He drew attention to the recent Lashkar-e-Toiba attack in Pahalgam, Kashmir and urged the international community to hold Pakistan accountable for fostering cross-border terror groups that threaten regional peace.

1951 Refugee Convention, Article 1(A)(2):

A refugee is a person who, owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, unwilling to avail himself of the protection of that country."



WHAT IS UNHCR?

Subsidiary organ of the UN General Assembly (UNGA), established in 1949; began functioning in 1951.

Headquarters: Geneva, Switzerland.

Current High Commissioner: Filippo Grandi (since 2016; term till Dec 2025).

Staff: ~18,800 (91% in the field).

Reports annually to the UNGA.

STRUCTURE

High Commissioner → heads the organization.

Executive Committee (ExCom) → 54 members, meets annually, frames policy conclusions.

Members need not be parties to the 1951 Refugee Convention (e.g., India).

Departments → Protection, Operations, Finance, Human Resources, Inspection & Evaluation.

Regional Divisions → coordinate field work.

MANDATE OF UNHCR

1. **Core Mission:** Protect and assist refugees, asylum seekers, stateless persons, and others displaced due to conflict or persecution.

2. **International Law Role:** Promote and monitor implementation of the 1951 Refugee Convention and the 1967 Protocol.

3. **Asylum & Protection:** Ensure the right of asylum and safeguard against refoulement (forced return).
4. **Durable Solutions:** Voluntary repatriation, Local integration, Third-country resettlement.
5. **Protection Services:** Legal aid, identity/travel documents, registration, and advocacy.
6. **Humanitarian Assistance:** Material and financial support through programs, NGOs, and partnerships.
7. **Good Offices Function:** Mediate in mass-displacement or non-mandate cases (e.g., IDPs).
8. **Global Compact Role:** Lead implementation of the 2018 Global Compact on Refugees (GCR) to promote responsibility-sharing.

SUCCESSES OF UNHCR

1. **1956 Hungarian Uprising →** managed refugee flows into Austria.
2. **Indo-Chinese refugee crisis (1970s–80s) →** resettlement programs.
3. **Rwanda & Great Lakes crisis (1990s) →** large-scale humanitarian relief.
4. **Syrian refugee response (2011 onwards) →** shelter, medical aid in Jordan, Lebanon, Turkey.
5. **Ukraine crisis (2022) →** emergency operations for millions displaced.
6. **Nobel Peace Prize (1954 & 1981) →** recognition of humanitarian efforts.

INDIA'S ROLE AT UNHCR

1. Member of ExCom, though not party to 1951 Refugee Convention.
2. Hosts Sri Lankan Tamils, Tibetans, Afghans, Rohingya, and Chakma refugees.
3. Provides financial contributions to UNHCR programs.
4. Works with UNHCR on Rohingya documentation & urban refugee support.
5. Supports regional cooperation under SAARC and ASEAN frameworks.

MEANS OF ACTION

1. **Legal Means:** Refugee Convention, Statute, UNGA resolutions.
2. **Operational Means:** Field presence in 137+ countries.
3. **Financial Means:** ~85% funding from voluntary state contributions, ~11% private donors.
4. **Partnerships:** NGOs, IGOs, host governments.
5. **Global Compact on Refugees:** frameworks for burden-sharing & long-term refugee integration.

CRITICISMS OF UNHCR

1. **Structure-related**

   Over-bureaucratization → slow response.

   Dependence on voluntary funding → financial instability.

   Over-concentration in Geneva HQ vs. field requirements.

2. **Actions-related**

   Failures in Rwanda (1994 genocide) and Srebrenica (Bosnia, 1995).

   Inability to protect IDPs effectively due to limited mandate.

   Overlap/conflict with other UN agencies (e.g., OCHA, UNICEF).

3. **Mandate-related**

   Refugee definition too narrow (excludes climate refugees, economic migrants).

   Refugee status determination left to states, limiting UNHCR's authority.

   Humanitarian neutrality often compromised by political pressures from states.

SUGGESTED REFORMS

1. **Expand the definition of refugee →** include

climate-induced and disaster-displaced persons.

2. **Strengthen funding mechanisms** → more assessed contributions (not only voluntary).
3. **Enhance coordination** with regional bodies (e.g., AU, EU, SAARC).
4. **Decentralize operations** → shift more authority/ resources to field offices.
5. **Increase accountability** → stronger monitoring of peacekeeper/aid worker misconduct.
6. **Empower UNHCR legally** → greater role in refugee status determination & protection guarantees.
7. **Focus on durable solutions** → not just relief, but long-term integration & development linkages (with UNDP, World Bank).

CONCLUSION

The UN Human Rights Council remains an essential global platform for the protection and promotion of human rights, but to function effectively it must overcome structural weaknesses, reduce politicization, and enhance impartiality. Strengthening its credibility and efficiency is not just desirable but necessary to ensure that human rights are upheld universally, beyond the influence of power politics.

UNITED NATIONS IN THE 21ST CENTURY: RELEVANCE, CRISIS, AND WAY FORWARD

WHY IN THE NEWS?

The United Nations General Assembly (UNGA), in its 80th session (September 2025), adopted a resolution allowing Palestinian President Mahmoud Abbas to address the high-level debate via pre-recorded video. This move came after the United States denied visas to Palestine's delegation on national security grounds. The resolution was passed with 145 votes in favor, 5 against, and 6 abstentions, showcasing once again the UN's role as a platform where global disputes and representation issues are contested and resolved.



WHAT IS THE UNITED NATIONS?

The United Nations was born in 1945, in the aftermath of World War II, with 51 founding members. Its Charter enshrines principles of sovereign equality, peaceful dispute settlement, non-use of force, and collective security. Today, with 193 member states, it is the largest and most universal intergovernmental organization in the world.

The UN operates through six principal organs, supported by specialized agencies like the World Health Organization (WHO), UNESCO, the International Monetary Fund (IMF), and the World Bank.

SIX PRINCIPAL ORGANS OF THE UN

UN Organ	Mandate / Functions
General Assembly (UNGA)	World's largest deliberative forum; one-country-one-vote principle; passes resolutions, approves budget, and elects members to other organs.
Security Council (UNSC)	Ensures global peace and security; 15 members (P5 with veto + 10 elected); can impose sanctions, authorize force, and establish peacekeeping missions.
Economic and Social Council (ECOSOC)	Coordinates socio-economic and developmental agendas; supervises agencies like WHO, ILO, FAO.
International Court of Justice (ICJ)	Settles disputes between states; advisory role on legal issues; based in The Hague.

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Secretariat	Administrative arm led by the Secretary-General (currently António Guterres); implements decisions, manages peacekeeping, and produces reports.
Trusteeship Council	Created to oversee decolonization and trust territories; suspended operations in 1994 after Palau's independence.

Principal Organs of the United Nations



WHY THE UNSC MATTERS



1. Legally binding powers under the UN Charter.
2. Authorizing interventions in conflicts (e.g., Korean War 1950, Gulf War 1991).
3. Peacekeeping operations (currently over 80,000 peacekeepers deployed in 12 active missions).
4. **Nuclear non-proliferation:** UNSC resolutions have shaped regimes like the Iran nuclear deal.
5. **Global legitimacy:** Even major powers seek UNSC backing for interventions, e.g., the US after 9/11.

ACHIEVEMENTS OF THE UN IN 80 YEARS

1. **Conflict Prevention & Peacekeeping:** Deployed over 70 peacekeeping missions; notable successes in Namibia, Cambodia, and Sierra Leone.
2. **Decolonization:** Enabled independence of 80+ countries in Asia and Africa.
3. **Human Rights:** Adoption of the Universal Declaration of Human Rights (1948); establishment of international criminal tribunals for Rwanda and former Yugoslavia.
4. **Global Health:** Eradication of smallpox; leadership during COVID-19, Ebola, and polio eradication campaigns.
5. **Sustainable Development Goals (SDGs):** Set a universal development agenda for 2015–2030.
6. **Humanitarian Relief:** The World Food Programme (WFP) feeds over 150 million people annually; UNHCR protects 43 million refugees.

PRESENT CHALLENGES FOR THE UN

1. **Geopolitical Paralysis:** Rivalries (US–China, Russia–West) weaken collective decision-making.
2. **Veto Deadlock:** UNSC often paralysed (e.g., Russia vetoing resolutions on Ukraine).
3. **Legitimacy Crisis:** Rising voices from the Global South demand more representation.
4. **Humanitarian Overstretch:** Over 110 million displaced people worldwide strain UN agencies.
5. **Funding Gaps:** Only 10 countries contribute nearly 70% of the UN's budget.
6. **New Threats:** Climate change, cybersecurity, artificial intelligence, and pandemics lack adequate frameworks

WAY FORWARD

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1. **UNSC Expansion:** Permanent seats must include countries like India, Brazil, South Africa, Japan, and an African Union nominee, reflecting multipolar realities.
2. **Revitalizing UNGA:** Strengthen its resolutions by linking them more effectively to global decision-making and accountability.
3. **Financial Sustainability:** Move away from dependency on a handful of donors; encourage equitable burden-sharing among all members.
4. **Peacekeeping 2.0:** Improve training, accountability, and integrate regional organizations (like the African Union) for joint missions.
5. **New Mandates for New Challenges:** Tackle cyber warfare, artificial intelligence ethics, climate migration, and outer-space governance.
6. **Global South Inclusion:** Ensure developing nations have greater say in agenda-setting, funding priorities, and leadership roles.
7. **Reviving Multilateralism:** Promote dialogue and collective problem-solving over unilateralism and bloc politics.

CONCLUSION

The United Nations, despite flaws, remains the world's most legitimate multilateral forum. The Palestine episode in the 80th UNGA reaffirmed its role as a global stage for representation and dialogue. In the last 80 years, the UN has prevented global wars, advanced human rights, and coordinated humanitarian relief at unprecedented scales. Unless structural reforms are undertaken—especially in the UN Security Council—its relevance will continue to be questioned. As humanity faces climate emergencies, technological disruptions, and geopolitical fragmentation, the UN must reinvent itself for the 21st century.

Prelims Questions

Q1. With reference to India–Japan relations, consider the following statements:

1. Japan is among the top five sources of Foreign Direct Investment (FDI) in India.
2. Japan has been one of the largest providers of Official Development Assistance (ODA) to India.
3. The Mumbai–Ahmedabad High-Speed Rail Project is being developed with Japanese assistance.

Which of the statements given above is/are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2, and 3

Q2. With reference to India–Singapore relations, consider the following statements:

1. Singapore is among the top sources of FDI into India.
2. India and Singapore conduct the SIMBEX naval exercise annually.
3. The Indian-origin community makes up nearly 9% of Singapore's population.

Which of the above statements are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2, and 3

Q3. Which of the following statements about India–EU relations is/are correct?

1. India was granted the status of "Strategic Partner" by the European Union in 2004.
2. The Broad-based Trade and Investment Agreement (BTIA) negotiations between India and the EU began in 2016.

Select the correct answer using the code below:

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Answer: A

Q4. With reference to India–Nepal relations, consider the following statements:

1. Nepal shares an open border of more than 1,700 km with India.
2. Political instability in Nepal has previously disrupted trade to India's northeastern

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states.
3. The Pancheshwar Multipurpose Project is a hydropower project jointly developed by India and Nepal.

Which of the above statements are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

Q5. With reference to India's multi-level foreign policy challenges, consider the following statements:

1. At the bilateral level, India's key concerns include trade imbalance, technology transfer, and food security.
2. At the regional level, India's engagement through I2U2 aims to address instability in East Asia.
3. At the global level, India advocates for UNSC reforms and plays a proactive role in counter-terrorism through CCIT and FATF.

How many of the above statements are correct?

(a) Only one (b) Only two
(c) All three (d) None

Q6. With reference to India–Mauritius relations, consider the following pairs:

1. Aapravasi Ghat – UNESCO World Heritage Site related to Indian indentured labourers
2. Jan Aushadhi Kendra – Recently established first time outside India in Mauritius
3. SAGAR Policy – Framework for Security and Growth in the Indian Ocean

Which of the above are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

Q7. Which of the following is/are core principles of the 1951 Refugee Convention?

1. Non-discrimination
2. Non-penalization for illegal entry
3. Non-refoulement

Select the correct answer:

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2, and 3

Q8. With reference to the United Nations, consider the following statements:

1. The Trusteeship Council ceased to exist after Palau's independence in 1994.
2. The International Court of Justice is headquartered in The Hague, Netherlands.
3. The UN Security Council is the only organ whose decisions are legally binding on member states.

How many of the above statements are correct?

(a) Only one (b) Only two
(c) All three (d) None

1. (d)	2. (d)	3. (a)	4. (d)
5. (b)	6. (d)	7. (d)	8. (b)

Mains Questions

Q1. India and Japan share a Special Strategic and Global Partnership that is central to Asia's economic and security architecture. Discuss the recent developments in this partnership, highlighting the challenges and the way forward.

(250 words, 15 marks)

Q2. India and Singapore are celebrating 60 years of diplomatic ties in 2025. Examine the major dimensions of their partnership—political, economic, security, cultural, and global. How can this relationship be leveraged to advance India's Act East Policy?

(250 words, 15 marks)

Q3. "India–EU relations have matured into a comprehensive partnership underpinned by shared values and complementary interests. Critically examine the significance of this relationship for India and suggest measures to overcome existing constraints."

(250 words, 15 marks)

Q4. Nepal's recent political instability has highlighted challenges to India's strategic, economic, and cultural interests. Discuss why

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Nepal's stability is vital for India and suggest short-term and long-term measures that India can adopt to strengthen bilateral ties.

(250 words, 15 marks)

Q5. India recently voted in favour of the UN's New York Declaration supporting a two-state solution to the Israel–Palestine conflict. In this context, critically analyse how India balances its strategic interests in West Asia with its commitment to multilateralism, strategic autonomy, and global peace. Also, highlight key challenges and opportunities at the bilateral, regional, and global levels.

(250 words , 15 marks)

Q6. India and Mauritius are not just partners but a family." Critically examine this statement in light of recent developments, with special reference to strategic, cultural, and economic ties.

(250 words , 15 marks)

Q7. Discuss the role of UNHCR in addressing global refugee crises. What challenges does it face in ensuring protection and durable solutions?

(250 words , 15 marks)

Q8. India has consistently advocated for reform of the UN system. Discuss India's contributions to the UN and its case for permanent membership in the UNSC.

(150 words)





HORTICULTURE: STRENGTHENING INDIA'S AGRI-ECONOMY

WHY IN THE NEWS?

Shri K. T. Francis, a retired teacher from Kozhikode, Kerala, has turned his three-acre farm into a model of coconut-based mixed farming. With 200 coconut palms, spices, tuber crops and tropical fruits, he earns ₹14–15 lakh annually, mainly from coconut and nursery sales. Recognised with state and national awards, his success shows how integrated farming and scientific practices can make small holdings both profitable and sustainable.

Shri Prabhat Das, a 40-year-old farmer from Kulhati village in Kamrup district, Assam, transformed his fields by shifting from traditional crops to floriculture. A graduate in Arts, he began cultivating Gladiolus, Tube Rose, Tissue Zerbera and Red Zerbera on 12 bighas of his own land during 2014 to 2016. The move proved highly rewarding as he earned between 1.5 to 2 lakh rupees annually by selling his flowers in the wholesale and retail markets of greater Guwahati. Earlier his earnings from field crops were modest, but the shift to flowers has brought him better returns and renewed confidence. Encouraged by this success, he now plans to expand his area under flower cultivation in the coming season.



The horticulture sector plays a vital role in the Indian economy. Horticulture supports better nutrition, offers alternative rural employment, encourages diversification in farming and raises farmer incomes. India is the second largest producer of fruits and vegetables in the world. It continues to hold a strong position in the production of spices, coconut and cashew nut.

Emergence of High - Value Crops

High - value crops are mainly those grown in horticulture - such as fruits, vegetables, flowers, spices and aromatic plants. These crops yield greater market value and return per unit area compared to many field crops.

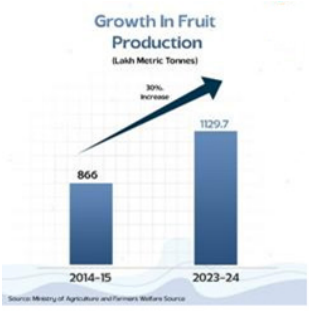
2016, the Government set up an Inter-Ministerial Committee to explore ways to double farmer's income. One key strategy identified was diversification into high-value agriculture, including horticulture.

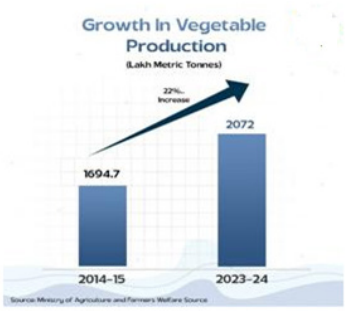
This sector has since, recorded impressive growth over the past decade. As of August 2025, for 2024-25 (second advanced estimates), horticulture production increased from 280.70 million tonnes in 2013-14 to 367.72 million tonnes. This includes fruit production of 114.51 million tonnes, vegetable production of 219.67 million tonnes, and 33.54 million tonnes from other horticulture crops.

Horticulture, derived from the Latin words hortus meaning garden and cultura meaning to cultivate, is a branch of plant science that focuses on the cultivation of garden crops. It covers fruits, vegetables, flowers, spices and plantation crops. The discipline also deals with the scientific management of these crops after harvest to maintain their quality and value.

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In 2023–24, Fruit production rose from 866 lakh metric tonnes in 2014–15 to 1129.7 lakh metric tonnes, reflecting an increase of about 30%. Vegetable production also grew from 1694.7 lakh metric tonnes to 2072 lakh metric tonnes during the same period, marking a rise of 22%. Productivity levels improved as well, with fruits increasing from 14.17 to 15.80 metric tonnes per hectare and vegetables from 17.76 to 18.40 metric tonnes per hectare.





SCHEMES AND INITIATIVES

The horticulture sector has witnessed notable progress over the years through targeted government schemes and initiatives that aim to tackle key challenges while unlocking the sector's full potential. The focus remains on enhancing crop quality, increasing production and improving farmers' access to markets.

Mission for Integrated Development of Horticulture (MIDH)

The Government has been implementing the Mission for Integrated Development of Horticulture since 2014–15. This centrally sponsored scheme aims to ensure the holistic growth of the horticulture sector in all States and Union Territories.

Since its launch in 2014-15, the Mission for Integrated Development of Horticulture (MIDH) has brought an additional 15.66 lakh hectares under horticulture crops up to July 2025. The scheme covers all horticulture crops, regardless of variety.

Key components such as quality planting material and micro irrigation have contributed to higher productivity. The productivity of horticulture crops has risen from 12.10 metric tonnes per hectare in 2019-20 to 12.56 metric tonnes per hectare in 2024-25, as per the second advance estimates

To evaluate the results, several impact assessment studies have been carried out through independent agencies, including NITI Aayog. The Department of Agriculture and Farmers Welfare also undertakes regular monitoring and evaluation of the scheme in different regions. Based on the feedback from these reviews, the scheme has been restructured with changes and new components to address field-level challenges.

THE KEY INITIATIVES UNDER THE SCHEME INCLUDE:

- **Centres of Excellence in Horticulture:** Established as hubs for demonstration and training on the latest technologies in the field.
- **Horticulture Cluster Development Programme:** Designed to make use of the geographical strengths of horticulture clusters. It supports integrated and market-led growth from pre-production and production to post-harvest handling, logistics, branding, and marketing. The aim is to boost the competitiveness of Indian horticulture in both domestic and export markets.
- **Clean Plant Programme:** A central sector scheme that focuses on providing high-quality, disease-free planting material to strengthen India's position in global horticulture trade.
- **Post-Entry Quarantine Facilities:** Set up to supply genuine and quality planting material, thereby improving orchard productivity and enhancing farmers' incomes.

FINANCIAL AND TECHNICAL SUPPORT

Mission for Integrated Development of Horticulture (MIDH)

The Mission for Integrated Development of Horticulture (MIDH) is a centrally sponsored scheme launched by the Government of India to promote holistic growth of the horticulture sector. It extends financial and technical support to States and Union Territories, covering fruits, vegetables, flowers, spices, plantation crops, mushrooms, and medicinal plants. The mission emphasizes productivity, sustainability, and profitability, thereby contributing to farmer incomes and nutritional security.

Key Interventions under MIDH

1. **Nurseries and Planting Material:** Establishment of nurseries and tissue culture units ensures production and supply of high-quality, disease-free seeds and planting material.
2. **Area Expansion and Orchard Development:** Support is given for setting up new orchards, gardens for fruits, vegetables, and flowers, as well as rejuvenation of old and senile orchards to enhance productivity.



3. **Protected Cultivation:** Promotion of modern techniques like polyhouses, greenhouses, and shade nets enables cultivation of high-value vegetables, flowers, and off-season crops.
4. **Organic Farming and Certification:** Incentives are provided to encourage chemical-free cultivation practices, boosting demand for organic produce in domestic and export markets.
5. **Water Resource Management:** Construction of water harvesting structures, watershed management systems, and micro-irrigation facilities promotes efficient water use and conservation.
6. **Beekeeping and Pollination Support:** Beekeeping is encouraged to enhance pollination, leading to better crop yields and diversification of farmer income through honey and by-products.
7. **Horticultural Mechanisation:** Assistance is given for adoption of modern tools and equipment to reduce drudgery, enhance efficiency, and lower labour dependency.
8. **Post-Harvest Management & Marketing Infrastructure:** Development of integrated pack houses, cold storages, ripening chambers, refrigerated transport, and cold chain systems reduces post-harvest losses and strengthens farm-to-market linkages.

NATIONAL HORTICULTURE MISSION

The National Horticulture Mission was launched in 2005–06 as a Centrally Sponsored Scheme. It aims to ensure holistic development of the sector and create strong backward linkages through a cluster-based approach, involving the active participation of all stakeholders.

The Mission focusses on:

1. Ensuring supply of quality planting material through nurseries and tissue culture units.
2. Improving production and productivity through area expansion and rejuvenation.
3. Promoting and spreading modern technologies in horticulture.
4. Developing infrastructure for post-harvest management and marketing.
5. Planning activities as per the strengths and climate of each state or region.

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HORTICULTURE MISSION FOR NORTH EAST & HIMALAYAN STATES (HMNEH)

The Department has been implementing a Centrally Sponsored Scheme called the Horticulture Mission for North East and Himalayan States since 2001–02. It was earlier known as the Technology Mission for Integrated Development of Horticulture in the North Eastern States.

In the Tenth Plan (2003–04), the scheme was extended to three Himalayan States, namely Himachal Pradesh, Jammu and Kashmir, and Uttarakhand. The mission covers the entire horticulture chain, from planting to consumption, with both backward and forward linkages.

From 2014–15 onwards, the HMNEH scheme has been merged with the Mission for Integrated Development of Horticulture.

NATIONAL HORTICULTURE BOARD (NHB)

The National Horticulture Board was established by the Government of India in 1984 as an autonomous organisation under the administrative control of the Ministry of Agriculture and Farmers Welfare.

The Board aims to develop production clusters or hubs for integrated high-tech commercial horticulture, create post-harvest and cold chain infrastructure, ensure the availability of quality planting material, and promote the adoption of advanced technologies for high-tech commercial horticulture.

COCONUT DEVELOPMENT BOARD (CDB)

The Coconut Development Board is a statutory body set up by the Government of India under the Coconut Development Board Act, 1979, and became operational in January 1981. Under MIDH, its focus is on producing and distributing quality planting material, expanding coconut cultivation in both potential and non-traditional areas, and improving productivity in major coconut-growing states. It also works on developing post-harvest processing and marketing technologies, promoting product diversification and by-product utilisation, adding value to coconut-based products, sharing information, and building capacity in the coconut sector.

CENTRAL INSTITUTE FOR HORTICULTURE (CIH)

The Central Institute of Horticulture was established at Medziphema, Nagaland, in 2006-07 to provide technical support through capacity building and training for farmers and field functionaries in the North Eastern Region. It now functions as one of the sub-schemes under MIDH. However, the institute does not directly implement any schemes.

RESEARCH AND QUALITY IMPROVEMENT

National Agricultural Research System (NARS) including ICAR Institutes and State/Central Agricultural Universities (CAU/SAU) under the aegis of Indian Council of Agricultural Research (ICAR) provide improved horticultural varieties.



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CONCLUSION

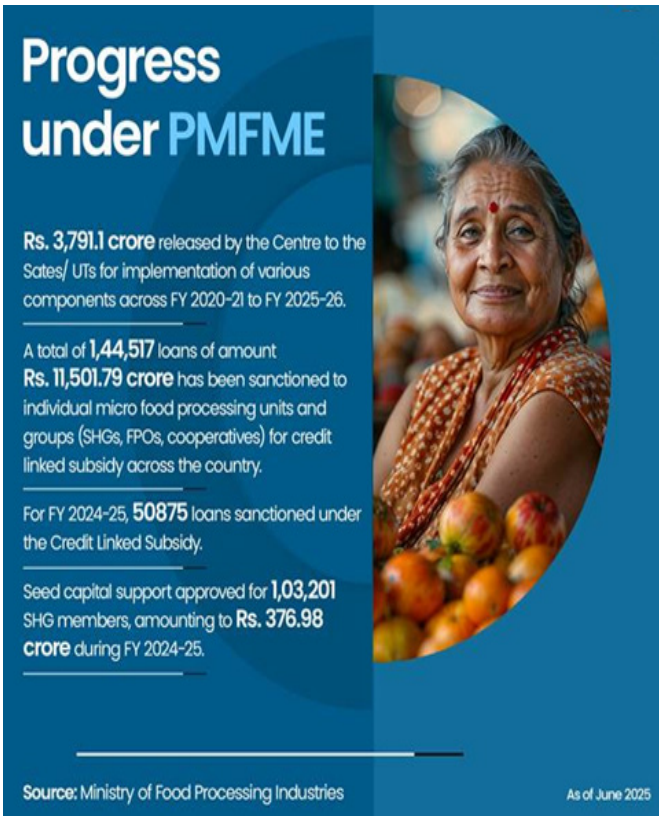
Horticulture plays a vital role in strengthening India's agricultural growth and ensuring nutritional security. The wide variety of crops, ranging from fruits and vegetables to spices, flowers and plantation crops, reflects the rich diversity of the sector. Continuous research, improved varieties and better post-harvest management are helping farmers increase productivity and incomes. With sustained government support and adoption of modern practices, horticulture can further boost rural livelihoods, enhance exports and contribute significantly to the nation's economy.

PRADHAN MANTRI FORMALISATION OF MICRO FOOD PROCESSING ENTERPRISES (PMFME)

WHY IN THE NEWS?

Ruby Fresh Snacks in Ernakulam, Kerala, tells the story of how a small dream became a thriving enterprise. Founded by Mr. P M Jaleel in 2011 with groundnut laddoos, the unit grew with the support of the PM Formalisation of Micro Food Processing Enterprises Scheme. A loan of over 3 lakh rupees in 2021 helped him buy new machines, double production, and expand his product range. Daily profits rose from about 12,000 rupees to nearly 20,000, and his turnover crossed 32 lakh rupees in 2021-22. Today, Ruby Fresh Snacks is not only a source of quality local treats but also a symbol of how government support can transform small entrepreneurs into inspiring success stories.

The Pradhan Mantri Formalisation of Micro Food Processing Enterprises Scheme was launched on 29 June 2020. It is a Centrally Sponsored Scheme that focuses on the growth and formalisation of micro food units across the country. The scheme is part of the Atmanirbhar Bharat Abhiyaan and supports the Vocal for Local vision in the food processing sector. It provides financial, technical and business assistance to entrepreneurs for setting up new units or upgrading existing ones. The scheme runs from 2020-21 to 2025-26 with an outlay of Rs. 10,000 crores. Its goal is to make micro enterprises more competitive, bring them into the organised sector, and unlock new opportunities for growth.



The expenditure under the scheme is to be shared in 60:40 ratio between Central and State Governments, in 90:10 ratio with North Eastern and Himalayan States, 60:40 ratio with UTs with legislature and 100% by the Center for other UTs.

The scheme aims to provide direct support to 2 lakh micro food processing units through credit-linked subsidies. It also seeks to create common infrastructure and strengthen institutional support to drive faster growth in the sector.

India's food processing industry has seen a remarkable growth over the past 11 years, shaped by its strong farm base, growing demand, and supportive government policies. The country is set to become a global leader in this sector, with steady growth ahead. Agriculture remains the backbone of food processing, while the sector itself has become vital to the economy through its rising share in GDP, jobs, and exports.

As of July 2025, for FY 2024-25, agriculture and processed food exports reached approximately

USD 49.4 billion with processed food exports constituting around 20.4%, positioning India as a rising global leader in food processing. The number of registered food business operators has expanded from 25 lakh to 64 lakh, reflecting growing formalisation. Infrastructure has also strengthened with establishing 24 mega food parks, 22 agro-processing clusters and completing 289 cold chain projects and 305 processing and preservation units, creating significant additional capacity. Further, 10 projects under Operation Greens have enhanced value addition, while 225 R&D projects have yielded 20 patents and 52 commercialised technologies.



KEY COMPONENTS OF THE SCHEME

Component	Target Group	Type of Support	Key Features
Support for Individual Units	Individual micro-enterprises	Credit-linked capital subsidy	- 35% of project cost subsidised - Max ₹10 lakh per unit - 10% beneficiary contribution - Balance through bank loan
Support for Self-Help Groups (SHGs)	SHG members	Seed capital support	- ₹40,000 per member for working capital & tools - Priority to ODOP-based SHGs - Disbursed at federation level as repayable loan
Support for FPOs & Co-operatives	Farmer-Producer Organisations & Producer Co-operatives	Grant support with training	- 35% grant with credit linkage - Training & capacity building provided - Funding capped as per scheme norms
Branding & Marketing Support	Groups of FPOs, SHGs, Co-operatives, SPVs	Marketing, branding & quality improvement	- Based on ODOP approach (State/regional level) - Fully funded marketing training - Common brand, packaging & standardisation - Tie-ups with retail chains & state institutions - Quality control measures enforced

DETAILED PROJECT REPORTS (DPRS)

Aspect	Details
Purpose	Required for proposals under the scheme.

Contents	- Product profile & strategy - Quality control measures - Aggregation of produce - Packaging & branding plan - Pricing & promotion strategies - Storage and marketing channels - Sales growth projections
Financial Support	Up to ₹5 lakh from State Nodal Agency (SNA) for preparing DPRs related to branding & marketing.
Flow Chart Requirement	Must show activities from raw material procurement → marketing with quality control checkpoints.
Five-Year Plan	Should include: - Promotional work - Expansion of producer participation - Turnover growth
Guidelines Support	Ministry provides Model DPRs with templates, technical terms of reference, and formats to help entrepreneurs, FPOs, SHGs, cooperatives, SPVs prepare structured proposals.

SUPPORT FOR COMMON INFRASTRUCTURE

Infrastructure Type	Details of Support
Assaying & Storage Facilities	Facilities for assaying agricultural produce, sorting, grading, warehousing, cold storage at the farm gate.
Common Processing Units	Dedicated processing units for ODOP (One District One Product) produce.
Incubation Centres	- One or more product lines - Available to small units on hire basis - May also be used partly for training - All incubation centres to be run on a commercial basis

PMFME SCHEME – COMPONENT-WISE APPROVED UNITS (TILL 30TH JUNE 2025)

S. No.	Component	No. of Applications Sanctioned	Amount Sanctioned (₹ in Crore)
1	Credit Linked Subsidy	1,44,517	11,501.79
2	Seed Capital	3,48,907	1,182.48
3	Common Infrastructure	93	187.20
4	Branding & Marketing	27	82.82

CAPACITY BUILDING & RESEARCH

Capacity building and training form an essential part of upgrading technology and bringing micro food processing units into the formal system. At the national level, National Institute for Food Technology Entrepreneurship and Management (NIFTEM) and Indian Institute of Food Processing Technology (IIFPT) lead capacity building and research, with financial support provided for these activities. In collaboration with State-level technical institutes, they offer training and research support to selected enterprises, groups, and clusters. Specialised institutions under ICAR, CSIR, and premier institutes like Defence Food Research Laboratory (DFRL) and Central Food Technological Research Institute (CFTRI) also partner in delivering product-specific training and research across the country.

ODOP FOCUS

The scheme follows the One District One Product (ODOP) approach to scale up procurement, services, and marketing. States identify products, with priority on perishables such as fruits, vegetables, spices, fisheries, and traditional foods like honey and turmeric. Support is focused on processing, storage, branding, and reducing wastage. Capital investment is prioritised for ODOP units, while new enterprises are eligible only for ODOP products. The approach complements cluster-based initiatives under the Agriculture Export Policy and Agriculture Ministry, ensuring stronger value chains and common facilities.

CONCLUSION

The PMFME Scheme marks a major step in strengthening micro food enterprises and unlocking the potential of local produce. Through its ODOP focus, common infrastructure, skill training, and access to credit, it provides small entrepreneurs with the tools to grow and compete. By reducing wastage, improving value addition, and promoting branding, the scheme not only boosts farmers' and producers' incomes but also creates jobs and supports rural development. It stands as a bridge between tradition and modern markets, driving sustainable and inclusive growth in the food processing sector.

Prelims Questions

Q1. With reference to the Mission for Integrated Development of Horticulture (MIDH), consider the following statements:

1. It was launched in 2014–15 as a Centrally Sponsored Scheme.
2. It covers fruits, vegetables, flowers, spices, plantation crops, mushrooms, and medicinal plants.
3. The scheme is implemented only in North Eastern states and Himalayan states.

Which of the statements given above are correct?

A. 1 and 2 only B. 2 and 3 only
C. 1 and 3 only D. 1, 2, and 3

Q2. Consider the following statements regarding the PM Formalisation of Micro Food Processing Enterprises (PMFME) Scheme:

1. The scheme provides a credit-linked capital subsidy of up to 50% of the project cost for individual units.
2. Self-Help Groups (SHGs) are eligible for seed capital support of ₹40,000 per member.
3. The scheme follows the One District One Product (ODOP) approach to strengthen value chains.
4. Branding and marketing support is extended only to individual entrepreneurs under the scheme.

Which of the statements given above is/are correct?

A. 2 and 3 only B. 1, 2 and 4 only
C. 2, 3 and 4 only D. 1 and 3 only

1. A	2. A

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Mains Questions

Q1. Horticulture has emerged as a key driver of agricultural growth and farmer income in India." Discuss the growth trends, government initiatives, and challenges of the horticulture sector.

(250 words, 15 marks)

Q2. The PM Formalisation of Micro Food Processing Enterprises (PMFME) Scheme aims to transform the unorganised food processing sector in India. Discuss its key components, achievements, and the role of ODOP in strengthening value chains. What challenges does the scheme face, and how can they be addressed?

(250 words, 15 marks)





VICE PRESIDENT: THE UNIQUE BRIDGE BETWEEN EXECUTIVE AND LEGISLATURE

WHY IN THE NEWS?

The Vice Presidential election is scheduled for 09 September 2025, where NDA nominee C.P. Radhakrishnan will contest against the INDIA bloc's nominee B. Sudershan Reddy, following the resignation of Jagdeep Dhankhar in July.



ORIGIN OF THE OFFICE OF VICE-PRESIDENT IN INDIA:

1. **Constitutional Provision:** Established under Articles 63–71 of the Indian Constitution (26 January 1950) as the ex officio Chairperson of the Rajya Sabha.
2. **Dual Role:** Designed to act as a bridge between the executive and legislature and step in as Acting President if the office becomes vacant.
3. **Precedent:** Dr. Sarvepalli Radhakrishnan (1952–62) set an example, combining constitutional duties with moral authority, enhancing the office's prestige.

COMPARISON BETWEEN THE INDIAN AND AMERICAN VICE PRESIDENTS

Aspect	Indian Vice President	American Vice President
Constitutional Basis	Articles 63–71 of the Indian Constitution	Article II & Amendments XII, XX, XXV of the US Constitution
Election	Indirectly elected by an Electoral College (both Houses of Parliament) through STV system	Elected along with the President on a joint ticket by the US Electoral College
Eligibility	Must be eligible to be a Rajya Sabha member (Indian citizen, 35 years, other conditions)	Must be a natural-born US citizen, 35 years old, with 14 years of residency
Role in Legislature	Ex officio Chairman of the Rajya Sabha (Upper House)	President of the Senate votes in case of a tie
Role in Executive	No direct executive powers; acts as President only in case of vacancy	Part of the Executive branch; member of the Cabinet, National Security Council, senior-most after the President

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Succession to Presidency	Becomes Acting President for max 6 months until a new President is elected	Becomes President immediately on death/ resignation/removal of the President (25th Amendment)
Removal	Removed by a Rajya Sabha resolution with Lok Sabha concurrence	Removed by Impeachment (same as President)
Tenure	5 years, re-eligible any number of times	4 years, usually two terms if re-elected with President
Visibility in Politics	Largely ceremonial, limited outside Parliament (exceptions: Dr. Radhakrishnan, Hamid Ansari)	Highly political, often seen as a future Presidential candidate (e.g., Joe Biden, Kamala Harris)
Salary	Salary as Chairman of Rajya Sabha (₹4,00,000/month)	Salary as Executive Officer (~$235,000/year)

CONSTITUTIONAL PROVISIONS RELATED TO THE VICE PRESIDENT OF INDIA

Aspect	Details
Article 66 – Qualifications	Must be a citizen of India, at least 35 years old, not holding any office of profit, and eligible for Rajya Sabha membership
Article 66 – Electoral College	Elected by an Electoral College consisting of all Members of Parliament (Lok Sabha + Rajya Sabha, both elected & nominated)
Article 66 & Vice Presidential/ Presidential Elections Act, 1952 – Election System	Elected by proportional representation using the single transferable vote and secret ballot; Nomination requires 20 proposers + 20 seconders; Security deposit: ₹15,000
Article 69 – Oath/Affirmation	Oath administered by the President; swears to bear allegiance to the Constitution of India
Article 67 – Term	Holds office for 5 years; eligible for re-election; continues until successor assumes office; in vacancy, Deputy Chairman of Rajya Sabha acts
Article 67 – Resignation	Can resign by writing to the President; effective upon acceptance; vacancy must be filled as soon as possible
Article 67(b) – Removal	Removed by a Rajya Sabha resolution (effective majority) + Lok Sabha concurrence (simple majority); 14 days prior notice required; no grounds specified
Article 71(1) – Election Disputes	All disputes regarding the VP election are decided by the Supreme Court; petitions must be filed within 30 days
Salary & Perks	Receives ₹4,00,000/month as Chairman of Rajya Sabha; entitled to free residence, medical facilities, travel allowances; pension of 50% of salary
Articles 66 & 89 – Role in Parliament	VP acts as ex officio Chairman of Rajya Sabha; cannot hold both Vice President and Chairman of Rajya Sabha roles separately—it is a combined function

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PROCESS OF ELECTION OF THE VICE PRESIDENT OF INDIA

Step	Details
1. Notification of Election	Issued by the Election Commission of India under the Vice Presidential Elections Act, 1952, about 60 days before the expiry of the term.
2. Filing of Nominations	Candidate files nomination (Form-3). • Requires 20 proposers & 20 seconders from MPs. • Security deposit: ₹15,000. • Must attach a certified copy of the electoral roll entry.
3. Scrutiny of Nominations	The Returning Officer scrutinizes all nomination papers and accepts/rejects them based on legal validity.
4. Withdrawal of Candidature	Candidates can withdraw their candidature by the notified deadline (by submitting notice to the Returning Officer).
5. Voting (Secret Ballot)	• Voting takes place in Parliament House, New Delhi. • Electoral College: All MPs (Lok Sabha + Rajya Sabha, including nominated members). • System: Proportional Representation by Single Transferable Vote (STV). • MPs mark preferences (1,2,3…) on pink ballot papers.
6. Counting of Votes	• First preference votes are counted. • Quota = (Total valid votes ÷ 2) + 1. • If no candidate meets quota: lowest candidate eliminated → votes redistributed to next preferences. • Process repeats until a candidate secures the quota.
7. Declaration of Result	• Candidate securing the quota is declared elected. • If only two candidates contest, the one with more votes after the first count wins.
8. Challenge to Election (Optional)	An election petition can be filed in the Supreme Court within 30 days of result declaration. The Court's decision is final.

VICE PRESIDENT OF INDIA: ROLE, IMPORTANCE & ISSUES WAY FORWARD: ROLE

Main Points	Example
Ex officio Chairman of Rajya Sabha (Art. 64)	2023: VP Jagdeep Dhankhar suspended AAP MP Sanjay Singh for repeated disruptions
Acting President of India (Art. 65)	1969: V.V. Giri became Acting President after Zakir Hussain's sudden death

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Neutral Moderator in Parliament	1952: Dr. S. Radhakrishnan as the first VP, calmed heated debates in the Rajya Sabha during refugee rehabilitation issues
Custodian of Parliamentary Conventions	2005: VP Bhairon Singh Shekhawat prevented misuse of Question Hour by insisting on discipline
Bridge Between States and Union	1998–2002: VP Krishan Kant actively engaged states on river water disputes like the Krishna–Godavari

IMPORTANCE

Main Points	Example
Ensures Continuity of Governance	1977: VP B.D. Jatti acted as President after Fakhruddin Ali Ahmed's death until the new elections
Strengthens Parliamentary Democracy	2013: VP Hamid Ansari allowed an extended debate on the Lokpal Bill, ensuring consensus
Upholds Federal Balance	2023: VP Dhankhar defended the Rajya Sabha's role against allegations of the Centre overriding states
Acts Above Party Politics	1950s: Radhakrishnan, as VP, kept the Rajya Sabha above Congress party politics despite being nominated by them
Safeguards Constitutional Morality	2000: VP Krishan Kant openly supported anti-corruption debates before the Tehelka scam revelations

ISSUES / CHALLENGES

Main Points	Incident / Example
Frequent Disruptions in the Rajya Sabha	2018: VP Venkaiah Naidu said "the nation is losing lakhs per hour" due to washouts
Perceived Political Bias	2022: VP Jagdeep Dhankhar strongly criticized the SC judgment on NJAC, seen as partial
Limited Role in Executive Functioning	1977: B.D. Jatti, as Acting President, had to sign on the cabinet's advice during the political turmoil (Emergency aftermath)
Weakening Deliberative Standards	2017: Hamid Ansari, in his farewell speech, lamented rising intolerance & falling debate quality
No Clear Succession Mechanism	2002: VP Krishan Kant's sudden death led to a 2-month vacancy before Bhairon Singh Shekhawat's election

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WAY FORWARD TO MAKE VP'S ROLE MORE VISIBLE

Way Forward	Incident / Example
Strengthen Parliamentary Functioning by ensuring decorum in Rajya Sabha	2018: VP Venkaiah Naidu expelled 245 MPs for disruptions, sending a message for discipline
Institutionalize VP's outreach to states and universities (build national consensus)	1952–1962: VP Dr. Radhakrishnan regularly addressed universities, strengthening the intellectual-political bridge
Regular Public Engagements & Policy Advocacy	2017–2022: Hamid Ansari held discussions on minority rights & democracy, though debated, kept VP's voice in public sphere
Promote Research & Capacity Building through Rajya Sabha Secretariat	2023: VP Dhankhar launched new digital archive of Rajya Sabha debates for public access
Clarify & Expand Role in Governance beyond Presiding Chair	1977: Acting President B.D. Jatti ensured continuity during political instability; similar clarity can help future crises
Strengthen Neutrality & Impartiality of Office	2002: VP Krishan Kant widely respected for impartial conduct, example to revive trust
Increase International Representation (soft diplomacy)	2006–2007: VP Hamid Ansari represented India in UN forums & NAM Summits, enhanced visibility
Leverage iGOT–Karmayogi & Digital Platforms for Public Awareness	2024: VP's office onboarded training modules on iGOT portal to spread awareness of Parliament's role

CONCLUSION

If the Vice President's office actively engages in parliamentary reforms, public discourse, federal dialogue, and international representation, it can evolve from being a "ceremonial backup" to a visible guardian of constitutional democracy

Prelims Questions

Q. With reference to the Vice President of India, consider the following statements:

1. The Vice President is elected by an Electoral College consisting of all Members of Parliament, both elected and nominated.
2. The Vice President serves as the ex officio Chairman of the Rajya Sabha.
3. In the event of a vacancy in the office of the President, the Vice President acts as President until a new President is elected.
4. The Vice President can be removed by impeachment in the same manner as the President.

Which of the statements given above are correct?

(a) 1, 2 and 3 only (b) 1 and 2 only
(c) 2 and 4 only (d) 1, 2, 3 and 4

Answer: (a)

Mains Questions

Q. "The office of the Vice President of India is often seen as ceremonial, but it plays a crucial role in ensuring parliamentary stability and constitutional continuity." Discuss the role, importance, challenges, and possible reforms to strengthen the visibility and effectiveness of the Vice President's office.

(250 words, 15 marks)

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