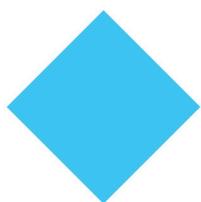


Building New India

Reform • Resilience • Transformation





Press Information Bureau
Government of India

Preface

India stands at a pivotal moment in its civilisational continuum, where legacy and aspiration intersect to shape a new development paradigm. The nation's global engagements reflect not merely diplomatic participation, but the confident articulation of a reform-driven, solutions-oriented India prepared to contribute meaningfully to international discourse. Guided by the enduring ideal of "*Sarve Bhavantu Sukhinah, Sarve Santu Niramayah*", may all be prosperous and free from illness, India's development philosophy places collective well-being at the centre of national progress and global well-being.

India's digital transformation represents a structural leap of historic proportions. Built upon population-scale Digital Public Infrastructure and interoperable platforms, the country has demonstrated that technology can function as a public good, enhancing governance efficiency, expanding financial inclusion, and delivering welfare with transparency and scale.

Manufacturing growth across electronics, automobiles, pharmaceuticals, and defence reflects a deliberate movement towards strategic self-reliance, "*Atmanirbharta*", without retreating from global interconnectedness.

Yet, the true measure of transformation lies in its human dimension. Universal health coverage and strengthened primary care networks, with special emphasis on empowering women, have reinforced the foundations of human capital. The rise of India's creative industries demonstrates how cultural capital is being organised into economic dynamism and global influence.

In rural landscapes and coastal communities, agriculture and allied sectors are being revitalised through technology infusion, infrastructure expansion, and market integration. Record output in foodgrains, dairy, fisheries, and horticulture signals a transition from subsistence to competitiveness.

Climate resilience, clean energy expansion, biodiversity conservation, and circular economy principles coexist with policy reforms that have opened space research and commercialisation to new actors and partnerships.

India's ascent is neither episodic nor rhetorical; it is structural, data-driven, and institutionally anchored. From grassroots entrepreneurship to digital identities serving over a billion citizens, from rural financial inclusion to strategic global partnerships, the arc of transformation is deliberate and cumulative.

As the nation advances toward the vision of Viksit Bharat 2047, its emerging identity is defined not solely by economic scale, but by its capacity to harmonise equity with excellence, resilience with reform, and national development with global responsibility.

In these unfolding chapters, India is not merely responding to change; it is shaping it, guided by the conviction that inclusive progress at home strengthens constructive leadership abroad.

Message

It gives me great pleasure to present this volume of PIB Backgrounders, titled “**Building New India: Reforms, Resilience, Transformation**”, which outlines India’s journey towards *Atmanirbharta*. Our development story today is not merely about accelerated growth or expanding economic indicators. It reflects a deeper national resolve, one anchored in inclusion, innovation, institutional strength, and above all, people.



India’s voice in the world is steady and assured. We do not stand at the margins of global conversations; we contribute solutions. We share scalable models of digital public infrastructure, social protection, and inclusive growth. We build partnerships rooted in trust and mutual respect. Our global engagement is shaped not only by ambition, but by responsibility.

Technology has evolved into a powerful public good. Governance has become more transparent and responsive, with services reaching the last mile. Innovation is not limited to laboratories or metropolitan hubs; it thrives in villages, startups, and classrooms.

Women are the protagonists and architects of progress. From grassroots entrepreneurs to frontier technologies, the transformation we witness today is cumulative, deliberate, and participatory. The journey towards the vision of Viksit Bharat 2047 demands collective resolve, informed dialogue, and sustained institutional commitment.

This volume captures that journey. It invites readers in India and across the world to witness a nation in motion, confident yet reflective, ambitious yet grounded.

My sincere appreciation to the Press Information Bureau for its meticulous efforts in consolidating data and analysing trends, culminating in a comprehensive, informative, and insightful work.

May this volume inspire dialogue. May it encourage thoughtful reflection. And may it reaffirm our shared belief that inclusive progress at home strengthens constructive leadership abroad.

Ashwini Vaishnaw
Minister of Information and Broadcasting
Government of India

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Building New India

Reform, Resilience, Transformation

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1

Advancing Self-Reliance and Export Resilience: India's Growing Global Footprint



Introduction

In the post-pandemic period, India has emerged as a fast-growing major economy, leveraging domestic strengths to navigate global uncertainties. The Economic Survey 2025-26 notes that **India's growth rates are "the envy of the world,"** backed by healthy banking system, credit intermediation, ample foreign reserves and a comfortable current account balance.

The global trade landscape has been undergoing adjustments as reflected in UNCTAD Trade Policy Uncertainty (TPU) Index and the Global Economic Policy Uncertainty (GEPU) Index in April 2025. At the same time, these developments have accelerated India's efforts to strengthen resilient supply chains, expand diversified trade and investment partnerships worldwide.

Against this backdrop, India has been able to pursue **targeted import substitution in critical sectors**, pairing it with an **export-oriented approach** to stay competitive over the long run.

Manufacturing Renaissance: Building Domestic Capabilities

India's quest for import substitution is powered by themes of *swadeshi and aatmanirbharta* and has translated into targeted policies across industries. The government has focused on sector-specific incentives, investments, and reforms in scaling domestic manufacturing capabilities. **Over the past decade, bold reforms and visionary policies like Make in India initiative and Production-Linked Initiatives have transformed the country into a global manufacturing hub.**

Highlights of Union Budget 2026-27

The **Union Budget 2026-27** places a sharp focus on **scaling domestic manufacturing in strategic and labour-intensive sectors**, thereby **strengthening export competitiveness and reducing critical import dependence**. The Government announced a wide range of measures spanning the services sector, manufacturing, Special Economic Zones (SEZs), infrastructure, ease of doing business, and sector-specific reforms.

Flagship initiatives include **Biopharma SHAKTI, the launch of India Semiconductor Mission 2.0, expansion of the Electronics Components Manufacturing Scheme, development of Rare Earth Corridors, establishment**

of Chemical Parks, and targeted support for capital goods and container manufacturing.

It proposes facilitation measures to enable customs duty reductions on **aviation parts, lithium-ion cell manufacturing, and parts for defence and civil aviation** that will help to lower manufacturing costs for engineering sub-segments such as aerospace components, electronics engineering, and energy storage hardware.

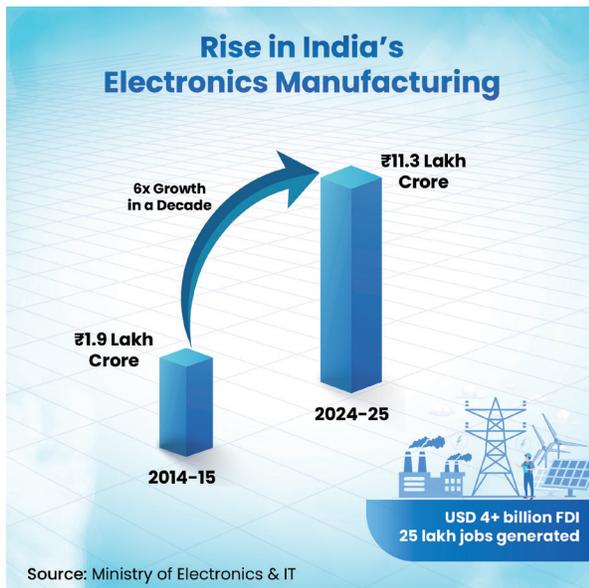
Electronics Success Story

A direct outcome of the import substitution efforts is clearly visible in the striking performance of India's electronics manufacturing. With a target of building a **\$500 billion domestic electronics ecosystem by 2030-31**, India is now firmly on track to become a global leader in electronic design, manufacturing, and exports.

- Electronics production in India rose

from **₹1.9 lakh crore in 2014-15** to **₹11.3 lakh crore in 2024-25**, nearly a six-fold increase.

- India has attracted over **USD 4 billion in FDI in electronics manufacturing since 2020-21**, reflecting rising global investor confidence.
- The electronics manufacturing sector has generated around **25 lakh jobs** in India over the last ten years.



Today, India is **one of the world's fastest-growing electronics manufacturers, particularly in mobile phones**. India has now achieved near self-reliance in mobile production, moving from importing most of its requirements a decade ago to manufacturing almost all devices domestically.

- Production in the mobile manufacturing segment has increased from **₹18,000 crore in 2014-15 to ₹5.45 lakh crore in 2024-25**, a 28-fold rise.

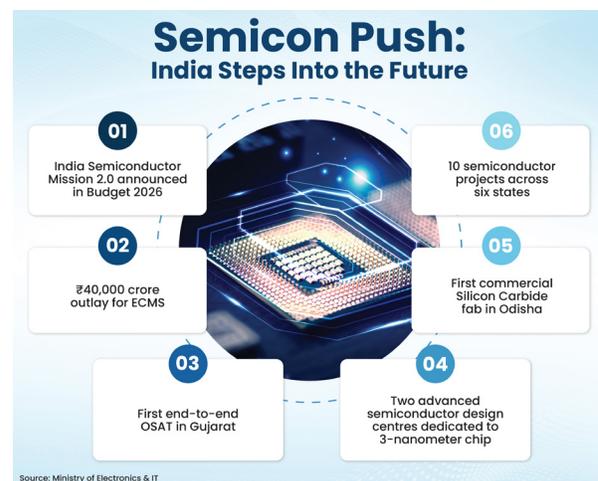
- India is now the **world's second-largest mobile phone manufacturer**, with more than 300 manufacturing units operating today compared to just two units in 2014.

A similar thrust is visible in other high-value sectors. **Semiconductors and electronics components** are critical areas where import substitution is strategically important, as seen during global chip shortages. Acknowledging this, **Budget 2026-27 announced the launch of India Semiconductor Mission 2.0** to produce equipment and materials, design full stack Indian IP, and fortify supply chains, alongside expanding the **Electronics Components Manufacturing Scheme** with an increased outlay of ₹40,000 crore.

In August 2025, India inaugurated one of its first end-to-end OSAT (Outsourced Semiconductor Assembly and Test) facilities in Sanand, Gujarat, strengthening the Atmanirbhar Bharat push in semiconductors. Earlier, in May

2025, two state-of-the-art semiconductor design facilities were inaugurated to focus on advanced 3-nanometer chip design, marking a significant milestone in the nation's semiconductor innovation journey.

India has also approved **10 semiconductor projects across six states**, including its first commercial Silicon Carbide fab in Odisha on the anvil and an advanced packaging unit, with **total investments of about ₹1.6 lakh crore**, further strengthening the country's position in the global semiconductor value chain.



Key initiatives to strengthen electronics manufacturing

- » Recognising that electronics manufacturing requires large capital investments, economies of scale, long gestation periods, access to advanced technologies, and a highly skilled workforce, **the Government has undertaken a series of strategic interventions to strengthen domestic capabilities and enable domestic firms to integrate more effectively into**

Global Value Chains (GVCs). To support this objective, **several targeted schemes have been launched** to strengthen domestic manufacturing and attract investments.

- » **Electronics Component Manufacturing Scheme (ECMS):** Notified in 2025 with an outlay of ₹22,919 crore, the scheme aims to **strengthen component manufacturing and integrate India's electronics industry with global value chains** through turnover-linked, capex, and hybrid incentives. With investment commitments already nearly double the initial target, the **Union Budget 2026-27 increased the outlay to ₹40,000 crore** to capitalise on this momentum.
- » **India Semiconductor Mission:** Approved in 2021 with an outlay of ₹76,000 crore, the India Semiconductor Mission (ISM) 1.0 provides up to **50% fiscal support for semiconductor fabrication, assembly, testing, and chip design.** Building on this, the **Union Budget FY 2026-27 provides ₹1,000 crore for ISM 2.0,** focusing on industry-led research, technology development, and skilled workforce creation.
- » Other key initiatives include the Production Linked Incentive (PLI) Scheme for Large Scale Electronics Manufacturing, PLI Scheme 2.0 for IT Hardware, Electronics Manufacturing Clusters (EMC and EMC 2.0) Scheme, Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS), and the Modified Programme for Development of Semiconductors and Display Manufacturing Ecosystem.

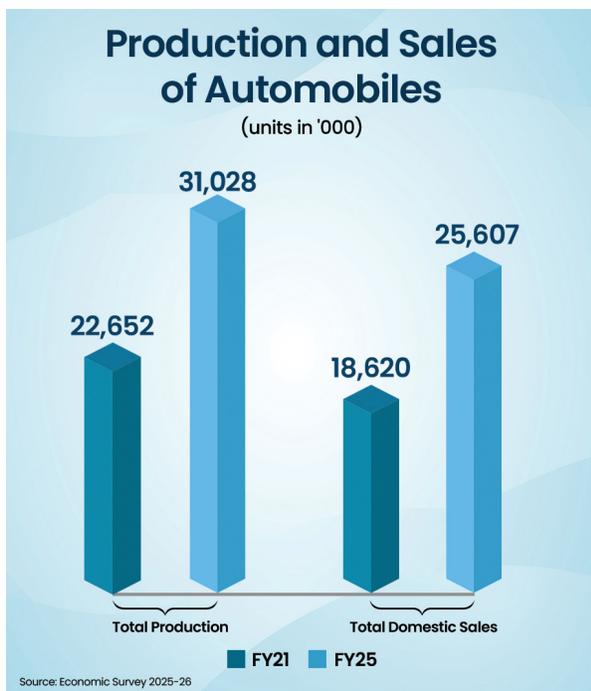
Automotive Industry on a Growth Drive

The automotive industry, including both vehicles and auto components, continues to be a key pillar of the economy owing to its significant contribution to economic growth, employment generation, and strong linkages with multiple sectors.

India has emerged as the **world's largest**

market for two-wheelers and three-wheelers, and the third-largest globally for passenger and commercial vehicles. Supported by a vast manufacturing and auto component ecosystem, the sector provides **direct and indirect employment to over 30 million people.**

Performance trends also reflect sustained growth: **total production increased from 22,652 thousand units in FY21 to 31,028**



thousand units in FY25, while domestic sales rose from 18,620 thousand units to 25,607 thousand units during the same period, reflecting strong growth and rising domestic demand. Overall, the industry has recorded nearly **33% growth in production over the last decade (FY15-FY25)**, accompanied by greater innovation

and technology adoption, along with increased localisation and value addition.

Leveraging “Pharmacy of the World”

India’s pharmaceutical industry is widely recognised for large-scale manufacturing of affordable medicines. Often referred to as the “**Pharmacy of the World**,” India plays a crucial role in ensuring access to cost-effective generic drugs while building strong domestic manufacturing capabilities. Today, India ranks as **the world’s third-largest pharmaceutical producer by volume and the eleventh**

INDIA’S RISE AS PHARMACY OF THE WORLD

- World’s 3rd largest producer by volume
- World’s 11th largest producer by value
- World’s 3rd largest producer of APIs

Source: Economic Survey 2025-26

Key initiatives to strengthen automobile industry

Over the past decade, policy reforms, targeted fiscal incentives, and infrastructure development have strengthened India’s position as a global automotive hub.

PLI Scheme for Automobile & Auto Components Industry: Approved in September 2021 with an outlay of ₹25,938 crore, the PLI-Auto Scheme promotes high-value Advanced Automotive Technology (AAT) vehicles and

products and has **attracted cumulative investments of ₹35,657 crore as of September 2025.**

PM E-DRIVE Scheme: Launched in September 2024 with an outlay of ₹10,900 crore, the scheme offers demand incentives for e-2W and e-3W while extending support to new categories such as e-trucks and e-ambulances, along with funding for charging infrastructure and upgrades to testing facilities.

Other key policy initiatives supporting this transformation include the PLI Scheme for Advanced Chemistry Cell (ACC) Battery Storage, the PM e-Bus Sewa-Payment Security Mechanism (PSM) Scheme, and the Scheme to Promote Manufacturing of Electric Passenger Cars in India (SMEC).

largest by value, with the sector recording an annual turnover of **₹4.72 lakh crore in FY25.**

In this context, given their **critical vulnerability and high strategic importance,** strengthening domestic manufacturing of Active Pharmaceutical Ingredients (APIs) has become a priority. India is already the **world's third-largest producer of APIs,** and domestic production has increasingly begun substituting imports.

Defence and Strategic Manufacturing: Atmanirbharta in Action

India's defence sector has witnessed a major shift towards self-reliance, ensuring that every procurement strengthens national industry, reduces import dependency, and enhances operational preparedness. **At least 65% of India's defence equipment is now manufactured domestically,** marking a significant shift from the earlier import dependence of nearly 65-70%.

Key initiatives to strengthen pharmaceuticals industry

This momentum is now being reinforced through initiatives aimed at strengthening supply chain resilience and domestic production.

PLI for Bulk Drugs: To mitigate reliance on imported Active Pharmaceutical

Ingredients (APIs), Key Starting Materials (KSMs), and Drug Intermediates, the **PLI scheme for Bulk Drugs has mobilised investments of ₹4,763 crore as of September 2025 and created an annual manufacturing capacity of 55,000 MT for 26 critical products**, with focus on fermentation-based synthesis for KSMs like Penicillin G Potassium.

PLI for Medical Devices: The Government launched the PLI Scheme for Promoting Domestic Manufacturing of Medical Devices in 2020, to promote indigenous manufacturing of medical devices. **As of September 2025, the scheme has attracted ₹1,093.69 crore in actual investment, and manufacturing of 57 high-end medical devices has started in the country.**

Global Integration of AYUSH: Efforts are underway to integrate India's AYUSH systems into the global health intervention framework. **The WHO Global vTraditional Medicine Centre established in Jamnagar serves as an international hub** for research, innovation, and policy dialogue on traditional medicine. **In May 2025, an MoU was also signed with WHO to develop the International Classification of Health Interventions module**, aimed at improving global acceptance and facilitating gradual integration of traditional medicine into public health systems.

Other key initiatives include the Strengthening of Pharmaceutical Industry (SPI) Scheme, the Scheme for Promotion of Bulk Drug Parks, the Scheme for Promotion of Medical Devices Parks, and the Strengthening of Medical Device Industry (SMDI) Scheme. As these schemes progress and production units become operational, **India is expected to achieve greater self-reliance and improved resilience in the supply of bulk drugs.**

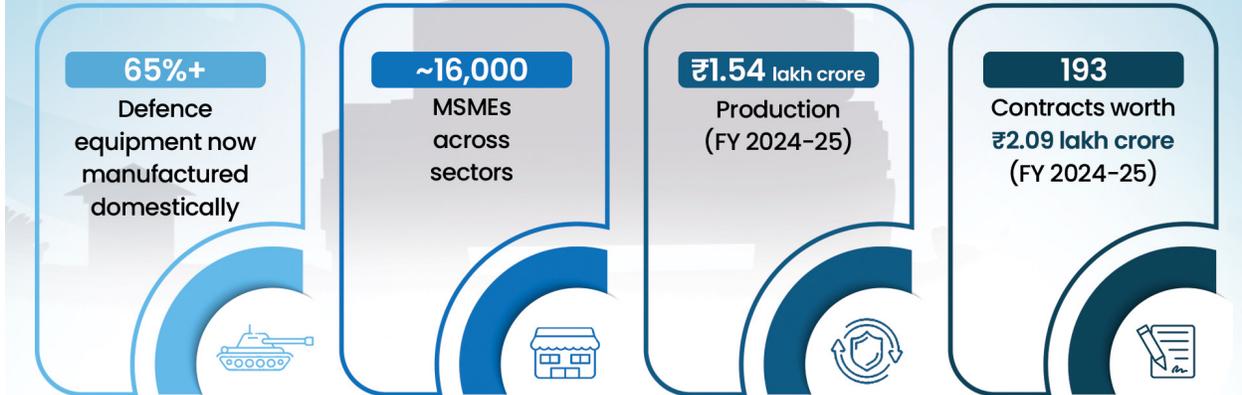
Indigenous defence production rose from ₹46,429 crore in FY 2014-15 to ₹1,27,434 crore in FY 2023-24, and further reached a record ₹1.54 lakh crore in FY 2024-25.

Reforms under Defence Acquisition Procedure (DAP) 2020 and Defence Procurement Manual (DPM) 2025 have ensured speed, transparency, innovation, and self-reliance across both capital and

revenue procurements. The government now targets **defence manufacturing worth ₹3 lakh crore and defence exports of ₹50,000 crore by 2029**, positioning India as a growing global defence manufacturing hub. To realise this vision, the Government has undertaken several measures, including:

Arming Growth

India's Defence Manufacturing Rise



Development of the **Uttar Pradesh Defence Industrial Corridor (UPDIC)** and **Tamil Nadu Defence Industrial Corridor (TNDIC)**, which together have attracted investments exceeding ₹9,145 crore, with 289 MoUs signed and potential investment opportunities worth ₹66,423 crore as of October 2025.

Strengthening defence innovation through **DRDO-led initiatives**, including a ₹500 crore corpus approved under the **Technology Development Fund (TDF)** for deep-tech and cutting-edge projects, along with **Technology Transfer programmes** and **15 Defence Industry-Academia Centres of Excellence (DIA-CoEs)** linking academia, start-ups, and industry.

Expanding **private sector and MSME participation**, with nearly **16,000 MSMEs** now contributing across areas such as drones and avionics, strengthening the defence manufacturing ecosystem.

Supporting domestic manufacturing through **liberalised FDI norms, PLI schemes, and defence industrial corridors**, creating opportunities for both domestic manufacturers and global investors.

Accelerating procurement momentum, with the **Ministry of Defence signing a record 193 contracts worth ₹2,09,050 crore in FY 2024-25**, the highest ever in a single financial year.

Together, these developments signal India's steady transition from a major defence importer to an emerging global hub for defence manufacturing and innovation.

Export Resilience and Diversification

While strengthening domestic production, India has simultaneously worked to ensure that its **exports remain robust**

and diversified. Recent data highlights this resilience: cumulative exports (merchandise & services) during April-January 2025-26 are estimated at USD 720.76 billion, up from USD 679.02 billion in April-January 2024-25, implying an estimated 6.15% growth. In a period marked by global uncertainties, this growth reflects India's resilience, with high-value commodities, widening global partnerships, and policy reforms supporting a more balanced and globally integrated trade trajectory.

A key aspect of resilience is export diversification. It helps navigate uncertain global trade environments, demand volatility, and supply chain disruptions. By expanding across products and markets, countries reduce overdependence on limited partners and build resilience against external shocks. Under UNCTAD's trade diversity indices for the Global South, India

ranks among the top five economies for the diversity of its traded products and among the top three for the diversity of its trade partnerships, reflecting a broad export basket and an increasingly wide range of trading relationships.

Merchandise Exports

On the product side, India's export basket is widening. In January 2025 (YoY), positive growth was recorded across multiple key categories:

Such broad-based growth signifies that multiple industries are pulling their weight. Some sectors have also shown remarkable growth over the years:

- **Petroleum Products:** India has witnessed a remarkable surge in petroleum product exports over the last decade. India is the seventh-largest

| | |
|-----------------------|---|
| Highest growth | Other cereals*(+88.49%), coffee (+36.03%), iron ore (+31.54%), meat, dairy & poultry (+17.92%), marine products (+13.29%), engineering goods (+10.37%) |
| Strong growth | Petroleum Products (+8.55%), Mica, Coal, Other Ores & Minerals Including Processed Minerals (+6.35%) |
| Steady growth | Man-Made Yarn/Fabrics/Made-Ups Etc. (+1.01%), Drugs & Pharmaceuticals (+0.96%), Electronic Goods (+0.32%), Cereal Preparations & Miscellaneous Processed Items (+1.12%), Fruits & Vegetables (+1.77%) |

*Other cereals include rye, barley, oats, fonio, quinoa, etc, and excludes wheat, rice, maize, and millet

exporter of refined petroleum products and ranks among the top five refining nations globally, due to its robust infrastructure and strategic geographic location.

- **Electronic Goods:** Electronics exports have climbed rapidly, rising from **seventh-largest export category in FY22 to the third-largest and fastest-growing in FY25**. This surge has continued in **first half of the financial year 2026**, with exports of **USD 22.2 billion**, putting the sector on track to become **India's second-largest export item**. Also, in the **first five months of 2025-26**, **smartphone exports touched ₹1 lakh crore**, a **55 per cent rise** over the same period last year.
- **Pharmaceuticals & Chemicals:** India currently ranks **11th globally in pharmaceutical exports** by value, with a 3% share and medical devices exports have grown significantly from **USD 2.5 billion in FY21 to USD 4.1 billion in FY25**.
- **Textiles:** India is the **6th largest global exporter of textiles and apparel**, with a share of about 4% in world exports in this segment. India's export of textiles and apparel (including Handicrafts) increased to **USD 37.75 billion in FY25**, up from **USD 35.87 billion in FY24**.
- **Automobiles:** The automobile industry is also seeing strong export growth. Overall automobile **exports increased from 4,131 thousand in FY21 to 5,357 thousand in FY25**. India shipped vehicles across passenger, commercial, two-wheeler, and three-wheeler segments, and exports recorded double-digit growth in the H1 of 2025-26, reflecting stronger global demand for India-made vehicles.
- **Defence:** India's defence exports have reached a record **₹23,622 crore in FY 2024-25**, compared to less than ₹1,000 crore in 2014. This growth has been accompanied by a widening global footprint, with **Indian defence products now exported to over 100 countries**, including the United States, France, and Armenia. Going forward, the government has set a target of **₹50,000 crore in defence exports by 2029**.

Rise in Trading Partners

- » India's continued efforts to negotiate trade agreements have helped diversify trade partnerships and bolster the economy amid external challenges. Over the last three years, India concluded **nine FTAs covering 38 countries**, expanding market access to an estimated **~70% of global GDP**, at mostly zero duty.
- » These agreements are widening opportunities for Indian goods and services, with more deals currently under negotiation. The objective is to spread trade ties across regions and reduce overdependence on any single market.

Strengthening India's Export Ecosystem through Institutional Support

Export Promotion Mission

To further strengthen export competitiveness, especially for MSMEs, first-time exporters and labour-intensive sectors, **the Government approved the Export Promotion Mission (EPM). With a total outlay of ₹25,060 crore for FY 2025-26 to FY 2030-31**, EPM aims to strengthen India's export ecosystem, improve access to affordable trade finance and enhance global market readiness and competitiveness across sectors and regions. It operates via two integrated sub-schemes- **Niryat Protsahan and Niryat Disha.**

EXPORT PROMOTION MISSION (EPM)

₹25,060 Crore

(Total Outlay)

6 years

(FY 2025-26 to FY 2030-31)

What it does

- Creates one unified export-support framework
- Delivers end-to-end digital processing via DGFT
- Targets MSMEs & labour-intensive sectors
- Prioritises tariff-hit sectors: textiles, leather, gems & jewellery, engineering, marine

Core Components

Niryat Protsahan

- Driving Trade Finance Access

Niryat Disha

- Expanding Holistic Market Access

Source: Ministry of Commerce & Industry

New interventions under the EPM

- 1. Support for Alternative Trade Instruments (Export Factoring):** This measure promotes export factoring as a cost-effective working capital solution for MSMEs. It provides 2.75% interest subvention on factoring costs through RBI/IFSCA-recognised entities, capped at ₹50 lakh per MSME annually, with digital claim processing for timely disbursement.
- 2. Credit Assistance for E-Commerce Exporters:** The intervention introduces structured credit with interest subvention and partial guarantees. The Direct E-Commerce Credit Facility offers up to ₹50 lakh with 90% guarantee coverage, while the Overseas Inventory Credit Facility provides up to ₹5 crore with 75% guarantee coverage. A 2.75% interest subvention is available, capped at ₹15 lakh annually per applicant.
- 3. Support for Emerging Export Opportunities:** This facilitates entry into new, high-risk markets via shared-risk and credit instruments, improving exporter confidence and liquidity.
- 4. Trade Regulations, Accreditation & Compliance Enablement (TRACE):** The measure aims to support exporters in meeting international testing, inspection, certification requirements. It reimburses 60% of eligible costs under the Positive List and 75% under the Priority Positive List, capped at ₹25 lakh per IEC annually.
- 5. Facilitating Logistics, Overseas Warehousing & Fulfilment (FLOW):** Enables access to overseas warehousing and fulfilment infrastructure, including e-commerce export hubs. Provides up to 30% of approved project cost for a maximum of three years, subject to prescribed ceilings and MSME norms.
- 6. Logistics Interventions for Freight & Transport (LIFT):** Offsets freight disadvantages in low export-intensity districts by reimbursing up to 30% of eligible freight costs, capped at ₹20 lakh per IEC per financial year.
- 7. Integrated Support for Trade Intelligence & Facilitation (INSIGHT):** This measure strengthens exporter capacity-building, district-level facilitation under Districts as Export Hubs, and trade intelligence systems. It offers up to 50% of project cost, and up to 100% for Central/State Government institutions and Indian Missions abroad, subject to notified ceilings.

professional services. During this period, the **services trade surplus also widened to an all-time high of USD 188.8 billion**. This strength has carried into FY26.

Services Exports

Services exports, India's core strength, have remained a steady growth engine even amid global uncertainty. **In FY25, services exports reached an all-time high of USD 387.5 billion, registering 13.6% (YoY) growth**, and reinforcing India's position as a global hub for technology, business, and

During **April-January 2025-26**, services exports are estimated at **USD 354.13 billion**, up from **USD 320.28 billion** a year earlier (+10.57%). Market diversification is also improving: while the US remains the largest export destination for India, **Europe's share rose from 30.8% to 32.8% between FY24 and FY25**.

Export Resilience & Diversification

Total exports at
USD 720.76 billion
(Apr-Jan 2025-26)

+6.15%
YoY Growth



Rise in Trading Partners

- > **9 FTAs** covering **38 countries** concluded over last 3 years
- > Market access to **~70%** of global GDP

Services Exports

- > **USD 354.13 Billion** in Apr-Jan 2025-26 (**+10.57% YoY**)

Merchandise Exports

- > **Electronics: 3rd** and fastest growing in FY25
- > **Pharmaceuticals & Chemicals: 11th** globally in pharmaceutical exports by value
- > **Textiles: 6th** largest global exporter of textiles and apparel

Source: Ministry of Commerce & Industry, Economic Survey 2025-26

Drivers of India's Services Exports

India's services export growth is being powered by the rapid expansion of **Global Capability Centres (GCCs)**, which grew at around a **7% CAGR from FY20 to FY25**, alongside sustained global demand for **software, BPM, consulting, and fintech** services.

Another key enabler is India's deep and diverse talent base. **Stanford's AI Index Report 2025** places India **second globally in AI skill penetration**. This advantage is reinforced by strong **physical and digital infrastructure**, combined with labour arbitrage, SEZ-based GCCs benefiting from tax holidays, and a vibrant startup ecosystem, bolstering India's cost competitiveness and efficiency.

Conclusion

India's experience demonstrates that **import substitution and export strength can move together** when approached strategically. Across sectors, from **mobile phones and medicines to automobiles and defence**, the push is to build in India not only for domestic needs, but for global markets. As local capacity expands and imports reliance falls, many industries also gain the scale to export more, strengthening the external sector.

Looking ahead to **Viksit Bharat 2047**, India's self-reliance will go hand in hand with deeper global integration. This will help expand **Made in India** products, create jobs, boost growth, and strengthen India's position as a global manufacturing and export hub..

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NITI Aayog

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2

India's Trade Partnerships Powering Global Integration and Growth



Introduction

India's role and share in global trade are poised for a major leap in line with the country's ambition and journey towards Viksit Bharat. **Over the past decades, India has significantly deepened its integration with global markets**, supported by strong export performance, resilient services trade, and an expanding network of trade partnerships, reflecting growing competitiveness and adaptability to changing global demand dynamics.

The country has not only increased its share in global trade but has also diversified

its trading partnerships. **According to UNCTAD's Trade and Development Report 2025, India ranks third among Global South economies in terms of the diversity index of trade partnerships.** With an index score higher than that of all countries in the Global North, India's trade ecosystem underscores resilience in the face of tariff uncertainties and emerging global challenges.

An expanding network of FTAs strengthens India's trade strategy by ensuring reliable market access. These agreements help reinforce the country's trajectory towards a stronger global trade presence by



supporting export-oriented firms expand production and integrate more deeply into global value chains.

India's Trade Partnerships Enter a New Phase in 2026

Bilateral and multilateral Free Trade Agreements (FTAs) constitute a key pillar of India's trade strategy, designed to expand trade and investment through enhanced market access, greater trade in services, reduction of non-tariff barriers, promotion of investment, and strengthened economic and technical cooperation. By leveraging trade complementarities, these agreements boost export potential, create new opportunities for industry and farmers, and generate employment across sectors.

India-EU Free Trade Agreement (FTA)

Hailed as the "Mother of All Deals," the conclusion of negotiations between India and the European Union Free Trade Agreement (FTA) in January 2026, marks a significant milestone in one of India's most strategic economic partnerships. Structured as a modern, rules-based trade framework, the agreement aims to address contemporary global economic challenges while enabling deeper market integration between the two major economies.

Increased Market Access: The agreement provides preferential access across 97% of EU tariff lines, covering 99.5% of trade

value, while preserving policy flexibility for sensitive sectors and supporting India's developmental priorities.

Immediate Duty Elimination: 70.4% of tariff lines, accounting for 90.7% of India's exports, will see immediate duty elimination, benefiting labour-intensive sectors such as textiles, leather and footwear, tea, coffee, spices, sports goods, toys, gems and jewellery, and selected marine products.

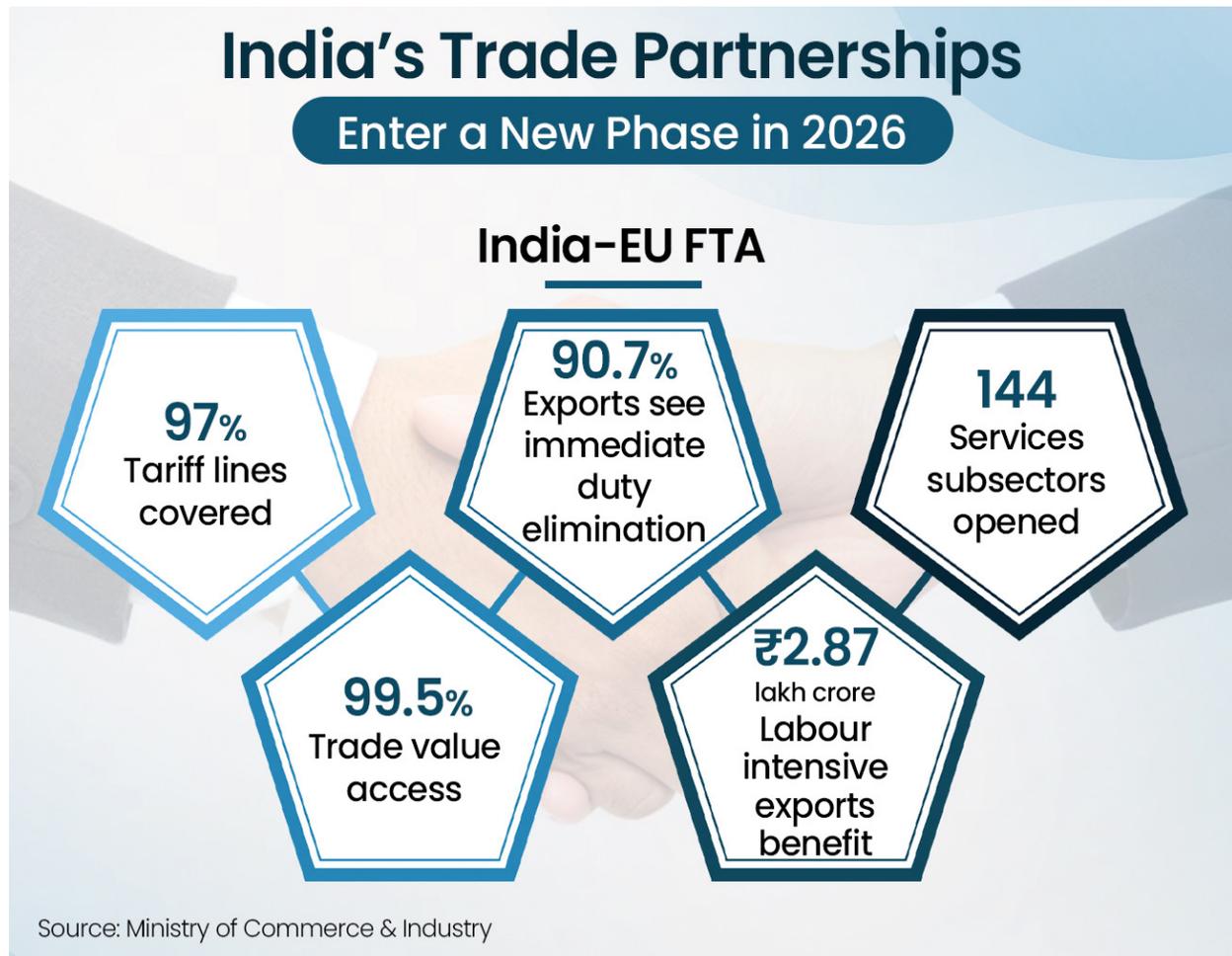
Phased Duty Elimination and Preferential Access: Zero duty over three to five years will apply to 20.3% of tariff lines covering 2.9% of exports, while 6.1% of tariff lines covering 6% of exports will receive preferential access through tariff reductions or tariff-rate quotas for products including processed foods, preserved vegetables, bakery items, cars, steel, and certain shrimp and prawn products.

Boost to Labour-intensive Industries: Labour-intensive industries such as textiles and apparel, marine products, leather and footwear, chemicals, plastics and rubber, sports goods, toys, gems, and jewellery, accounting for exports exceeding INR 2.87 lakh crore (USD 33 billion), will gain competitiveness, deeper integration into European value chains, and generate employment as duties move to zero.

Market Access in Services: The EU has extended commitments across

144 subsectors, including IT/ITeS, professional, education, and business services, providing Indian service providers

a stable environment to expand exports and support innovation, productivity and business growth across both economies.



India Protects what Matters

Carefully calibrated liberalisation under trade agreements is designed to support and propel initiatives such as Make in India. Accordingly, highly sensitive agricultural products along with dairy, meat, poultry and cereals continue to be fully safeguarded.

Advancing Trade Cooperation with Other Key Partnerships

In the fiscal year 2025-26, India advanced its trade engagement by concluding FTAs with the United Kingdom (UK), Oman and New Zealand marking a significant expansion of India's economic partnerships across key global markets. Alongside these new agreements, India has, over the past few years, operationalised several major trade pacts that continue to support export growth and investment flows.

India-Oman Comprehensive Economic Partnership Agreement (CEPA)

India signed a Comprehensive Economic Partnership Agreement (CEPA) with Oman in December 2025, marking a significant step in strengthening economic engagement with the Gulf region. The agreement opens new export opportunities for India's labour-intensive sectors- such as agriculture, textiles, leather, gems and jewellery, engineering, pharmaceuticals, and automobiles- supporting job creation and empowering artisans, women-led enterprises, and MSMEs.

Market Access for Goods: CEPA provides unprecedented market access for Indian goods, granting **zero-duty access on 98.08% of Oman's tariff lines, which**

Global Recognition and Market Access for Traditional Medicine and AYUSH

The agreement also marks the **first time any country has extended commitments on traditional medicine across all modes of supply**, creating significant opportunities for India's wellness and AYUSH sectors through a structured institutional framework supporting traditional medicine.

together account for 99.38% of India's exports by value.

Services and Mobility Commitments: Oman has, for the first time, offered commitments across key mode 4 categories, providing high-quality provisions for temporary entry and stay of intra-corporate transferees, contractual service suppliers, business visitors, and independent professionals.

India-New Zealand Free Trade Agreement (FTA)

Concluded in 2025, the India-New Zealand FTA stands out as one of India's fastest-concluded trade agreements, significantly strengthening economic

engagement between the two countries. The agreement enhances market access and tariff preferences for Indian exports to New Zealand while also positioning the partnership as a gateway to the wider Oceania and Pacific Island markets.

Increased Market Access for Farmers and MSMEs: Under the agreement, New Zealand has **eliminated duties on 100% of tariff lines, granting zero-duty access for all Indian exports from the date of entry into force.**

- Through an **Agricultural Productivity Partnership**, the agreement aims to support farmers, improve productivity, and integrate them into global value chains.
- Additionally, the agreement **boosts MSMEs and employment by providing zero-duty access for labour-intensive sectors** such as textiles, apparel, leather, footwear, gems and jewellery, engineering goods, and processed foods.

Investment and Workforce Opportunities: The FTA is also supported by an **investment commitment of USD 20 billion over 15 years**, strengthening long-term economic and strategic cooperation.

- It also opens **opportunities for India to emerge as a key provider of skilled workforce**, alongside future cooperation in areas such as AYUSH

and services including yoga instructors, Indian chefs, and music teachers, as well as priority sectors like IT, engineering, healthcare, education, and construction.

This cooperation is expected to create new opportunities for professionals and further strengthen economic ties between the two countries.

India-UK Comprehensive Economic and Trade Agreement (CETA)

India and the United Kingdom signed the Comprehensive Economic and Trade Agreement (CETA) in 2025, marking a major milestone in their long-standing economic partnership. Bilateral trade between the two countries has already reached USD 56 billion, with **both sides aiming to double this level by 2030.** The

Eased Mobility for Indian Professionals in the UK

In a first-of-its-kind arrangement by the UK, the agreement eases mobility for professionals in areas such as IT, healthcare, finance, and education, enabling smoother entry for contractual service suppliers, business visitors, intra-corporate transferees, and independent professionals.

agreement is also expected to significantly boost India's agriculture and processed food exports, which are projected to grow by over 50% in the next three years.

Market Access for Goods: CETA grants unprecedented duty-free access to nearly 99% of India's exports to the UK, covering nearly 100% of the trade value and benefiting key sectors such as textiles, leather, marine products, gems and jewellery, engineering goods, chemicals, and auto components.

Social Security Benefits: Another major achievement under the agreement is the **Double Contribution Convention, which eliminates the need for dual social security contributions**, resulting in estimated savings of over ₹4,000 crore for Indian companies and professionals working in the UK.

The agreement's comprehensive provisions

are expected to significantly expand market access, boost exports and investment, and deepen economic cooperation between India and the UK in the years ahead.

India-European Free Trade Association (EFTA) Trade and Economic Partnership Agreement (TEPA)

The India-European Free Trade Association (EFTA) Trade and Economic Partnership Agreement (TEPA), signed in 2024 and effective from October 2025, marked the first FTA signed by India to incorporate commitments directly linked to investment flows and job creation.

Market Access for Goods: The EFTA countries have offered market access covering 92.2% of tariff lines, accounting for 99.6% of India's exports, including 100% coverage of non-agricultural products along with tariff concessions on processed agricultural products (PAP).



Services Cooperation: The agreement will also strengthen cooperation in services by opening new opportunities for Indian service providers in sectors such as IT, business services, education, cultural and recreational services, and audio-visual services.

Investment and Employment Commitments: A distinctive feature of the agreement is the investment commitment to increase foreign direct investment (FDI) into India by USD 50 billion within 10 years of the agreement's entry into force and an additional USD 50 billion in the subsequent five years, amounting to a total of USD 100 billion over 15 years.

- These investments are expected to **generate 1 million direct jobs in India.** Importantly, this commitment excludes foreign portfolio investment (FPI), ensuring that flows are directed toward long-term productive investments that build domestic capacity.

Through expanded market access, strengthened services cooperation, and investment-led growth commitments, TEPA is expected to significantly deepen India's trade and investment ties with EFTA economies while creating new opportunities for exporters, businesses, and workers.

India-UAE Comprehensive Economic Partnership Agreement (India-UAE CEPA)

Signed in 2022, the India-UAE Comprehensive Economic Partnership Agreement (CEPA) marked India's first such accord in the Middle East and North Africa (MENA) region, ushering in a new era of strategic economic cooperation between the two countries. The agreement was concluded with the **potential to raise bilateral trade to USD 100 billion over five years** while creating substantial employment and business opportunities in both economies.

Strong Trade Growth and Export Gains: The impact of the agreement is already visible in trade outcomes, with **bilateral trade surpassing USD 100 billion in FY 2024-25**, registering strong growth and reaffirming the UAE's position among India's key trading partners.

- In terms of India's exports, **non-oil exports reached USD 27.4 billion in FY 2023-24 recording an average growth of 25.6%** since entering into force of CEPA.
- At the sectoral level, electrical machinery and equipment, light & medium high technology goods like boilers, generators and reactors and organic & in-organic chemicals have been major achievers.
- **Smartphones have also emerged as a major item of export with shipments valued USD 2.57 billion bound for the UAE during FY 2023-24.**

The CEPA has strengthened economic partnership and diplomacy between the two countries by empowering MSMEs, supporting job creation, and creating new business opportunities. Both nations are committed to further enhance their economic partnership and leveraging the agreement to unlock greater trade and investment potential.

India-Australia Economic Cooperation & Trade Agreement (Ind-Aus ECTA)

The India-Australia Economic Cooperation and Trade Agreement (ECTA) signed in April 2022, marked India's first trade agreement with a developed economy in over a decade, signalling a renewed momentum in expanding partnerships with advanced markets. A key milestone was the signing of a Mutual Recognition Arrangement on organic products, which facilitates smoother trade and reduces compliance costs for exporters.

Market Access and Tariff Liberalisation: The agreement covers almost all tariff lines traded between the two countries, granting India **preferential market access across 100% of Australian tariff lines**. Also, India has extended **preferential access to Australia across more than 70% of its tariff lines, particularly benefiting India's imports of raw materials and intermediate goods** such as coal and mineral ores.

Services Market Access: In services trade, **Australia has offered commitments across**

around 135 sub-sectors and granted Most Favoured Nation (MFN) treatment in 120 sub-sectors, covering key areas of interest to India such as IT, IT-enabled services, business services, health, education, and audio-visual services.

Extended Benefits for Indian Exports: From January 2026, Indian exports enjoy **zero-duty access across 100% Australian tariff lines**, opening new opportunities, especially for labour-intensive sectors.

Trade and Export Performance Gains: Over the past three years, the agreement has delivered sustained export growth, improved market access, and stronger supply-chain resilience, benefiting Indian exporters, MSMEs, farmers, and workers.

- **India's exports to Australia grew by 8% in FY 2024-25**, helping improve the bilateral trade balance, with strong gains across sectors such as manufacturing, chemicals, textiles, plastics, pharmaceuticals, petroleum products, and gems and jewellery.
- Agricultural exports also recorded broad-based growth, with notable increases in fruits and vegetables, marine products, spices, and particularly strong growth in coffee exports.
- Gems and jewellery exports continued their upward momentum, rising 16% during April-November 2025.

As negotiations progress towards a Comprehensive Economic Cooperation Agreement, the ECTA continues to anchor India-Australia economic engagement across the Indo-Pacific, strengthening trusted trade and shared prosperity.

Comprehensive Economic Cooperation and Partnership Agreement with Mauritius

India and Mauritius signed the Comprehensive Economic Cooperation and Partnership Agreement (CECPA) in 2021, marking India's first trade agreement with a country in Africa. The agreement establishes an institutional mechanism to strengthen bilateral trade and investment ties.

It provides preferential market access for over 300 Indian export products, including food and beverages, agricultural products, textile and textile articles, base metals and articles, electricals and electronic item, plastics and chemicals, and wood products. The agreement also opens significant opportunities in services, granting Indian service providers access to around 115 subsectors from the 11 broad service sectors such as professional services, computer related services, research & development, telecommunication, construction, education, financial, tourism & travel related, yoga, audio-visual services, transport services, etc. further deepening economic cooperation between the two countries.

India's Expanding Negotiation Agenda

Besides these concluded agreements, several major economies are currently engaged in active negotiations with India to deepen trade and investment ties through FTAs and comprehensive economic partnerships:

- In February 2026, India reached a framework understanding with the United States for an Interim Agreement aimed at promoting reciprocal and mutually beneficial trade. The framework reaffirms the countries' commitment to the broader US-India Bilateral Trade Agreement (BTA) negotiations, which will include additional market access commitments and support more resilient supply chains.
- India and Israel signed the Terms of Reference for a Free Trade Agreement (FTA) in November 2025. Subsequently, the first round of FTA negotiations were concluded in February 2026, establishing a structured framework for discussions on identified areas to enhance trade and economic cooperation. The proposed agreement is expected to deepen cooperation in sectors such as fintech, agri-tech, artificial intelligence, quantum computing, machine learning, pharmaceuticals, space, and defence.

Domestic Enablers that Strengthen Export Competitiveness

Enhancement in export competitiveness increasingly depend on effective implementation in providing infrastructure, regulatory clarity, and administrative support needed for export-oriented businesses to grow.

Digital and Policy Support for Exporters: To enable the exporters to leverage the benefits of FTAs and preferential trade agreements, the tariff explorer service on the Trade Connect ePlatform provides information on tariff concessions available to eligible exports from the country. Furthermore, the **Export Promotion Mission (EPM)** establishes a comprehensive, flexible, and digitally driven framework for enhancing export initiatives.

Financial and Credit Support Measures: The government has also implemented the **Credit Guarantee Scheme for Exporters** to provide additional financial assistance to Indian exporters during periods of uncertainty, thereby ensuring liquidity, promoting business continuity, and creating opportunities to expand into new markets.

RBI Measures Supporting Exporters: The EPM's effectiveness is further reinforced by complementary steps announced by the Reserve Bank of India.

- These measures include a moratorium or deferment on payment of instalments for eligible borrowers, extension of export credit tenor up to 450 days for pre- and post-shipment credit disbursed till 31 March 2026, and flexibility for regulated entities to maintain liquidity by reducing margins or reassessing working capital limits.
- Under the Foreign Exchange Management (Export of Goods and Services) (Second Amendment) Regulations, 2025, **the period for realisation and repatriation of export proceeds has been extended from nine months to 15 months**, and the shipment period against advance payments has been increased from one year to three years.

Support under Union Budget 2026-27: The Union Budget 2026-27 outlines a range of measures aimed at further enhancing India's trade competitiveness.

- These include the removal of the existing value cap of ₹10 lakh per consignment on courier exports to facilitate smoother export operations.
- Duty-free imports of specified inputs have also been extended to cover leather or synthetic footwear and inputs used in processing seafood products for export.
- The time limit for export of final products has been extended from six months to one year for exporters of leather or textile garments and leather and synthetic footwear, providing greater operational flexibility.
- In addition, export cargo using electronic sealing will now be allowed clearance directly from factory premises to the ship, helping reduce logistics time and costs.

Together, these regulatory and fiscal measures provide an integrated framework of support to exporters, maintaining liquidity, protecting credit discipline and aligning with the EPM's goal of an enhanced export ecosystem.

- **Discussions for the ASEAN-India Trade in Goods Agreement (AITIGA) is also underway**, which holds potential to unleash the full economic potential of the member countries and further strengthen regional cooperation.
- **India and Mexico meetings have been centered on strengthening bilateral trade and investment relations**, with discussions focused on expanding trade, investment, expanding economic cooperation, fostering business collaborations, and exploring opportunities across diverse sectors.
- **With Canada, India continues discussions on a Comprehensive Economic Partnership Agreement, supported by agreed terms of reference.** The proposed agreement aims to raise bilateral trade to around \$50 billion by 2030 through tariff reductions and clearer frameworks for services and investment.

INDIA'S EXPANDING NEGOTIATION AGENDA



TRADE PARTNERSHIP PROGRESS IN 2026

- ▶ 1st round of negotiations for India-Israel FTA concluded (February 2026)
- ▶ India-Gulf Cooperation Council (GCC) Joint Statement signed (February 2026)

OTHER TRADE ENGAGEMENTS UNDER DISCUSSION

- ▶ India-USA BTA
- ▶ India-Canada CEPA
- ▶ ASEAN*-India TIGA#
- ▶ India-Mexico



*Association of Southeast Asian Nations
#Trade in Goods Agreement

Source: Ministry of Commerce & Industry

- **The Terms of Reference (ToR) for the India-GCC Free Trade Agreement (FTA) were signed in February 2026, followed by the signing of a Joint Statement formally launching negotiations for a comprehensive and mutually beneficial agreement.** The FTA will enable seamless flow of goods, and services and attract investments while expanding job opportunities and fostering food and energy security for the region, elevating deep economic ties.

The expanding network of concluded agreements and ongoing negotiations

reflects a broader shift in India's international economic engagement. Together, these partnerships position India to play a central role in shaping contemporary trade architectures anchored in mutual growth, resilience, and strategic trust.

Conclusion

India's trade partnerships in 2026 signal a decisive shift toward deeper global economic integration, supported by a broad network of modern and outcome-oriented trade agreements. Landmark agreement with the European Union,

alongside other strengthened partnerships, are expanding market access, boosting exports, attracting investment, and creating new employment opportunities across sectors. Complemented by domestic policy, financial, and regulatory measures to strengthen exporter competitiveness, India's trade ecosystem is becoming more resilient and globally integrated.

Together, these efforts position India as a trusted and dynamic partner in global trade, driving sustainable growth and shared prosperity in the years ahead.

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3

Policy Reforms That Transformed Business Environment



India: An Emerging Global Business Powerhouse

Over the past few years, India has emerged as one of the most attractive destinations not only for investments but also for doing business. Over a decade ago, the Government launched an ambitious program of regulatory reforms aimed at making it easier to do business in India.

With the launch of Ease of Doing Business (EoDB) initiatives and a wave of business-friendly reforms, India has now ushered in a new era of efficiency and opportunity. The country- and its vibrant community of young entrepreneurs- now stand empowered and ready to seize the advantages of this reformed, growth-oriented ecosystem. The Indian business ecosystem has strengthened and the same is witnessed by an approximate 27% increase in the number of active registered companies in just five years. It grew

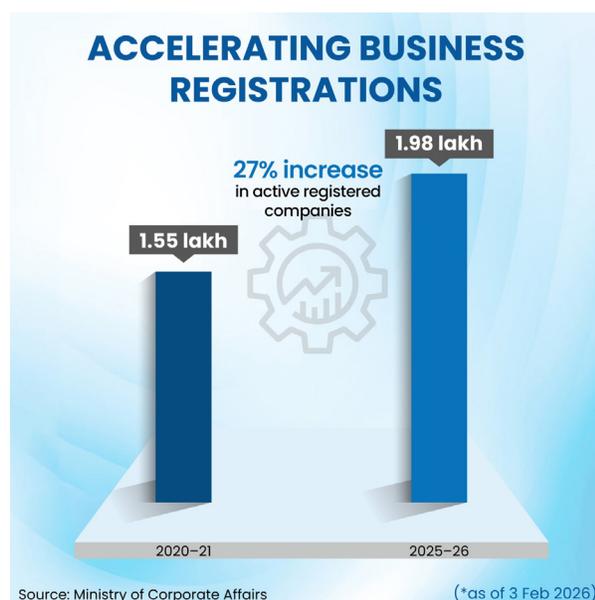
from 1.55 lakh in 2020–21 to 1.98 lakh in 2025–26 (as on 3 February 2026).

The RBI's Business Expectations Index, which has consistently stayed above the neutral benchmark of 100 through FY 2024-25 and into July to September (Q2) of the FY 2025-26, indicates positive sentiment regarding future output, employment, and investment. Together, these indicators reinforce the continued resilience of industry sentiment and reflect a business environment where firms remain confident about demand and growth prospects.

Government's Strategic Focus on Ease of Doing Business

EoDB is fundamental to fostering entrepreneurship, innovation, and wealth creation. Recognising this, the Government has made "improving the business environment" a strategic priority to attract investment, stimulate enterprise, and accelerate economic growth. By reforming regulatory and legislative frameworks, streamlining procedures, and removing redundant compliances, the Government aims to create a more transparent, efficient, and predictable ecosystem for businesses.

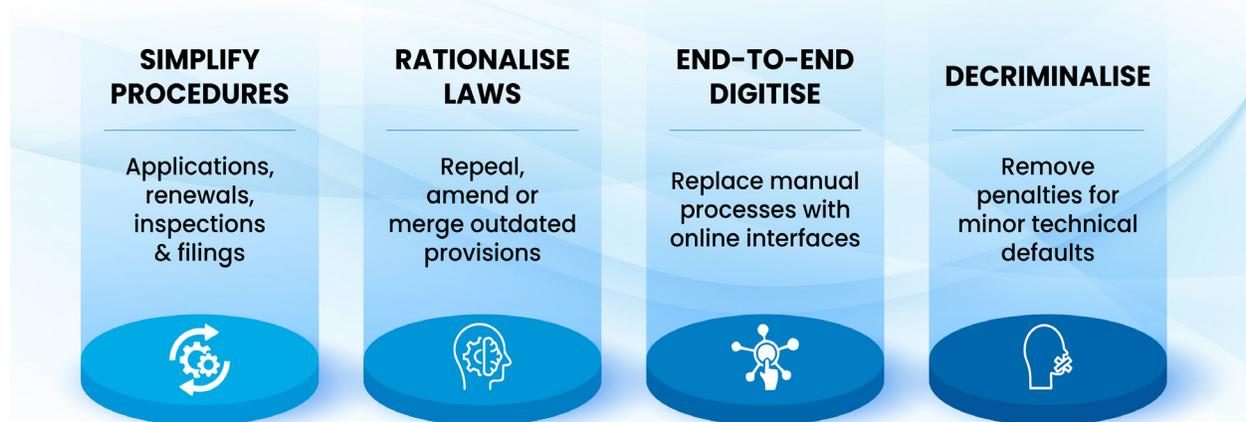
Today, EoDB stands as a central pillar of India's reform agenda. **The Union Budget 2026–27** further advances this vision through measures promoting digital



trade facilitation, tax certainty, reduced compliance and litigation, trust-based customs systems, and an investment-friendly tax regime. These sustained reforms strengthen investor confidence and reinforce India's position as an increasingly competitive and business-ready economy.

financial inclusion, boost innovation, accelerate MSME growth, and position India as a competitive global trade and investment hub.

FOCUS AREAS OF EoDB INITIATIVES



Source: Ministry of Commerce & Industry

Institutional Reforms Strengthening India's Business Ecosystem

India's reform-driven growth strategy is anchored in strengthening entrepreneurship, expanding access to finance, modernising regulatory frameworks, and enhancing trade facilitation. Through initiatives such as Startup India, credit guarantee schemes, digital credit assessment models, comprehensive insurance sector reforms, and integrated customs systems, the Government is creating a more transparent, technology-enabled, and investor-friendly ecosystem. Together, these measures not only improve EoDB but also deepen

Start-Up India

Under the Startup India initiative, eligible companies can obtain recognition as startups from the Department for Promotion of Industry and Internal Trade (DPIIT), enabling them to access a range of benefits including tax incentives, simplified compliance procedures, fast-tracked intellectual property rights (IPR) processing, and other regulatory support. The initiative seeks to build a robust and inclusive startup ecosystem that fosters innovation, drives sustainable economic growth, and generates large-scale employment opportunities across the country.

With over 2.16 lakh DPIIT-recognised startups as of February 2026, India stands firmly as one of the world's largest startup ecosystems. **Regulatory reforms for start-ups initiated since 2016 aim to enhance EoDB**, ease of raising capital and reduce compliance burden for the startup ecosystem.

Beyond Startup India, several initiatives have further strengthened India's startup ecosystem by promoting technological innovation, rural entrepreneurship, academic research, and regional inclusion. These initiatives ensure that startup support remains broad-based, decentralized, and closely aligned with national development priorities.

Credit Guarantee Scheme

Credit guarantee schemes enhance EoDB by providing collateral-free, or third-party guarantee-free, loans for MSMEs and startups. These schemes reduce risk for lenders, enabling easier access to finance for entrepreneurs, fostering innovation, and simplifying the overall business environment

Targeted Schemes:

- **Credit Guarantee Scheme for Micro & Small Enterprises (CGTMSE):** Facilitates credit guarantees for credit support of up to ₹10 crore to Micro and Small Enterprises (MSEs).
- **Credit Guarantee Scheme for Startups (CGSS):** Supports startups by providing

| Scheme | Ministry | Objective |
|---|--|--|
| Atal Innovation Mission (AIM) (2016) | NITI Aayog | Foster nationwide innovation culture |
| GENESIS (Gen-Next Support for Innovative Startups) (2022) | Ministry of Electronics & IT (Meity) | Deep-tech startups in Tier II/III cities |
| Technology Incubation and Development of Entrepreneurs (TIDE) 2.0 (2019) | Ministry of Electronics & IT (Meity) | ICT startup incubation & scale-up |
| MeitY Startup Hub (MSH) (2016) | Ministry of Electronics & IT (Meity) | Integrate tech startup ecosystem |
| NIDHI (National Initiative for Developing and Harnessing Innovations) (2016) | Department of Science & Technology (DST) | Support S&T startups from idea to market |
| Startup Village Entrepreneurship Programme (SVEP) (2015) | Ministry of Rural Development (DAY-NRLM) | Promote rural entrepreneurship |
| ASPIRE (Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship) (2015) | Ministry of MSME | Strengthen rural enterprise incubators |
| Prime Minister's Employment Generation Programme (PMEGP) (2008) | Ministry of MSME (KVIC) | Subsidised credit for self-employment |

credit guarantees; the revised framework has enhanced guarantee coverage, increasing the maximum limit from ₹10 crore to ₹20 crore per eligible borrower.

- **Credit Guarantee Scheme for Exporters (CGSE):** Additional collateral-free credit support of up to ₹20,000 crore to direct and indirect exporter MSMEs.

By facilitating, or speeding up, the loan approval process, these schemes also help reduce time and cost associated with accessing capital.

Credit Assessment Model (CAM)

The public sector banks (PSBs) have launched the **credit assessment model (CAM)** based on the digital footprints for MSMEs in 2025. This model aims at **leveraging digitally fetched and verifiable data** to enable **automated loan appraisal** for MSMEs, **utilising objective decisioning** for all loan applications and **model-based limit assessment** for both existing-to-bank and new-to-bank MSME borrowers.

Along with improving the EoDB for the MSMEs, this model also integrates the credit guarantee schemes, such as the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE). During the period 1st April to 30th November 2025, **over ₹3.2 lakh crore MSME loan applications**, amounting to **more than ₹41.5 thousand crore**, have been sanctioned by PSBs under the credit programmes of CAM.

Sabka Bima, Sabki Raksha Act, 2025

The Sabka Bima, Sabki Raksha (Amendment of Insurance Laws) Act, 2025 introduces comprehensive reforms by amending the Insurance Act, 1938, the Life Insurance Corporation Act, 1956, and Insurance Regulatory and Development Authority Act, 1999. The objective is to **strengthen policyholder protection, deepen insurance penetration, accelerate sectoral growth, and significantly improve EoDB.**

A key reform is the increase in the FDI limit to 100%, which is expected to attract new players, expand capital availability, and bridge the protection gap for individuals and businesses. The Act promotes EoDB through:

- One-time registration for insurance intermediaries to ensure seamless operations and better service continuity.
- Raising the IRDAI approval threshold for share transfers from 1% to 5%, simplifying compliance.
- Reducing the Net Owned Fund requirement for foreign reinsurers from ₹5,000 crore to ₹1,000 crore, encouraging greater reinsurance participation and capacity in India.

Trade and Investment Facilitation

To strengthen India's position as a competitive global trade and investment destination, the Government has provided measures aimed at streamlining cargo clearances, modernising customs processes, and enhancing investor access. These initiatives focus on digital integration, faster approvals, technology-driven risk management, and expanded investment avenues, creating a more efficient, transparent, and investor-friendly trade ecosystem.

- Single and interconnected digital window for cargo clearance approvals.
- For goods not having any compliance requirement, clearance will be done by Customs immediately after online registration is completed by the importer, subject to the payment of duty.
- Customs Integrated System (CIS) will be rolled out in 2 years as a single, integrated and scalable platform for all the customs processes.
- Utilization of non-intrusive scanning with advanced imaging and AI technology for risk assessment will be expanded in a phased manner with the objective to scan every container across all the major ports.
- Individual Persons Resident Outside

India (PROIs) will be permitted to invest in equity instruments of listed Indian companies through the Portfolio Investment Scheme (PIS). It is also proposed to increase the investment limit for an individual PROI under this scheme from 5% to 10%, with an overall investment individual PROIs to 24%, from the current 10%.

Regulatory Reforms Enhancing Ease of Doing Business

Parallel regulatory reforms have prioritised capacity-building, regulatory coherence, and a governance model rooted in trust and accountability to enhance Ease of Doing Business. Recent measures span financial markets, taxation, labour regulation, insolvency resolution, customs administration, quality standards, and compliance rationalisation. By consolidating laws, decriminalising minor offences, digitising processes, and strengthening transparency, these reforms reduce regulatory friction while preserving accountability. These coordinated measures reinforce regulatory certainty, encourage competition, and foster a more efficient and resilient business environment.

RBI's Master Directions

Reserve Bank of India (RBI) has **simplified and streamlined its regulatory framework by consolidating over 9,000 circulars and guidelines into 238 function-specific Master Directions** for different categories of regulated entities. In coordination with

National Bank for Agriculture and Rural Development (NABARD), instructions issued to Regional Rural Banks and cooperative banks have also been consolidated and simplified to ensure greater transparency.

With an aim to enhance accessibility and reduce compliance burden, a total of 9,446 circulars are being repealed, 3,809 have been consolidated into Master Circulars, and 5,673 identified as obsolete. This exercise improves clarity and enhances EoDB.

SEBI's move to simplify regulations and improve transparency

To enhance EoDB and **deepen capital markets**, Securities and Exchange Board of India (SEBI) has introduced measures to **simplify regulatory requirements and strengthen transparency**. It has **aligned the guidelines for issuance and listing of securitised debt instruments (SDIs) with the Reserve Bank of India's norms on securitisation of standard assets**, thereby ensuring **greater regulatory consistency, smoother compliance, and clearer processes for issuers**.

Rationalizing Penalty and Prosecution

To reduce compliance stress, the Government has introduced a series of measures aimed at **rationalising penalties, decriminalising minor defaults, and simplifying assessment and prosecution frameworks**—making the tax system more

transparent, predictable, and business-friendly.

- **Integrated assessment & penalty orders** with no interest on penalties during appeal; pre-deposit reduced from 20% to 10% (on core tax demand).
- **Updated returns allowed** even after reassessment, with an additional 10% tax.
- **Immunity from penalty & prosecution** extended from underreporting to misreporting, on payment of full tax and interest.
- **Decriminalisation** of non-production of books and TDS on payments in kind; minor offences to attract fines only.
- **Technical penalties rationalised** into fees.
- **Proportionate prosecution framework** with simple imprisonment to a maximum of 2 years, convertible to fine.
- **Retrospective immunity** (from 1.10.2024) for non-disclosure of foreign assets below ₹20 lakh.

Trust-based systems

The Government is focused on offering trust-based custom systems to enhance EoDB. In this regard, the Union Budget 2026-27 proposed to enhance the duty

deferral period for Tier 2 and Tier 3 Authorised Economic Operators (AEO), from 15 days to 30 days, to have better wharf to warehouse transit and **facilitate just-in-time manufacturing. The enhancement in the duty deferral period means extending the time allowed to pay customs or import duties after goods are imported, instead of paying them immediately.**

- Provided preferential treatment based on AEO accreditation in clearing their cargo.
- Trusted importers recognised in risk systems, minimising verification, while electronically sealed export cargo cleared factory-to-ship.

Deferred duty payment is a mechanism for delinking duty payment and Customs clearance. It is based on the principle 'Clear first-Pay later*'. The aim is to have a seamless wharf to warehouse transit in order to facilitate just-in-time manufacturing.

An **Authorised Economic Operator (AEO)** is a business entity involved in international movement of goods requiring compliance with provisions of the national Customs law and is approved by or on behalf of national administration in compliance with World Customs Organization (WCO) or equivalent supply chain security standards.

Other proposals include-

- Provided eligible manufacturer-importers the same duty deferral facility. This should encourage them to get themselves accredited as a full-fledged Tier 3- AEO in due course.
- For greater certainty and better business planning, the validity period of advance ruling, binding on Customs, extended from the present 3 years to 5 years.
- For non-compliance goods, trusted importer filings will automatically notify Customs for clearance, enabling immediate release on arrival.
- Customs warehousing framework to shift to operator-centric system with self-declarations, electronic tracking and risk-based audits, reducing delays and compliance costs.

Jan Vishwas Act

In order to further **strengthen a trust-based**

regulatory framework, the Government has undertaken significant decriminalization reforms. **The Jan Vishwas (Amendment of Provisions) Act, 2023 decriminalized 183 provisions across 42 Acts, thereby reducing criminal liability for minor and technical offences.**

Continuing these efforts, the **Jan Vishwas (Amendment of Provisions) Bill, 2025**, which comprises of 355 provisions, proposes amendments to 288 provisions for decriminalisation to promote EoDB and 67 provisions aims at enhancing Ease of Living. It reflects the Government's commitment to "**Minimum Government, Maximum Governance**" and is poised to boost sustainable economic growth and improved ease of doing business.

Insolvency and Bankruptcy Code (IBC), 2016

The **Insolvency and Bankruptcy Code (IBC)** has significantly **transformed India's insolvency framework by enabling timely resolution of financially distressed companies and improving recoveries for creditors.** By establishing a clear, structured, and time-bound process for corporate revival or liquidation, it has **enhanced transparency, strengthened creditor confidence, and fostered a more predictable business.**

The primary objective of the IBC is rescuing corporate debtors (CDs) in distress. Since inception till September 2025, a total of 3,865 CDs have been rescued, 1,300

through resolution plans, 1,342 through appeal, review or settlement, and 1,223 through withdrawal. As of 30 September 2025, creditors have realised ₹3.99 lakh crore under resolution plans. This is about 170% of the liquidation value and nearly 94% of the fair value (based on 1,177 cases). Overall, creditors have recovered more than 32% of their admitted claims.

By maximising the value of assets, promoting entrepreneurship, enhancing the availability of credit, and balancing the interests of all stakeholders, the Code has strengthened the **overall credit ecosystem and improved business confidence** in the country.

The Securities Markets Code, 2025 (SMC)

The SMC Code, 2025 replaces the Securities Contracts (Regulation) Act, 1956, the SEBI Act, 1992, and the Depositories Act, 1996, thereby **consolidating the uneven laws governing India's securities markets.** It spans subjects such as board composition, independence, conflict management, transparency, regulatory sandboxing, investor protection, governance of market infrastructure institutions, and EoDB.

Quality Control Orders

Quality Control Orders (QCOs), issued by various Ministries and Departments, play a crucial role in strengthening India's **quality ecosystem.** Their implementation supports India's ambition to expand its **share in**

global manufacturing by enforcing robust quality standards that enhance consumer safety, curb the circulation of sub-standard products, attract investment, and reduce the risk of accidents and loss of life. QCOs also enable early detection of product defects and malfunctions, benefiting both manufacturers and consumers through improved reliability and more rationalised costs.

To minimise compliance burdens and support EoDB—particularly for MSMEs—extensive consultations are held with industry bodies, sectoral associations, and other stakeholders during both the formulation and implementation stages.

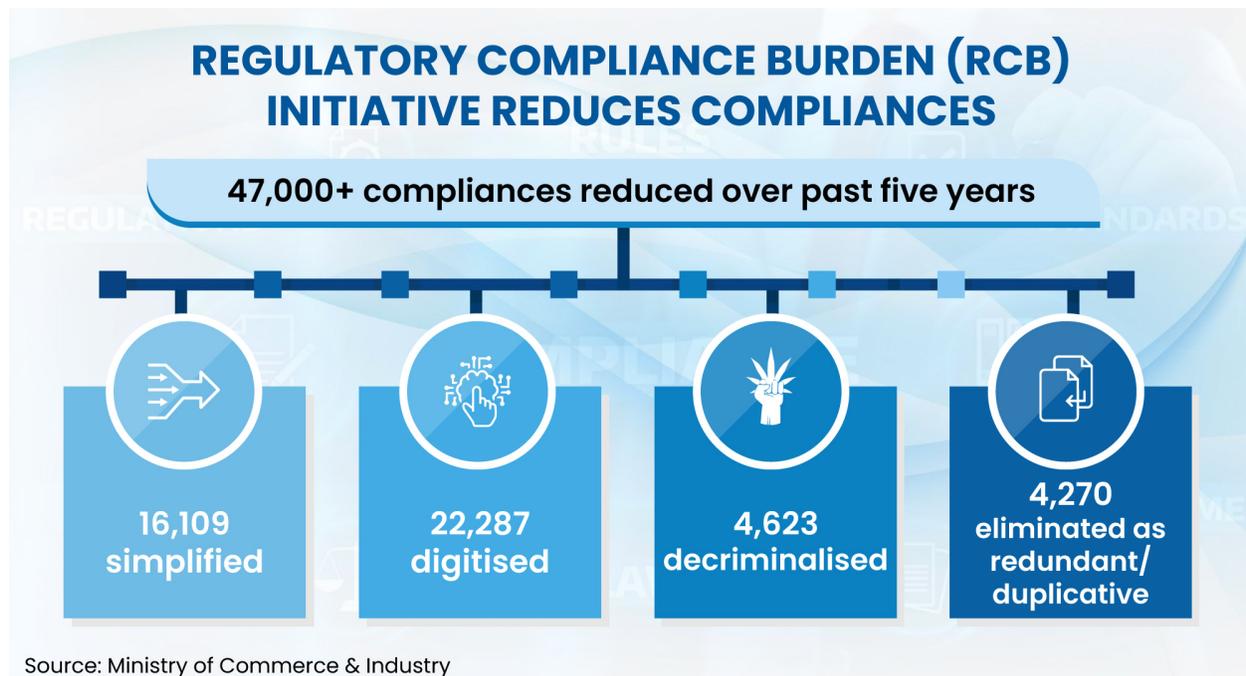
India has significantly expanded its mandatory quality assurance framework in recent years. As of 31 December 2025, 143 QCOs covering 723 products have been

notified—more than tripling the coverage from 214 products in 2019. This calibrated approach strengthens quality standards while balancing regulatory efficiency and business facilitation.

Regulatory Compliance Burden (RCB) Initiative

Launched in 2020, the RCB initiative seeks to ease regulatory pressures on businesses and citizens through a comprehensive self-review by Central Ministries, Departments, and States/UTs. Over the past five years, more than 47,000 compliances have been reduced.

Additionally, under the expanded RCB+ initiative, 4,846 compliances have already been reduced out of 6,262 identified across 23 State-implemented Acts, further advancing regulatory simplification.



Minimum Alternate Tax (MAT)

Minimum Alternate Tax (MAT) enhances the EoDB in India by creating a fair, transparent tax structure that ensures profitable companies pay a minimum tax. Recently, Significant rationalization measures have been proposed under the MAT framework in the Union Budget 2026-27.

Non-residents opting for presumptive taxation are proposed to be exempted from the applicability of MAT, thereby **reducing compliance burden and enhancing tax certainty**. **Buyback taxation is to be streamlined by taxing buybacks** in the hands of all shareholders as capital gains. Further, in the new tax regime, **set-off of available MAT credit is proposed to be permitted up to one-fourth of the tax liability**. Additionally, **MAT is proposed to be treated as a final tax**, with the rate reduced from 15% to 14%, aiming to **simplify the structure while maintaining revenue stability**.

Labour Reforms

The consolidation of 29 Central labour laws into four Labour Codes has significantly enhanced EoDB by simplifying compliance, reducing approval timelines, and providing greater operational flexibility, particularly for MSMEs.

- The Codes have prescribed a **30-day time limit for granting permission** for factory construction or expansion and

reduced the overall approval timeline from 90 days to 30 days.

- They simplify contract labour norms by **exempting contractors employing fewer than 50 workers from licensing**, and **introduced electronic single registration, a single return, and single all-India licences valid for five years** with deemed approvals.
- The Codes replaced six existing boards with a **single national tripartite board**, enabled **compounding of offences through graded monetary fines**, replaced **criminal penalties** with civil penalties, and mandated a 30-day notice period for compliance before legal action.
- They also **increased thresholds for lay-off, retrenchment, closure, and Standing Orders to 300 workers**, providing greater operational flexibility to establishments without prior approvals.

GST 2.0

GST reforms introduced in September 2025 strengthen EoDB by **simplifying tax slabs, reducing rates across key sectors, thus lowering tax incidence and improving price competitiveness**. The move towards a simplified two-rate structure lowers compliance and transaction costs, while rate rationalisation improves affordability and supports entrepreneurship.

The impact is reflected in the expansion of the tax base, with **registered taxpayers increasing from about 60 lakhs in 2017 to over 1.6 crore in January 2026**, indicating deeper formalisation. Further, **correction of inverted duty structures** in labour-intensive and agri-input sectors such as textiles and fertilisers has reduced costs and working capital pressures, easing business operations.

Conclusion

India's emergence as a **global business powerhouse** is anchored in sustained, structural reforms across taxation, regulation, finance, labour, trade, and investment. From compliance rationalisation and trust-based governance to digital trade systems and startup support, the reform momentum reflects a transparent, predictable, and growth-oriented ecosystem.

Rising enterprise registrations, strong business sentiment, expanding formalization, and improved credit access underscore the confidence of industry and investors alike. As India deepens its integration with global value chains and strengthens its policy framework, it is not merely **enhancing EoDB- it is shaping a resilient, competitive, and future-ready economic landscape.**

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Introduction

India has fundamentally reimagined its economic landscape by positioning **digital transformation as a vital engine for business growth**. As part of its sustained commitment to improving Ease of Doing Business (EoDB), the Government has undertaken extensive reforms and initiatives to simplify regulations, enhance transparency, and strengthen institutional efficiency across sectors. From seamless business registration to a real-time payment system, India's digital ecosystem ensures that organizations can navigate the entire business lifecycle, from entry to expansion, with unprecedented speed and ease. By harmonizing central and state-level reforms through integrated platforms, India offers a world-class gateway where data flows effortlessly across departments, reducing both time and cost of doing business.

The impact of these reforms is clearly reflected in India's growing investment inflows and enterprise expansion. As the nation continues to strengthen its digital trade and logistics frameworks, it reinforces its status as a secure, efficient, and highly lucrative destination for industries.

Business Registration & Regulatory Framework

India's advanced digital infrastructure makes business registration easy, fostering an environment that promotes ease of entry. By harmonizing central platforms **with state-led reforms**, India provides entrepreneurs and businessmen with an efficient, transparent, and reliable gateway to growth.

MCA21 Version 3

India's corporate landscape is being revolutionized by the **MCA21 Project**, a

India's High-Speed Business Entry Registration

MCA21
Version 3

SPICe+ Form

Udyam
Registration
Portal

Business
Reforms Action
Plan (BRAP)
and District
Reforms

forward-looking, AI-driven initiative that significantly enhances transparency and Ease of Doing Business. The platform is used for **end-to-end registry and incorporation related services of Companies & LLPs since 2006. MCA21 Version 3** integrates advanced features like **e-Scrutiny, e-adjudication and e-consultation, Compliance Management System and MCA Lab**. Additionally, MCA21 V3 have a cognitive chat bot enabled helpdesk, mobile apps, interactive user dashboards, enhanced user experience using UI/UX technologies, and effortless data dissemination through APIs.

Application Programming Interface

API acts like a bridge that enables different systems to talk to each other and work together. It allows softwares to connect, access data or use functions such as searching information, retrieving details, submitting data, updating records, or triggering actions.

In the last five years (2021-2025), a total of approximately **3.84 crore** filings have been made. And, the security and confidentiality of information submitted is ensured by adhering to **ISO 27001** standards and multi-factor authentication to verify the identity of users accessing the system.

ISO 27001 standards

ISO 27001 provides organizations of all sizes and sectors with a framework to establish, implement, maintain, and continually improve an Information Security Management System (ISMS). Compliance with ISO 27001 demonstrates that an organization has implemented a robust system to manage data security risks in line with internationally recognized best practices and standards.

Additionally, a helpdesk mechanism to address grievances related to the MCA21 portal has been established. During the FY 2025-26 (up to 31st Jan 2026) 3,16,877 helpdesk tickets were raised on the portal of which about 98%, were successfully resolved.

Udyam Registration Portal

India's **Udyam Registration Portal** epitomizes the Ease of Doing Business by offering a free, paperless, and **self-declaration-based system for MSMEs** (Micro, Small and Medium Enterprises). By efficiently **integrating with CBDT** (Central Board of Direct Taxes) and **GSTN** (GST Network) **databases**, it provides a fully digital, documentation-free experience that eliminates administrative hurdles.

As of 12th February 2026, Udyam Portal has facilitated over **7.71 crore registrations** and supported **33.97 crore jobs**.

Business Reforms Action Plan (BRAP) and District Reforms

Backed by a strong digital infrastructure, the Government has further strengthened EoDB reforms through the Business Reforms Action Plan (BRAP). BRAP was designed to compare regulatory requirements across States and encourage them to reduce compliance burdens and create a more business-friendly environment .

Since 2015, the Government has been implementing the BRAP to **promote transparency, simplify regulatory procedures, and enhance service delivery** across States and Union Territories. Till date, 7 editions of BRAP have been completed, and the eighth edition, BRAP 2026, was formally rolled out on 11 November 2025. To further deepen reforms at the grassroots, DPIIT has also launched the **District Business Reform Action Plan (D-BRAP) to strengthen EoDB at the District Level**. Following are some of the state specific achievements under BRAP:

| Achievements of States under BRAP | |
|-----------------------------------|---|
| Kerala | <ul style="list-style-type: none"> • Aspirer (score below 70%) under business and citizen centric reforms in BRAP 2022 survey and Fast Movers (score 70%-80%) in BRAP 2024 • Streamlined business registration • Digitised land and tax processes • Simplified environmental clearances, and advanced renewable energy adoption, carbon-neutral gram panchayats, and waterbody rejuvenation |
| Uttar Pradesh | <ul style="list-style-type: none"> • Aspirer in BRAP 2022 and 2024 survey • Excelled in Business Entry (15-minute registrations) • Labour Enablers (40% compliance reduction) • Land Administration (50% faster transactions) • Achieved 434 reforms across 25 areas |

| | |
|----------------|---|
| Tamil Nadu | <ul style="list-style-type: none"> • Aspirer in BRAP 2022 and 2024 survey • Introduced single-window • Digitised approvals alongside land reforms, while promoting solar parks, decarbonisation plans • Effective monitoring of industrial effluent treatment systems |
| Andhra Pradesh | <ul style="list-style-type: none"> • Aspirer under business and citizen centric reforms in BRAP 2022 survey and Fast Movers in BRAP 2024 • Implemented single-window industrial clearances • Online land registration • E-environmental approvals • Expanded its Online Consent Management & Monitoring System allowing firms to apply for consents and track approvals digitally |
| Madhya Pradesh | <ul style="list-style-type: none"> • Aspirer under business and citizen centric reforms in BRAP 2022 survey and Fast Movers in BRAP 2024 • Integrated with national portals • Simplified land allotment • Provide ready-built industrial facilities at nominal rates |

SPICe+ Form

SPICe+ Form, an integrated web form, offers 11 services by 3 Central Govt Ministries & Departments and 3 State Governments (Maharashtra, Karnataka, West Bengal) and NCT - Delhi. The form saves many procedures, time and cost for starting a business in India. It has consolidated 10 essential procedures - including

- Incorporation,
- DIN Allotment,
- Issue of PAN,
- Issue of TAN,
- Issue of ESIC Registration,
- Issue of EPFO Registration,
- Issue of Profession Tax Registration (Maharashtra, Karnataka And West Bengal), Bank Account Opening,
- Allotment of GSTIN (If So, Applied For) and

- First-Time Registration of Shops and Establishment for all new companies getting incorporated in Delhi.

This efficient system, featuring real-time data validation facilitates on-screen filing also for smooth incorporation of companies.

Integrated Clearance & Environmental Approvals

India has transformed its administrative framework by digitizing approvals at both central and state levels. Through unified single-window portals, businesses can navigate the regulatory journey electronically, ensuring unmatched transparency and operational speed.

National Single Window System (NSWS)

The NSWS is a digital platform which **guides in identifying and applying for approvals** according to the business requirements. It has emerged as a key reform initiative to streamline business approvals by reducing approval timelines, securing document repository and fast query management through a single digital gateway. It integrates approval processes across **32 Central Departments and 32 State Governments**, and has access over **698 central and 7435 state approvals**. NSWS has granted over **8,29,750 approvals**, since its launch.

The Government has also launched other single-window digital platforms that increase transparency, reduces cost and simplify compliance.

| Other Single Window Digital Platforms | |
|---|--|
| <p>PARIVESH (Pro-Active and Responsive facilitation by Interactive, Virtuous, and Environmental Single Window Hub) 3.0</p> | <p>For environmental clearances and post-approval compliance monitoring.</p> <p>It integrates baseline data, afforestation land banks, inter-ministerial dashboards, and AI-enabled support to enhance transparency, predictability, and efficiency.</p> |
| <p>e-Gram SWARAJ portal</p> | <p>Provides a single window with the complete Profile of the GP, including details of Sarpanch/Secretary, demography, finances, assets along with activities taken up through the Gram Panchayat Development Plan (GPDP).</p> <p>Serving as a unified reporting and tracking platform, it strengthens decentralised planning and improves the effectiveness of development fund utilisation.</p> |

Taxation, Customs & Trade Facilitation

India's digitized fiscal and trade infrastructure boosts business competitiveness by facilitating smoother goods movement and more efficient tax compliance. By transitioning approvals and tracking systems to high-speed digital gateways, the traditional bottlenecks have been removed leading to a transparent trade environment.

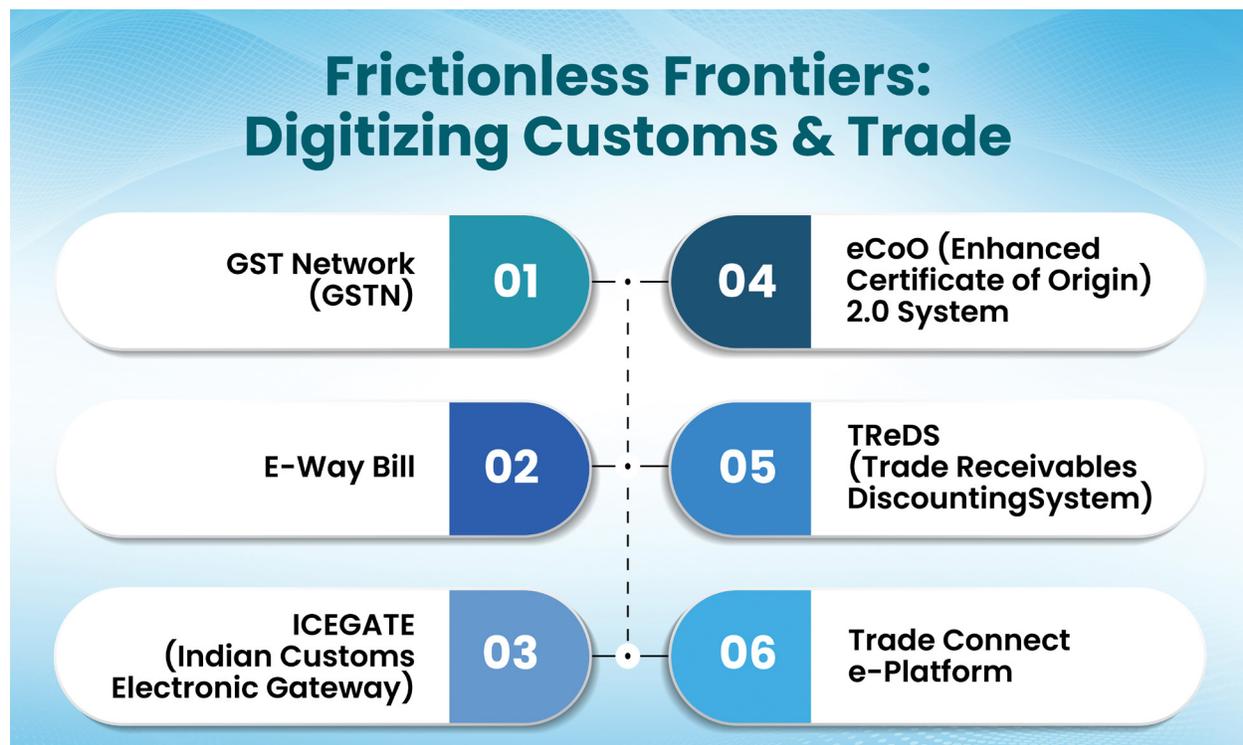
GST Network (GSTN)

GST (Goods and Service Tax) is the nation's largest ever indirect tax reform, which unified a diverse tax landscape into a single, streamlined system. Supported by its **digital backbone**, GSTN platform provides a synchronised interface for over

a crore of taxpayers, ensuring effortless B2B electronic invoicing. It handled the processing of over ₹102.91 lakh crore payments through the portal as of January 2026. This automated ecosystem fosters a transparent and efficient fiscal framework.

E-Way Bill

The **E-Way Bill** system has revolutionized logistics in India by replacing multiple state-level permits with a single, electronic document for the movement of goods. This reform has facilitated the removal of static border check posts, significantly reduced transport time and improved tax compliance. **E-way bill volumes grew by 21% year-on-year during April- December 2025** which indicates robust transaction momentum under GST.



ICEGATE (Indian Customs Electronic Gateway)

ICEGATE serves as a **centralized hub for all electronic interactions between Indian customs and the trading community**. It offers a range of services including e-filing, online amendment submission, online duty payment, query resolution, and Integrated Goods and Services Tax (IGST) refund processing for traders. The gateway significantly enhances the ease of doing business by **streamlining customs procedures and promoting transparency in cross-border trade**.

eCoO (Enhanced Certificate of Origin) 2.0 System

The eCoO 2.0 System is a digital upgrade that significantly enhances the Ease of Doing Business by **simplifying the certification process for exporters and trade efficiency**. With user-friendly features like multi-user access under a single IEC, Aadhaar-based e-signing, and an integrated dashboard for Free Trade Agreement (FTA) resources, the platform ensures continuous trade efficiency. By allowing easy online applications for “in-lieu” Certificate of Origin, the system provides a highly flexible and transparent environment.

TReDS (Trade Receivables Discounting System)

TReDS is an electronic platform that facilitates financing / discounting of trade

receivables of MSMEs through multiple financiers. These receivables can be due from corporates and other buyers, including Government Departments and Public Sector Undertakings (PSUs).

TReDS in Union Budget 2026-27

To enhance MSME liquidity, the Union Budget 2026-27 proposed mandating TReDS for Central Public Sector Enterprises's transaction settlements and introducing a credit guarantee mechanism for invoice discounting. Furthermore, linking GeM with TReDS facilitates quicker financing, while introducing TReDS receivables as asset-backed securities which will help develop a secondary market for enhanced transaction settlement.

Trade Connect e-Platform

Trade Connect e-Platform provides comprehensive international trade information and services to all exporters, including MSMEs, enabling them easy access to global markets. **It enables direct connections between global buyers and Indian exporters** with the help of Indian missions abroad. It is a **single engagement channel** for exporters to engage with government agencies and **demystifies international trade** through digital learning, information and trade intelligence on an

integrated platform. Currently, it has over 19.25 lakhs registered users with more than 28 lakhs certificate of origin issued (as on 12 February, 2026).

Logistics & Market Access

India's advanced digital infrastructure strengthens the business environment through integrated logistics coordination and expansive electronic market access. These centralized platforms ensure transparent end-to-end solutions and efficient supply chains, reinforcing the nation's commitment to superior Ease of Doing Business.

PM GatiShakti National Master Plan

Launched in **October 2021**, the **PM GatiShakti National Master Plan** is a transformative initiative for **integrated infrastructure planning** and **multimodal connectivity**. It brings together **57 Central Ministries** and all **States and Union Territories** on a **unified digital platform** with over **1,700 data layers** to enable **coordinated, data-driven project planning** and **execution of infrastructure projects**.

The **PM GatiShakti Public and Unified Geospatial Interface** provides **230 curated datasets** to private stakeholders, supporting more informed investment decisions and logistics planning strategies. So far, **27 States** have notified **State Logistics Policies**, and **28 Aspirational Districts** are using the **District Master**

Plan Module, with expansion to all **112 Aspirational Districts** in the near future.

PM GatiShakti institutionalises coordinated planning through the **Network Planning Group (NPG)**, ensuring **multimodal integration** and **last-mile connectivity** at the project stage. As of **February 2026**, the NPG has evaluated **352 projects** worth **₹16.10 lakh crore**; **201** have been **sanctioned**, out of which **167** are under **implementation**.

By enabling a **holistic assessment of transport corridors, logistics nodes, and economic zones**, the Plan reduces **project delays**, prevents **duplication of assets**, strengthens **multimodal freight movement** across the country, and enhances **Ease of Doing Business**.

National Logistics Portal (Marine)

The National Logistics Portal (Marine) is a **maritime single-window platform** that significantly bolsters the ease of doing business by providing **end-to-end logistics solutions for exporters, importers, and service providers**. This "open platform" aligns with global standards, integrating **G2G, G2B, and B2B models** to facilitate the well-connected exchange of documents and real-time tracking of vessel terminal gate, and container freight station (CFS) gate transactions. By enabling digital payments for CFS and shipping charges through a single-window certification device, India is strengthening digital entrepreneurship.

This integrated digital platform creates a robust ecosystem where multiple value-added services and innovative solutions can seamlessly build and operate.

Logistics Data Bank (LDB 2.0)

LDB 2.0 is a significant step towards India's journey of a digitally empowered economy. This enhanced platform provides critical real-time tracking and **multi-modal visibility across road, rail, and sea using container, truck, or trailer numbers, as well as railway FNRs through integration with Unified Logistics Interface Platform (ULIP) APIs.** This significantly strengthens the country's digital trade infrastructure.

By introducing **high-seas container tracking** and a live container heatmap to identify

bottlenecks, LDB 2.0 fosters a transparent, data-driven ecosystem that **reduces costs and improves supply chain management.** These advancements directly promote the EoDB, making India's logistics more efficient, and credible.

GeM (Government e-Marketplace)

GeM has grown into a **digital procurement system connecting sellers and service providers** across the country, including women entrepreneurs, startups, micro and small enterprises (MSEs), artisans, self-help groups (SHGs) and Divyangjans. GeM has recorded notable achievements, with 4 lakh crore+ order value in FY26 (till 12 February, 2026) and an order volume of 60 lakh+. From December 2021 to November 2025, **the module has facilitated auctions worth**



₹2,200+ crore, conducted over 13,000 auctions, welcomed 23,000+ registered bidders, and enabled participation from more than 17,000 auctioneers.

The platform has implemented **technology-driven procurement** processes for faster and more cost-effective transactions, expanded into new service verticals such as insurance, manpower and Mine Development & Operations (MDOs).

ONDC (Open Network for Digital Commerce)

ONDC is an initiative aiming at **promoting open networks** for all aspects of exchange of goods and services over digital or electronic networks. It envisions creating a level playing field for sellers, buyers, and service providers across India, particularly small and medium enterprises (MSMEs). By fostering **open protocols and reducing dependency on monopolistic platforms**, ONDC aims to catalyze innovation and inclusivity in the digital commerce landscape and thereby promotes ease of doing business. The sellers and service providers are spread across **616+ cities** expanding the geographical coverage of the ONDC network.

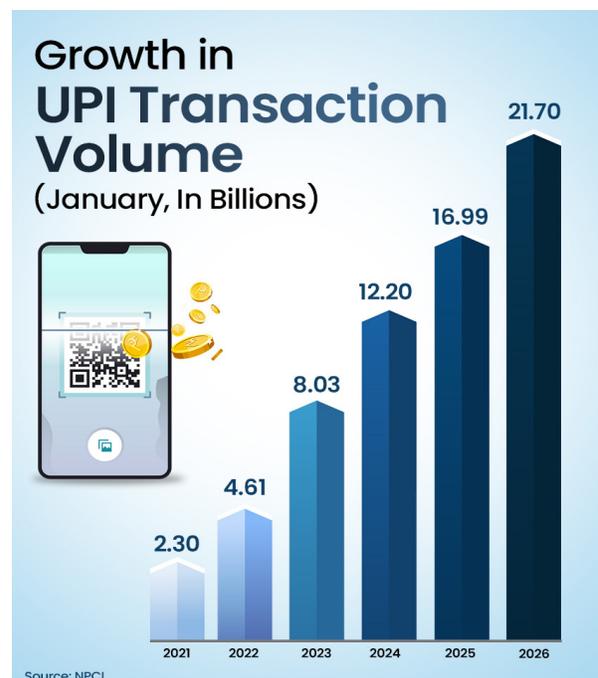
Digital Public Infrastructure

The Digital Public Infrastructure (DPI) in India **enables secure and co-ordinated interactions between people, businesses and governments.** This integrated

ecosystem dramatically reduces operational friction and enhances the Ease of Doing Business through instant, secure, and transparent digital interactions.

UPI (Unified Payments Interface)

UPI is a real-time payment system that enables instant money transfers between bank accounts through a mobile application. **UPI brings multiple bank accounts into a single app and supports various features** such as fund transfers, merchant payments, and peer-peer payment requests, making **digital transactions quick and convenient.** It promotes ease of doing business with safe and quick payments, ensuring privacy and provides QR code convenience. The system **connects 691 banks** on a single platform allowing people to make payments easily without worrying about which bank they use. **In January 2026 alone it handled 21.70 billion transaction**



International Recognition of UPI

- » **International Monetary Fund (IMF)** dated June 2025 had recognized Unified Payments Interface (UPI) as the world's largest retail fast-payment system (FPS) by transaction volume.
- » As per ACI Worldwide report on 'Prime Time for Real-Time' 2024, **UPI has around 49% share** in the global real-time payment system transaction volume.
- » It has **surpassed Visa** to take the lead in processing daily transactions.
- » **UPI is now live in over 8 countries**, including the UAE, Singapore, Bhutan, Nepal, Sri Lanka, France, Mauritius and Qatar, positioning India as a global leader in digital payments. Its growing international adoption is boosting remittances, promoting financial inclusion, and strengthening India's position in the global fintech landscape.

amounting to ₹ 28.33 lakh crore. UPI with other public digital infrastructure has reduced transaction and compliance costs.

cKYC (Central Know Your Customer) Registry

cKYC Registry is a centralized repository of KYC records of customers in the financial sector with uniform KYC norms and inter-usability of the KYC records across the sector. **The objective is to reduce the burden of producing KYC documents and getting those verified every time** when the customer creates a new relationship with a financial entity.

Entity Locker

EntityLocker is a flagship initiative designed

to empower organizations by **providing a secure, cloud-based platform for storing, sharing, and verifying digital documents and certificates**. Aligned with the goals of digital transformation, EntityLocker offers a **'Digital Empowerment' solution** that grants organizations access to authentic digital documents through their digital document wallet. This platform ensures safe, efficient, and streamlined document management for businesses and institutions.

API Setu

The API Setu is a **unified digital platform** that enables government departments, private organizations, startups, and developers to **discover, access, and integrate APIs with ease**. It empowers developers with everything they need to build, share,

and integrate APIs. It enables swift, transparent, safe and reliable information sharing across applications and promote innovation. It facilitates business friendly environment by promoting innovation through the availability of data from e-Governance applications and systems to the industry and public.

Conclusion

India's digital reforms have fundamentally transformed the business environment, making approvals, registration, and trade processes seamless and efficient. Enhanced transparency, faster compliance, and real-time data flow have strengthened organisations' confidence and operational ease. Robust digital infrastructure is fostering innovation, reducing costs, and enabling smooth interactions between businesses, citizens, and government. These initiatives collectively position India as a secure, efficient, and highly attractive destination for enterprise setup and growth.

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5

GST 2.0: A Simpler Tax System for a Stronger Economy



Introduction

The Goods and Services Tax (GST), introduced on 1st July 2017, stands as India's most significant indirect tax reform since Independence. By subsuming 17 different taxes and 13 cesses into one unified tax, **GST simplified compliance, and enhanced transparency.** Over the past eight years, the system has continuously evolved through introduction of different provisions and digitalisation, emerging as the backbone of India's indirect tax framework.

Building on this foundation, **the Next-Generation GST (GST 2.0) reforms, effective from 22nd September 2025** mark a decisive step toward making the tax system uncomplicated, fairer, and more growth-oriented. With a shift to a streamlined **two-slab structure of 5% and 18%**, while retaining a **40% rate on luxury and sin goods**, the reform retained the revenue balance. By rationalizing tax structures, reducing rates across key industries, and addressing long-standing anomalies, GST 2.0 seeks to strengthen Ease of Doing Business, support small traders and entrepreneurs, encourage job creation, and improve affordability for the common citizen.

GST and Ease of Doing Business

The Next-Generation GST reforms are

designed not just to reduce tax rates, but to create a cycle of growth.

Uncomplicated tax structure: GST 2.0 was introduced as One Nation, One Tax with simpler 2-tier structure (5% and 18%) which expanded the tax base.

Simplified and Digital Compliance: Smoother duty structures, faster processing of refunds, and digital compliance through e-invoicing and AI-driven risk detection, GST 2.0 simplifies compliance, improves transparency, reduces disputes, and transaction cost.

Easy registration and refunds: Easy registration for small and low-risk businesses, 90% upfront provisional refunds for exporters, simplifies the registration process through technology.

MSME & Manufacturing Boost: Rationalised rates and fixed inverted duty structures support MSMEs and manufacturers, lower input costs and working capital pressures, ease business operations, and encourage domestic value addition.

Unified National Taxation: System that eliminated cascading of taxes (tax on tax) and created a single national market with common rates and procedures, ensures that GST remains citizen-centric, business-friendly, and aligned with India's growth ambitions.

GST 2.0

Easier Business, Faster Growth

Uncomplicated Tax Structure
with simpler 2-tier structure

Simplified & Digital Compliance
with smoother duty structures, faster refunds,
e-invoicing and AI-driven risk detection

Easy Registration and Refunds for small and low-risk
businesses, including 90% upfront provisional refunds for
exporters

MSME & Manufacturing Boost with rationalised rates
and fixed inverted duty structures

Unified National Taxation eliminates cascading of
taxes (tax on tax) and created a single national market
with common rates and procedures



GST Growth Performance

GST's performance over the years reflects strong formalisation, steady revenue

growth, and expanding economic activity across the country.

Expansion of Tax Base: Registered GST taxpayer base has grown from about 60

GST: IMPACT SNAPSHOT



lakhs in 2017 to 1.5 crore in November 2025, reflecting greater formalization of the economy.

Record Revenue Growth: Gross GST revenue during April-December 2025 stood at ₹17.4 lakh crore, recording a YoY growth of 6.7%.

E-way bills generated: As on 31st January 2026, 723.84 crore e-way bills were generated indicating upward movement in the GST revenue.

GST 2.0 Structural Changes

Building on the streamlined tax regime, the reform introduced targeted rate rationalisation across key sectors of the economy. Sector-specific GST rationalisation (across construction,

automobiles, agriculture, textiles, leather, wood, packaging, and emerging technologies like drones) **lowers input costs, corrects inverted duty structures, and improves working capital efficiency.** Together, these changes strengthen Ease of Doing Business by **reducing compliance burdens, supporting MSMEs and young entrepreneurs,** enhancing affordability, and boosting domestic manufacturing and exports.

Here are some of the key changes in certain sectors which supports ease of doing business.

Home Building & Materials Industry

The cut in GST on cement and construction materials gives a big boost to the housing sector. This lowers the cost of homes and

infrastructure projects, making ownership of houses more affordable.

overall capital investment required. This, in turn, reduces freight rates per tonne-

| Product | GST Rationalisation | Impact |
|--|--------------------------------|--|
| Cement | Reduced from 28% to 18% | The cement industry is highly employment-intensive, spanning mining, logistics, manufacturing, and distribution. Increased demand due to lower prices is poised to boost job creation for the youth across cement plants, ancillary industries, and logistics. |
| Marble/travertine blocks, Granite blocks, Sand-lime bricks | Reduced from 12% to 5% | Lowers the costs of flooring, tiling, and interior finishing, directly benefiting homebuyers and infrastructure projects. |
| Bamboo flooring / joinery, packing cases & pallets (wood) | Reduced from 12% to 5% | Eases rural housing costs and supporting MSME running brick kilns. |

Automobile Sector

Lower GST on vehicles and auto components reduces production and logistics costs, improves demand predictability, and enhances working capital efficiency.

- **Commercial goods vehicles (Trucks, Delivery Vans) (From 28% to 18%)**

Trucks form the backbone of India's supply chain, **carrying nearly 65%–70% of goods traffic**. Lower GST on trucks reduces their upfront purchase cost, bringing down the

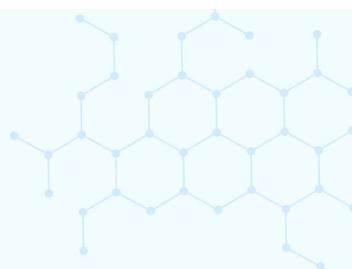
kilometre, making logistics more affordable and especially supporting India's young entrepreneurs by lowering entry and operating costs.

Reduction of **GST on third-party insurance of goods carriages (from 12% to 5% with ITC)** further complements these efforts.

Agriculture sector

Cheaper machinery and lower rates on bio-pesticides help small farmers reduce costs and encourage sustainable farming

GST REDUCTION In Agriculture



 Tractors (<1800 cc)
from 12% to 5%

 Ammonia, Sulphuric Acid, Nitric Acid
from 18% to 5%

 Tractor components
from 18% to 5%

 Bio-Pesticides & several
Micronutrients
from 12% to 5%

 Sprinklers, Drip Irrigation,
Harvesting Machinery
from 12% to 5%



practices. By reducing compliance burdens and enhancing affordability across the farm supply chain, these measures strengthen Ease of Doing Business in the agriculture and allied sectors.

- **GST on Tractors (<1800 cc) to come down to 5%**

Lower GST brings down the purchase price of tractors, making them more affordable for small and medium farmers who form the majority of tractor buyers in India.

- **GST on Tractor components reduced (18% to 5%)**

Tractor tyres and tubes, Hydraulic pumps for tractors, and many other tractor components also became cheaper which can lead to reduction in the cost of modern

farm equipment, making mechanisation affordable for small & marginal farmers.

- **Sprinklers, Drip Irrigation, Harvesting Machinery from 12% to 5%**

These cuts are expected to reduce the cost of farm equipment generally used by small and marginal farmers, making them more affordable. Consequently, this encourages adoption of water-saving irrigation (drip, sprinklers), supporting sustainable agriculture.

- **Ammonia, Sulphuric Acid, Nitric Acid (18% to 5% GST)**

These are the major raw materials for fertiliser production and the rate cut corrects inverted duty structure (IDS). The rate cut is likely to make the timely

availability of affordable fertilisers, directly aiding farmers during sowing seasons. It safeguards timely availability of affordable fertilisers, directly aiding farmers during sowing seasons.

- **Bio-Pesticides & several Micronutrients (12% to 5%)**

The rate cut aims to promote eco-friendly and sustainable farming practices by making bio-based inputs more affordable.

Leather and Footwear Industry

The leather and footwear sector is a key employer, directly benefitting the youth, in India, with a strong export base. GST rationalisation here are set to ease the burden on young manufacturers and makes products more accessible to the consumers.

GST has been reduced from 12% to 5% on chamois leather, composition leather with a basis of leather or leather fibre, and leather prepared after tanning or crusting.

GST on supply of job work in relation to hides, skins, and leather (falling under chapter 41) also cut from **12% to 5%**, reduces MSME production costs, encouraging young entrepreneurs.

Wood Industry

Agro-based and eco-friendly wood substitutes see lower taxation, thereby

encouraging sustainable manufacturing and MSME competitiveness. The rate cut is expected to support MSMEs in wood manufacturing and promote eco-friendly alternatives.

GST reduced from **12% to 5%** on **rice husk board, glassfibre reinforced gypsum board, cement bonded particle board, jute particle board, bagasse board, sisal fibre board, etc.** Sheets for veneering, bamboo flooring, casks, barrels, vats, tubs of wood are also included.

Textile Industry

The GST rationalisation in textiles is likely to remove structural anomalies, reduce costs, boost demand, support exports, and sustain jobs.

- **GST on man-made fibres (MMF) reduced from 18% to 5% and GST on man-made yarns cut from 12% to 5%.**

Many MMF producers are small and medium units; lower GST improves their cash flows and reduces cost burdens. The rate cut also makes Indian synthetic textiles more price-competitive, by reducing reliance on imports and boosting exports.

- **GST on ready-made apparel up to ₹2,500 per piece (earlier limit was ₹1,000) is set at 5%.**

A lower tax helps domestic brands and exporters compete effectively against

GST Reduction for Textile Industry

Man-made fibres (MMF)

from
18% to **5%**

Man-made yarns

from
12% to **5%**

GST on carpets and other floor covering

from
12% to **5%**

cheap imports in the low- and mid-price segments.

- **GST on carpets and other floor covering has also been reduced from 12% to 5%.**

The cut enhances the affordability in domestic markets and makes Indian carpets more competitive internationally, boosting a traditional sector with strong export potential.

GST Rationalisation for Reducing Packaging Costs

The GST on Packing paper, cases, cartons, boxes (of corrugated paper or non-corrugated paper or paper boards) and paper pulp moulded trays has been reduced to 5%.

The GST rationalisation on packaging material reduces the overall logistics and packaging cost, serving the dual purpose of making products cheaper for the customers and production cheaper for businesses.

This aims to provide relief to youth businesses and small manufacturers that are dependent on cost-effective packaging solutions.

Conclusion

The Next-Generation GST reforms mark an important step in strengthening India's indirect tax system through targeted rationalisation and sector-focused relief. By reducing rates, correcting inverted duty structures, and easing compliance, the reforms are designed to improve cost

GST Reforms for Promoting Drone Technology

Drones have emerged as transformative tools across sectors like **agriculture, defense, disaster management, and infrastructure development**. Recognizing their potential among the tech-savvy youth, the Indian government has intensified efforts to integrate drone technology into national development strategies. Working along the same lines, the **GST on unmanned aircraft (drones)** has been significantly **reduced from the earlier 18%/28% to a uniform 5% rate**. This rationalization aims to encourage wider adoption of drones across sectors while also boosting domestic manufacturing under the Make in India and Atmanirbhar Bharat initiatives. This policy is expected to unlock wide-ranging sectoral applications in agriculture, petroleum, mining, infrastructure, logistics, defence, and emergency response.

efficiency, enhance competitiveness, and support employment generation across key sectors of the economy.

With continued digital integration and policy refinement, GST is steadily evolving into a more responsive, transparent, and growth-supportive framework that aligns taxation with India's broader development priorities.

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6

Labour Reforms Strengthen Ease of Doing Business in India



Labour at the Core of India's Growth

With a workforce of over 56 crores, India stands on the cusp of a powerful demographic advantage. Labour market indicators reflect a resilient and steadily strengthening job ecosystem, marked by rising labour force participation, falling unemployment, and robust employment generation across both organised and unorganised sectors.

Did you know?

India working-age population (age group 15-59) is expected to exceed 98 crores in next 10 years.

To truly unlock this demographic dividend, the **Government is focused towards creating quality jobs that offer stability and sustainable livelihoods.** It is actively

Transforming Labour Governance: The Shift from 29 Laws to 4 Codes

Before - 29 existing labour laws
Now - Four Labour Codes

The Code on Wages, 2019

The Industrial Relations Code, 2020

The Code on Social Security, 2020

The Occupational Safety, Health and Working Conditions Code, 2020



advancing this agenda through structural reforms and targeted interventions aimed at fostering decent and inclusive employment.

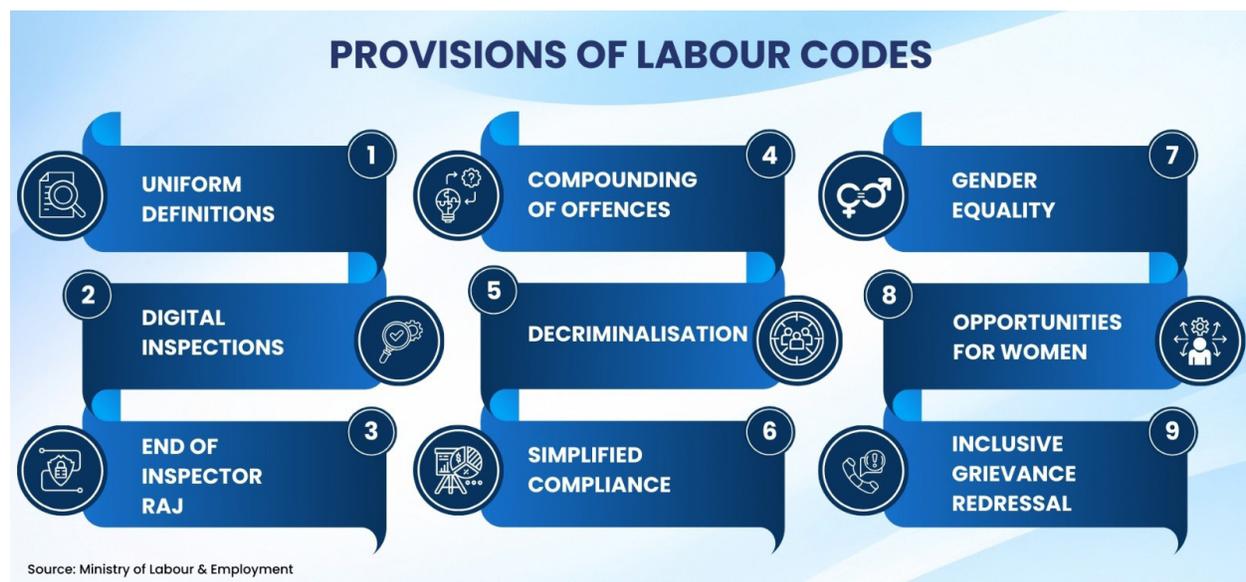
In a historic decision, the Government implemented four Labour Codes - the **Code on Wages, 2019**, the **Industrial Relations Code, 2020**, the **Code on Social Security, 2020** and the **Occupational Safety, Health and Working Conditions Code, 2020** with effect from 21st November 2025, rationalising 29 existing labour laws.

Provisions, Significance & Rationale of Labour Codes

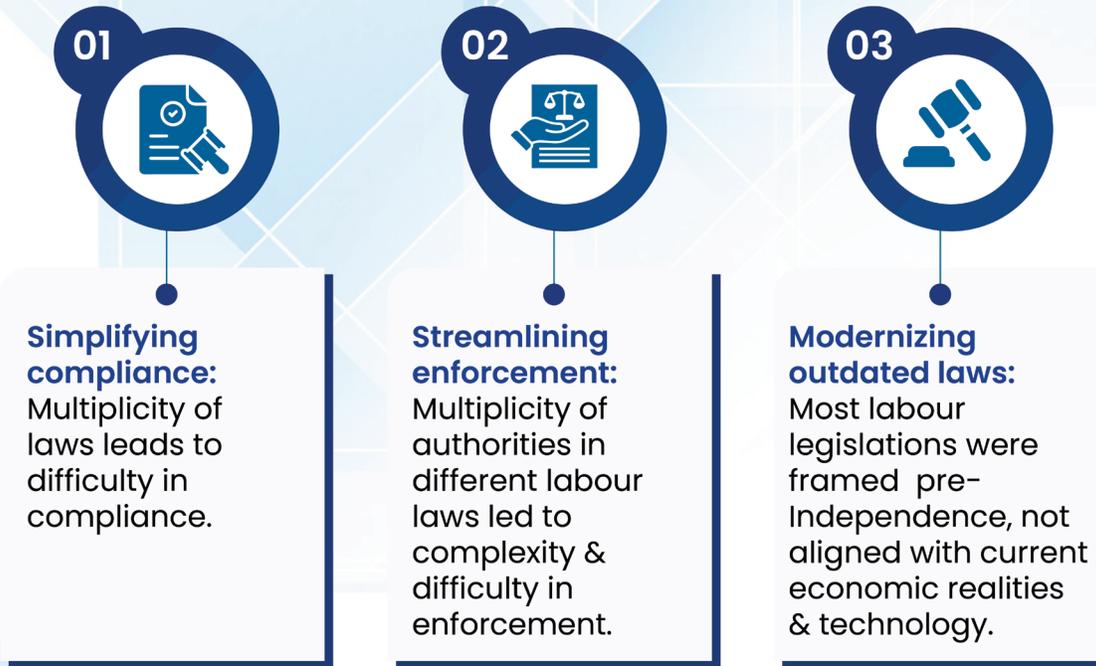
The Labour Codes aim to strike a careful balance between labour market flexibility and the protection of workers' rights-enhancing industrial competitiveness while

strengthening welfare safeguards. They address long-standing structural gaps by moving beyond colonial-era frameworks and aligning India's labour architecture with modern global practices.

In doing so, the reforms promote greater workforce participation- particularly by removing barriers for women and enabling flexible and hybrid work models- while expanding social security, income protection, and effective grievance redressal for gig and platform workers. Together, the four Labour Codes empower both workers and enterprises, fostering a workforce that is protected, productive, and prepared for the evolving world of work- laying the foundation for a more resilient, competitive, and self-reliant nation.



Rationale Behind Codification of 29 Laws into 4 Codes



Source: Ministry of Labour & Employment

Labour Reforms Powering Ease of Doing Business

The merger of 29 Central labour laws into four comprehensive Labour Codes distinctly improves Ease of Doing Business in India by **streamlining compliance, shortening approval timelines, and enhancing operational flexibility.**

The Codes mandate a **30-day timeline for approvals** related to factory construction or expansion, compressing the earlier 90-day process into a faster, time-bound framework.

Contract labour regulations have been rationalised by **exempting contractors with fewer than 50 workers from licensing requirements**, alongside the introduction of **electronic single registration, a unified return system, and a single all-India licence** valid for five years with deemed approvals. Institutional structures have been simplified through the **consolidation of six boards into a single national tripartite board**, while enforcement has been modernised by enabling compounding of offences through graded monetary fines, replacing criminal sanctions with civil penalties, and providing a 30-day compliance window before legal action.

Further, thresholds for lay-off, retrenchment, closure, and applicability of Standing Orders have been raised to 300 workers, granting establishments greater flexibility to manage operations without prior government approvals.

Code 1: The Code of Wages, 2019

The Code on Wages, 2019 aims to simplify, consolidate, and rationalize the provisions of four existing laws- The Payment of Wages Act, 1936; The Minimum Wages Act, 1948; The Payment of Bonus Act, 1965; and The Equal Remuneration Act, 1976. Its core objective is to **strengthen workers' rights while promoting simplicity and uniformity in wage-related compliance for employers-**

Universal Minimum Wages- The Code establishes a statutory right to minimum wages for all employees across both organized and unorganized sectors. Earlier, the Minimum Wages Act applied only to scheduled employments covering ~30% of workers.

Introduction of Floor Wage- A statutory floor wage shall be set by the Government based on minimum living standards, with scope for regional variation. No state can fix minimum wages below this level, ensuring uniformity and adequacy nationwide.

Criteria for Wage Fixation- Appropriate

Governments will determine minimum wages considering workers' skill levels (unskilled, skilled, semi-skilled and highly skilled), geographic areas, and job conditions such as temperature, humidity, or hazardous environments.

Gender Equality in Employment- Employers shall not discriminate on the basis of gender, including transgender identity, in recruitment, wages, and employment conditions for similar work.

Universal Coverage for Wage Payment- Provisions ensuring timely payment and preventing un-authorized deductions will apply to all employees, irrespective of wage limits (currently applicable only to employees earning up to ₹24,000/month).

Overtime Compensation- Employers must pay all employees overtime wages at least twice the normal rate for any work done beyond the regular working hours.

Responsibility for Wage Payment- Employers, including companies, firms, or associations, shall pay wages to employees employed by them. Failure to do so makes the proprietor/ entity liable for unpaid wages.

Inspector-cum-Facilitator- The traditional role of "Inspector" is replaced with "Inspector-cum-Facilitator," emphasizing guidance, awareness, and advisory roles alongside enforcement to improve compliance.

Compounding of Offences- First-time, non-imprisonable offences can be compounded by paying a penalty. Repeat offences within five years, however, cannot be compounded.

Decriminalization of Offences- The Code replaces imprisonment for certain first-time offences with monetary fines (up to 50% of the maximum fine), making the framework less punitive and more compliance-oriented.

Code 2: The Industrial Relations Code, 2020

The Industrial Relations Code (IR Code) has been prepared after amalgamating, simplifying and rationalizing the relevant provisions of the Trade Unions Act, 1926, the Industrial Employment (Standing Orders) Act, 1946 and the Industrial Disputes Act, 1947. The Code acknowledges the fact that survival of worker depends upon survival of industry. In this backdrop, it **simplifies laws related to trade unions, conditions of employment in industrial establishment or undertaking, investigation and settlement of industrial disputes-**

Fixed Term Employment (FTE)- Allows direct, time-bound contracts with full parity in wages and benefits; gratuity eligibility after one year. The provision reduces excessive contractualization and offers cost efficiency to employers.

Re-skilling Fund- To train retrenched

employees, this fund has been set up from the contribution to be made by an industrial establishment for an amount equal to 15 days' wages for every worker retrenched. This is in addition to retrenchment compensation. The amount will be credited to the workers account within 45 days of retrenchment.

Trade Union Recognition- Unions with 51% membership get recognition as the Negotiating Union; otherwise, a Negotiating Council is formed from unions, not less than 20% membership of trade union. Such an arrangement strengthens collective bargaining.

Expanded Worker Definition- Covers sales promotion staff, journalists, and supervisory employees earning up to ₹18,000/month.

Broader Definition of Industry- Includes all systematic employer-employee activities, regardless of profit or capital, widening access to labour protections.

Higher Threshold for Lay-off/Retrenchment/Closure- Approval limit raised from 100 to 300 workers; States may enhance the limit further. The provision will simplify compliance and contribute to formalization.

Women's Representation: Ensures proportional representation of women in grievance committees for gender-sensitive redressal.

Standing Orders Threshold- Raised from 100 to 300 employees, easing compliance and enabling flexible workforce management.

Work-from-Home Provision- Permitted in service sectors by mutual consent, improving flexibility.

Industrial Tribunals- Two-member tribunals consisting of judicial and administrative member for quicker dispute resolution.

Direct Tribunal Access- Parties may approach tribunals directly after failed conciliation within 90 days.

Notice for Strikes/Lockouts- Mandatory 14-day notice for all establishments to promote dialogue and minimize disruptions.

Expanded Definition of Strike- Includes “mass casual leave also within its ambit” to prevent flash strikes and ensure lawful action.

Decriminalization & Compounding- Minor offences made compoundable with monetary penalties, promoting compliance over prosecution.

Digital Processes- Enables electronic record-keeping, registration, and communication for transparency and efficiency.

Code 3: The Code on Social Security, 2020

The Code on Social Security incorporates existing nine Social Security Acts viz; The Employee’s Compensation Act, 1923; The Employees’ State Insurance Act, 1948; The Employees’ Provident Funds and Miscellaneous Provisions Act, 1952; The Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959; The Maternity Benefit Act, 1961; The Payment of Gratuity Act, 1972; The Cine-Workers Welfare Fund Act, 1981; The Building and Other Construction Workers’ Welfare Cess Act, 1996 and; The Unorganised Workers’ Social Security Act, 2008. **The Code extends social security to all workers-** including unorganized, gig, and platform workers-covering life, health, maternity, and provident fund benefits, while introducing digital systems and facilitator-based compliance for greater efficiency-

Expanded ESIC (Employees’ State Insurance) Coverage- ESIC now applies pan-India, eliminating the criteria of “notified areas.” Establishments with fewer than 10 employees may voluntarily opt in with mutual consent of employers and employees. Coverage would be mandated for hazardous occupation and extended to plantation workers.

Time-bound EPF (Employees’ Provident Fund) Inquiries-A five-year limit has been set for initiating EPF inquiries and recovery proceedings, to be completed within two

years (extendable by one). Suo-moto reopening of cases has been abolished, ensuring timely resolution.

Reduced EPF Appeal Deposit- Employers appealing EPFO orders now need to deposit only 25% of the assessed amount (down from 40–70%), reducing financial burden and ensuring ease of business and access to justice.

Self-assessment for Construction Cess- Employers can now self-assess cess liabilities in respect to Building and Other Construction Work, previously assessed by the notified Government authority. It reduces procedural delays and official intervention.

Inclusion of Gig and Platform Workers- New definitions are included- “aggregator,” “gig worker,” and “platform worker” to enable social security coverage. Aggregators to contribute 1- 2% of annual turnover (capped at 5% of payments to such workers).

Social Security Fund- A dedicated fund to finance schemes for unorganised, gig, and platform workers, covering life, disability, health, and old-age benefits has been proposed. The amount collected through the compounding of offences will be credited to this Fund and used by the Government.

Expanded Definition of Dependents- Coverage extended to maternal

grandparents and in case of female employees it also includes dependent parents-in-law, broadening family benefit access.

Uniform Definition of Wages- “Wages” now include basic pay, dearness allowance, and retaining allowance; 50% of the total remuneration (or such percentage as may be notified) shall be added back to compute wages, ensuring consistency in calculating gratuity, pension, and social security benefits.

Commuting Accidents Covered- Accidents during travel between home and workplace are now deemed employment-related, qualifying for compensation.

Gratuity for Fixed-Term Employees- Fixed-term employees become eligible for gratuity after one year of continuous service (earlier five years).

Inspector-cum-Facilitator System Introduces randomized web-based, algorithm-driven inspections for transparency and wider compliance. Inspectors now act as facilitators to support adherence and reduce harassment.

Decriminalization & Monetary Fines- The code has replaced imprisonment with monetary fines for certain offences. The employer will be given mandatory 30 days’ notice for compliance before taking any legal action.

Compounding of Offences- First-time offences punishable with fines are compoundable- for fine-only: 50% of maximum fine and for fine/imprisonment cases: 75% of maximum fine- reducing litigation and improving ease of doing business.

Digitization of Compliance- Mandates electronic maintenance of records, registers, and returns, cutting costs and improving efficiency.

Vacancy Reporting- Employers shall report vacancies to specified career centres before recruitment, promoting transparency in employment opportunities.

Code 4: The Occupational Safety, Health and Working Conditions Code 2020

The Code has been drafted after amalgamation, simplification and rationalization of the relevant provisions of the 13 Central Labour Acts- The Factories Act, 1948; The Plantations Labour Act, 1951; The Mines Act, 1952; The Working Journalists and other Newspaper Employees (Conditions of Service and Miscellaneous Provisions) Act, 1955; The Working Journalists (Fixation of Rates of Wages) Act, 1958; The Motor Transport Workers Act, 1961; The Beedi and Cigar Workers (Conditions of Employment) Act, 1966; The Contract Labour (Regulation and Abolition) Act, 1970; The Sales

Promotion Employees (Conditions of Service) Act, 1976; The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979; The Cine-Workers and Cinema Theatre Workers (Regulation of Employment) Act, 1981; The Dock Workers (Safety, Health and Welfare) Act, 1986 and; The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.

The Code balances the twin objectives of **safeguarding worker rights and safe working conditions, and creating a business-friendly regulatory environment.** This will spur economic growth and employment thereby, making India's labour market more efficient, fair, and future-ready.

Unified Registration: A uniform threshold of 10 employees is set for electronic registration. One registration for an establishment has been envisaged in place of 6 registrations in the Acts. This will create a centralised database and promote ease of doing business.

Extension to Hazardous Work: The Government can extend the Code's provisions to any establishment, even with one employee, engaged in hazardous or life-threatening occupations.

Simplified Compliance- Introduces one license, one registration, one return

framework for the establishments, reducing redundancy and compliance burden.

Wider Definition of Migrant Workers- The definition of inter-state migrant workers (ISMW) now covers workers employed directly, through contractors, or migrate on their own. Establishments must declare the number of ISMW. Benefits include: a lump-sum annual travel allowance to native place once in 12 months and portability of public distribution system and social security benefits across states along with access to a toll-free helpline.

Health and Formalization- Free annual health check-ups for employees.

Formalization via appointment letters- Appointment letters specifying job details, wages, and social security will be given to enhance transparency and accountability.

Women's Employment- Women can work in all types of establishments and during night hours (before 6AM, beyond 7PM) with consent and safety measures, fostering equality and inclusion.

Expanded Media Worker Definition- "Working journalists" and "cine workers" now include employees in electronic media and all forms of audio-visual production.

National Database for Unorganised Workers- A national database to be developed for unorganized workers including migrants to help migrant workers

get jobs, map their skills and provide other social security benefits.

Victim Compensation- Courts can direct at least 50% of fines imposed on offenders to be paid as compensation to victims or their legal heirs in case of injury or death.

Contract Labour Reform- Applicability threshold has been raised from 20 to 50 contract workers. All India license valid for 5 years against work-order based license to be provided to the contractor. For contract labour, beedi and cigar manufacturing and factory: a common license is envisaged and provision of deemed license after expiry of prescribe period is introduced. Moreover, the license shall be auto-generated. Provision of contract labour board has been done away with and provision for appointment of designated authority to advise matters on core and non-core activities is introduced.

Safety Committees- Establishments with 500 or more workers will form safety committees with employer-worker representation, enhancing workplace safety and shared accountability.

National Occupational Safety & Health Advisory Board- A single tripartite advisory board replaces six earlier boards to set national safety and health standards across sectors, ensuring uniformity and quality.

Decriminalisation & Compounding of Offences- Offences punishable by fine only to be compounded by paying 50% of the maximum fine; those involving imprisonment or fine or both by 75%. Criminal penalties (imprisonment) replaced by civil penalties like monetary fines, promoting compliance over punishment.

Revised Factory Thresholds- Applicability increased from 10 to 20 workers (with power) and 20 to 40 workers (without power), reducing compliance burden for small units.

Social Security Fund- Establishes a fund for unorganised workers, financed through penalties and compounding fees, for their welfare and benefit delivery.

Contract Labour- Welfare & Wages: Principal employers to provide welfare facilities like health and safety measures to contract workers. If the contractor fails to pay wages, the principal employer has to pay unpaid wages to the contract labour.

Working Hours & Overtime- Normal working hours capped at 8 hours/day and 48 hours/week. Overtime allowed only with worker consent and paid at twice the regular rate.

Inspector-cum-Facilitator System- Inspectors will now act as facilitators with an objective to help employers comply with law, rules and regulations rather than merely policing them.

India's Labour Reforms Win Global & Local Praise

International organisations have welcomed the Government's decision to implement the four Labour Codes. They see this as an important step towards improving social security, strengthening minimum wage systems, and building stronger labour institutions. Globally, there is appreciation for India's efforts to create a more inclusive and future-ready labour system.

- The **Director-General of the International Labour Organization (ILO)** said that India's new Labour Codes, especially on social protection and minimum wages, are important reforms. He emphasised that continued dialogue between the government, employers, and workers will be essential to ensure the reforms benefit both workers and businesses.
- The **International Social Security Association (ISSA)** stated that India's Labour Codes contribute to global efforts to build stronger and more inclusive social security systems. It encouraged continued investment to expand coverage and strengthen institutions.
- The **International Monetary Fund (IMF)** also welcomed India's labour market reforms and suggested further efforts to improve human capital, increase

women's participation in the workforce, continue public investment, and strengthen the business environment.

Within India, the reforms are widely viewed as steps that improve worker protection, modernise industrial relations, and simplify compliance procedures.

An independent study by the V.V. Giri National Labour Institute (VVGNI), found positive perceptions among both workers and employers. The study, titled "The Implementation of Labour Codes: A Perception-based Analysis," shows broad acceptance of the reforms and highlights that the Labour Codes strike a balance between protecting workers and supporting economic growth.

Conclusion

The introduction of the new Labour Codes marks a transformative shift in India's labour landscape, balancing worker welfare with enterprise efficiency. By simplifying compliance, strengthening workplace safety, and ensuring fair wages, the Codes create a more transparent and growth-oriented labour framework.

Further, the Labour Codes strengthen worker security, dignity, and welfare while enabling resilient and competitive industries. **As labour remains a key driver of economic growth, these reforms lay the foundation for a future-ready workforce and reaffirm India's commitment to**

inclusive, sustainable development under the vision of Aatmanirbhar Bharat.

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7

India's Transformation into a Global Health Powerhouse



Introduction

From conquering longstanding public health challenges to becoming a leading force in affordable medicines and global healthcare delivery, India's rise as a global health powerhouse stands as a testament to visionary leadership, resilient institutions, and the unwavering commitment of the Government of India to building a healthier, stronger, and more prosperous nation. The Government runs flagship schemes that provide public health insurance, free healthcare and services across all levels and subsidised medicines, along with a widespread and accessible health infrastructure. The guiding principle is to provide universal health coverage – ensuring that everyone, including the most socio-economically disadvantaged populations, gets access to affordable and quality healthcare so that India can progress towards its goal of being a healthy, productive and prosperous society – a Viksit or developed Bharat – by 2047.

India's medical education system, comprising private colleges along with publicly funded institutions, has seen expansion and growth over the years. India's pharmaceutical sector, the world's third largest by volume, enables a ready supply of affordable medicines not just to Indian citizens but also to the world – as evidenced by India's prowess in manufacturing and supplying COVID-19 vaccines. India's biopharmaceutical sector is growing in leaps and bounds, supported

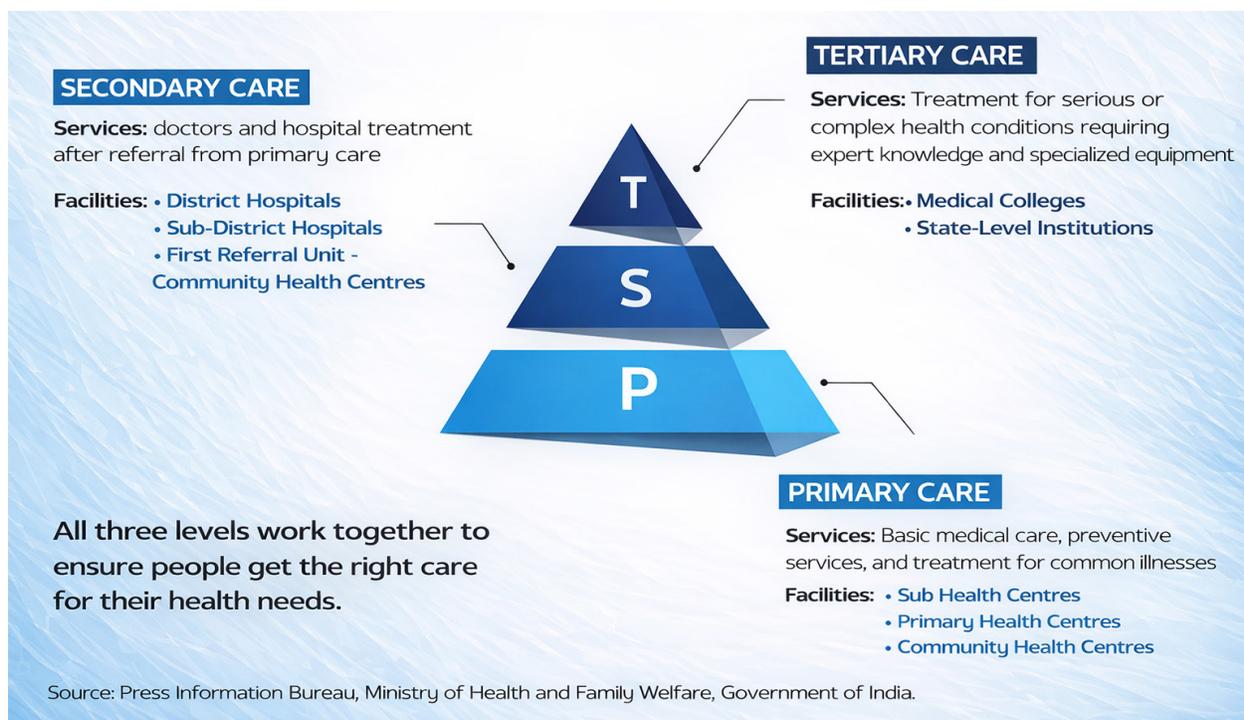
by government investment and private industry's innovative spirit. India has been witnessing a rise in medical tourists, from over 112,000 in 2009 to over 600,000 in 2024. To enhance India's medical tourism sector, the Government of India in its Union Budget 2026-27 announced the establishment of five integrated medical hubs across India featuring diagnostic infrastructure and rehabilitation services in partnership with the private sector. India is now poised to contribute more significantly to global public health – a remarkable achievement for a country that was battling endemic diseases not even a century ago.

Providing Universal Health Coverage: Ayushman Bharat

The Government of India's flagship scheme – Ayushman Bharat (Long Live India) – is key to its aim in providing universal health coverage to all, particularly the socio-economically backward and vulnerable sections of the Indian society. This umbrella scheme has various components that work together to ensure that people get access to quality healthcare at all levels – primary, secondary and tertiary levels.

It's four major components include:

1. **AB-Pradhan Mantri Jan Arogya Yojana (PM-JAY)**, the world's largest publicly funded health assurance scheme.



2. **Ayushman Arogya Mandir** for upgrading sub health centres and primary health centres.
3. **Pradhan Mantri Ayushman Bharat Health Infrastructure Mission (PM-ABHIM)** - the largest pan-India scheme for strengthening healthcare infrastructure across the country.
4. **Ayushman Bharat Digital Mission (ABDM)**, which forms the backbone for a citizen centric interoperable digital health ecosystem.

Pradhan Mantri Jan Arogya Yojana (Prime Minister's People Health Programme)

The Government of India launched the

Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) on September 23, 2018, to achieve universal health care. It is the world's largest public healthcare scheme with hundreds of millions of vulnerable Indian families enrolled in it.

AB-PMJAY provides healthcare coverage up to Rs. 5 lakhs per year (~\$5,000 USD) for secondary and tertiary care services and hospitalisation to enrolled socio-economically deprived families and to all senior citizens above 70 years, saving them from catastrophic medical bills. The scheme provides cashless treatment across empanelled government-funded and private hospitals. The scheme is aimed at the bottom 40% of the Indian population, covering 120 million people, with over 434 million Ayushman cards already made.

AB-JAY COVERAGE



Over **434 million people** have **Ayushman cards** and are covered under the Ayushman Bharat PM-JAY health assurance scheme. About **967,300 senior citizens** of all classes also enrolled.



The insurance scheme covered **over 106.12 million authorised hospital admissions** across over **36,000 empanelled hospitals**.

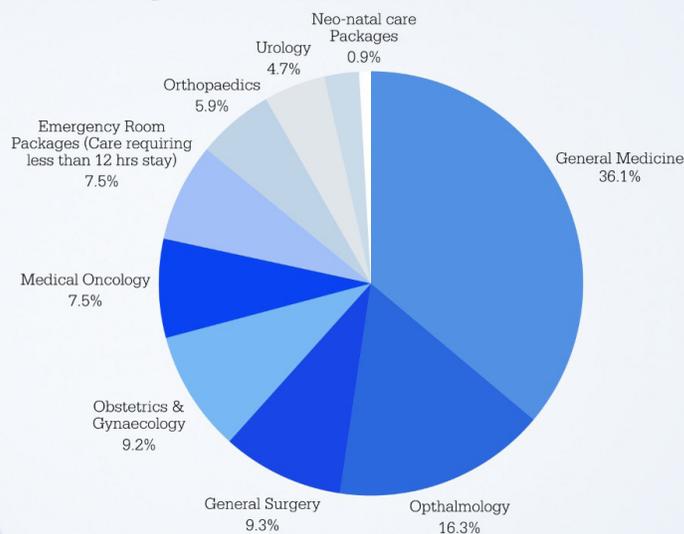


The scheme has **authorised healthcare services valued at over Rs. 234.30 crores (approx. \$25.74 million USD)** across a wide range of specialties.

As on February 27, 2026

Hospital Admissions Under AB-PMJAY

There were about 14 million hospital admissions authorised under the scheme across top 10 specialties.



As of February 22, 2026

The scheme has helped reduce the healthcare expenditure of families by increasing government spending on health insurance. The savings for families was over Rs. 1.25 lakh crore (2024-2025) (~\$13.77 billion USD).

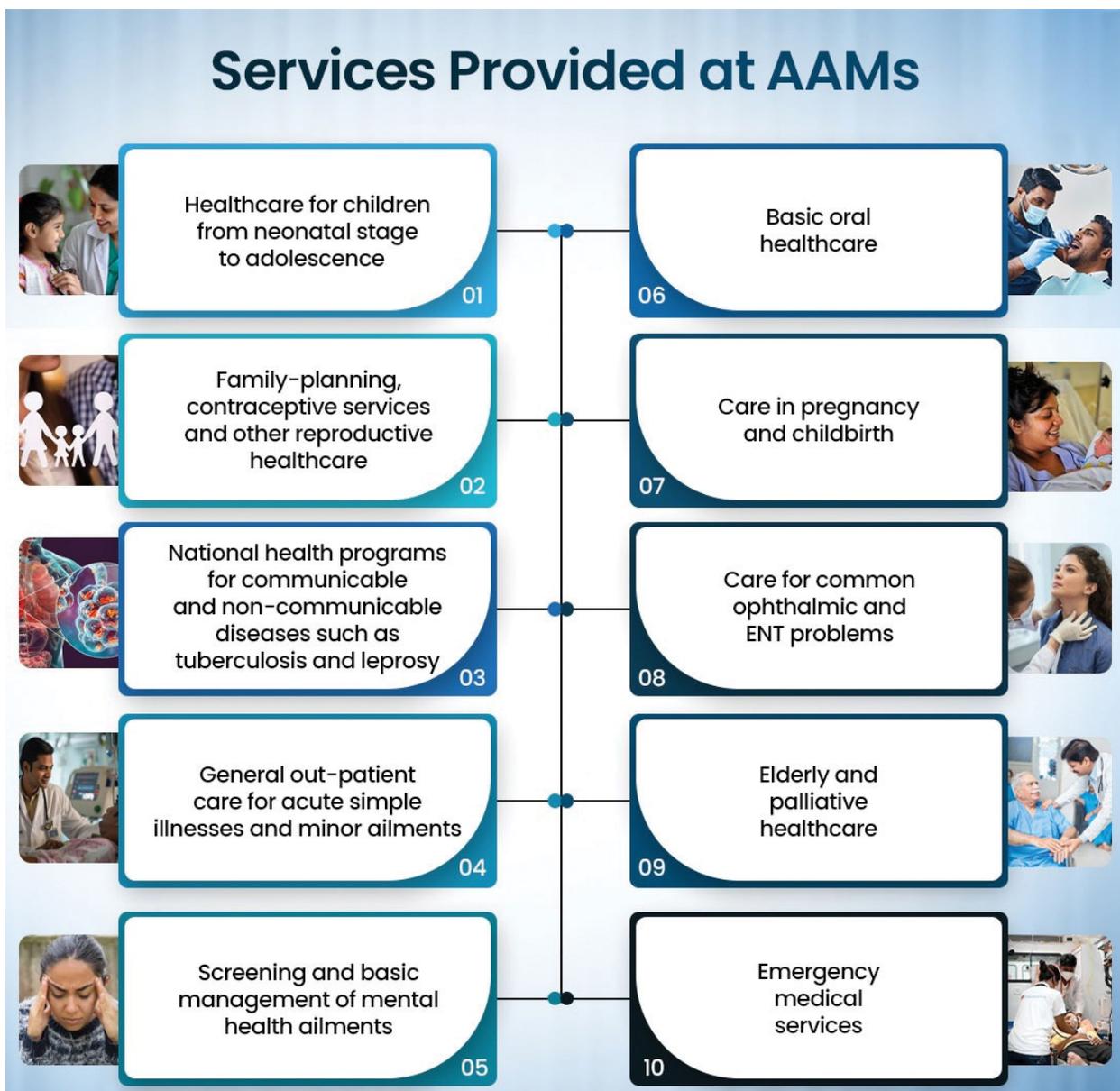
The allocation for the Pradhan Mantri Jan Arogya Yojana has been raised to Rs. 9,500 crore (~\$1.05 billion USD) in Budget Estimates 2026-27, up by Rs. 500 crore (~\$55 million USD) or 5.56% over the Revised Estimates of Financial Year

2025–26. This increase aims to expand beneficiary coverage, improve service quality, and strengthen hospital networks.

While AB-PMJAY supports secondary and tertiary healthcare, the Ayushman Bharat scheme runs various other programmes to ensure quality primary healthcare and a robust healthcare infrastructure which is accessible to all.

Ayushman Arogya Mandirs

A strong primary care infrastructure ensures health equity and access. Ayushman Arogya Mandirs are primary health care centres under the Ayushman Bharat scheme that provide a wide range of general health services for people close to their homes.



There are 1,84,235 AAMs across the country (as on February 27, 2026), including in the urban, rural and tribal-dominated areas. There are 30,817 AAMs in 178 tribal districts across 26 states and 24,327 AAMs in 112 aspirational districts across 27 states (as on December 31, 2025).

AAMs are where the community can access preventive and promotive healthcare. Over 58 million wellness sessions with yoga were also held at AAMs for the holistic development of people. The ministry screens millions of people for various non-communicable diseases under the National Programme for Prevention and Control of Non-Communicable Diseases. As on October 31, 2025, these are the number of screenings for various ailments:

- Hypertension Screenings: 401.3 million
- Diabetes Screenings: 398.6 million
- Oral Cancer Screenings: 338.3 million
- Breast Cancer Screenings: 158.6 million

Pradhan Mantri- Ayushman Bharat Health Infrastructure Mission

Recognising the vital role of AAMs in mitigating and controlling the impact of pandemics or other disease outbreaks, the Government of India launched the Pradhan Mantri-Ayushman Bharat Health

Infrastructure Mission (PM-ABHIM) in 2021. PM-ABHIM looks at infrastructure in health, research and surveillance.

PM-ABHIM aims at strengthening the health infrastructure from the grassroots to the district level through establishment and upgradation of the following in every district:

- Ayushman Arogya Mandirs (AAMs)
- Block Public Health Units
- Integrated District Public Health Labs
- Critical Care Hospital Blocks

PM-ABHIM also prioritises pandemic and disaster preparedness by expanding an IT-enabled, real-time disease surveillance network that integrates laboratories at block, district, regional, and national levels to detect, investigate, and prevent outbreaks effectively.

The Government of India approved Rs. 32,928.82 crore (~\$3.63 billion USD) for a 5-year period from the fiscal years 2021-22 to 2025-26. This fund is for the construction, upgradation and establishment of:

- 9,519 building-less sub health centres-
Ayushman Arogya Mandirs
- 5,456 urban-AAMs

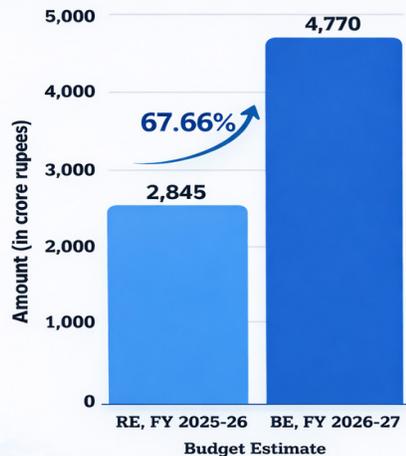
- 2,151 block public health units
- 744 integrated public health laboratories
- 622 critical care blocks at district hospitals and government medical colleges

HISTORIC RAMPING UP OF INFRASTRUCTURE TO FIGHT COVID-19

| | March 2020 | 2025 |
|---|------------|----------------------------|
| Testing Labs | 14 | 3,400 |
| Domestic Manufacturing capacity of PPE kits | 0 | 4.5 lakh per day |
| ICU Beds | 2,168 | 1.45 lakh (as of Nov 2023) |
| Oxygen-supported beds | 50,583 | 5.15 lakh (as of Nov 2023) |

PM-ABHIM Budget Allocation Surge

The allocation under PM-ABHIM has seen a **significant jump of 67.66%**, or Rs. 1,925 crore (~USD 212 million), rising from Rs. 2,845 crore (~USD 313 million) in Revised Estimates FY 2025-26 to Rs. 4,770 crore (~USD 526 million) in Budget Estimates FY 2026-27 — reflecting the government’s strong commitment to expanding critical health infrastructure across India.



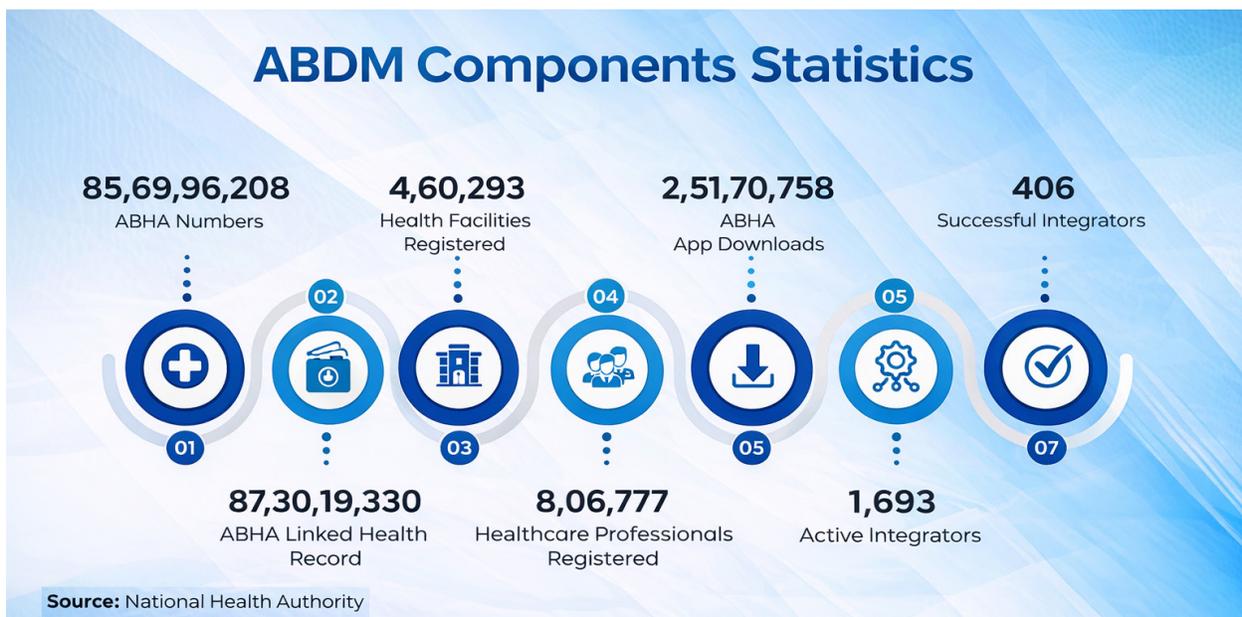
As of February 22, 2026

Digital Initiatives – Ayushman Bharat Digital Mission and Technology Integrations

The Ayushman Bharat also supports the creation of a robust digital public infrastructure through the Ayushman

Verified healthcare professionals can treat patients remotely through teleconsultations and review digital health records. This digital ecosystem enables the last-mile health coverage.

India runs one of the world’s largest digital mental health initiatives, operating 53 cells across all 36 states and union



Bharat Digital Mission (ABDM), one of the most ambitious digital health architectures in the world. Beneficiaries are assigned a unique health identification number, under the Ayushman Bharat Health Account (ABHA) system, enabling their medical records to be securely stored and accessed online through a “digital health locker”.

Over 863 million ABHAs have been created to date (as on February 27, 2026). Through an app, users can also connect with registered healthcare professionals.

territories with 24x7 counselling services in 20 languages and having handled over 3.28 million. Launched on October 10, 2022, Tele MANAS has further expanded accessibility with support in 12 languages, providing comprehensive mental health support from general well-being to disorder management.

National Health Mission

Apart from the umbrella Ayushman Bharat scheme, the Government of India has been running the National Health Mission for

Revolutionising Healthcare Access: Drone-Based Delivery of Medical Services

Pilot projects using drones are in process. In 2021, the Indian Council of Medical Research launched the 'i-DRONE' initiative to test drone-based delivery of vaccines and medical supplies to hard-to-reach areas in the mountainous states of Manipur and Nagaland. Following successful pilots across diverse terrains, the programme expanded nationwide with specialized applications: high-altitude medical deliveries in Himachal Pradesh (above 10,000 feet), TB sample transport in Telangana to reduce diagnostic time, pathological sample transfers in Karnataka for time-sensitive cases, and blood product transportation studies in Delhi NCR. These initiatives demonstrate how drones can strengthen last-mile healthcare connectivity, accelerate diagnostics, and provide critical medical logistics support in challenging geographies. optimised supercomputing for applications including natural language processing, weather prediction, and drug discovery.



decades, with its two components – the National Urban Health Mission and the National Rural Health Mission – for the prevention, mitigation and treatment of various kinds of diseases. The National Health Mission (NHM) has significantly contributed to improving India's public health outcomes through its relentless efforts in expanding human resources, addressing critical health issues, and fostering an integrated response to health emergencies.

The NHM works to improve maternal, child, and adolescent health through

programmes including immunisation, strengthens health systems by improving quality standards, and manages a range of communicable and non-communicable diseases (NCDs) control programmes.

Universal Immunisation Programme

The Universal Immunisation Program (UIP) is one of the largest public health programs targeting close of 26.7 million newborns and 29 million pregnant women annually free of cost.

Strategic interventions like advocacy, social

mobilisation, inter-personal communication at the family level by community health workers and media engagement are some measures utilised to improve immunisation coverage. Community health workers called the Accredited Social Health Activists and Auxiliary Nurse Midwives conducted over 13 million immunisation sessions across the country. There are over 1.03 million ASHAs working under the NHM across the country (as of April 4, 2025).

The 11 vaccines given under the programme are:

- Hepatitis B Vaccine
- Oral Polio Vaccine (OPV)
- Bacillus Calmette-Guérin Vaccine (BCG)
- Injectable Polio Vaccine (IPV)
- Pentavalent Vaccine
- Rotavirus Vaccine (RVV)
- Pneumococcal Conjugate Vaccine (PCV)
- Measles & Rubella Vaccine (MR)
- Diphtheria Pertussis Tetanus Vaccine (DPT)
- Tetanus & Adult Diphtheria Vaccine (Td)
- Japanese Encephalitis Vaccine (JE)

National Health Mission Components

| | | | |
|---|--|--|--|
|  |  |  |  |
| RMNCAH+N | National Missions: Non-Communicable Diseases | Programmes: Communicable Diseases | Strengthening Health Systems & Infrastructure |
| <p>Reproductive, Maternal, Newborn, Child, Adolescent Health and Nutrition</p> <p>Improving the maternal and child health and their survival are central to the achievement of outcomes under NHM under the NHM.</p> | <ul style="list-style-type: none"> • Prevention & Control of Cancer, Diabetes, Cardiovascular Diseases & Stroke • Mental Health Programme • Halffulness of 2025 • Prevention dDiabetes & Control of Hypertension) • Tobacco Control Programme • Oral Health Programme • Palliative Care • Prevention & Management of Burn Injuries • Others | <ul style="list-style-type: none"> • Vector Borne Disease Control • Tuberculosis Control • Leprosy Eradication • Integrated Disease Surveillance | <p>NHM funds infrastructure maintenance.</p> <p>The Mission improves standards by adopting IPHS norms, defining clinical protocols, training health workers, through capacity-building programmes, and strengthening Hospital Management Societies (RKS). Steps are taken to improve quality of care and enable enicle accreditation of facilities with funds for national accreditation and quality certification programmes.</p> |



HPV Vaccination Programme Launched

The Government of India launched a three-month nationwide HPV Vaccination Programme on February 28, 2026 for the prevention of cervical cancer among women. The Gardasil-4 vaccine, which is a single-dose, WHO pre-qualified vaccine used in immunisation programmes across the world, is now being given to adolescent girls aged 14 years, free of cost, at all government primary and community health centres, district and sub-district hospitals, and government medical

colleges and hospitals across the country through central-state/UT government collaboration. Gardasil-4, a quadrivalent HPV vaccine protects against HPV types 16 and 18 (which cause cervical cancer), as well as types 6 and 11.

About 11.5 million girls are presently eligible for the vaccine. The 90-day vaccination drive is running daily to ensure maximum coverage and will thereafter be available on routine immunisation days. This nationwide HPV vaccination campaign is a pivotal step towards empowering

India's women and safeguarding the health of mothers and daughters across the country. With this landmark campaign, India has joined over 160 countries with HPV vaccination programmes.

Mission Indradhanush

Mission Indradhanush was launched on December 25, 2014 under the Universal Immunisation Programme (UIP) to immunise children and pregnant women who have either missed or dropped out of routine immunisation schedules, focusing on regions with low vaccination coverage.

As a result of the continued, sustained efforts and intensified implementation of vaccination drives and campaign across

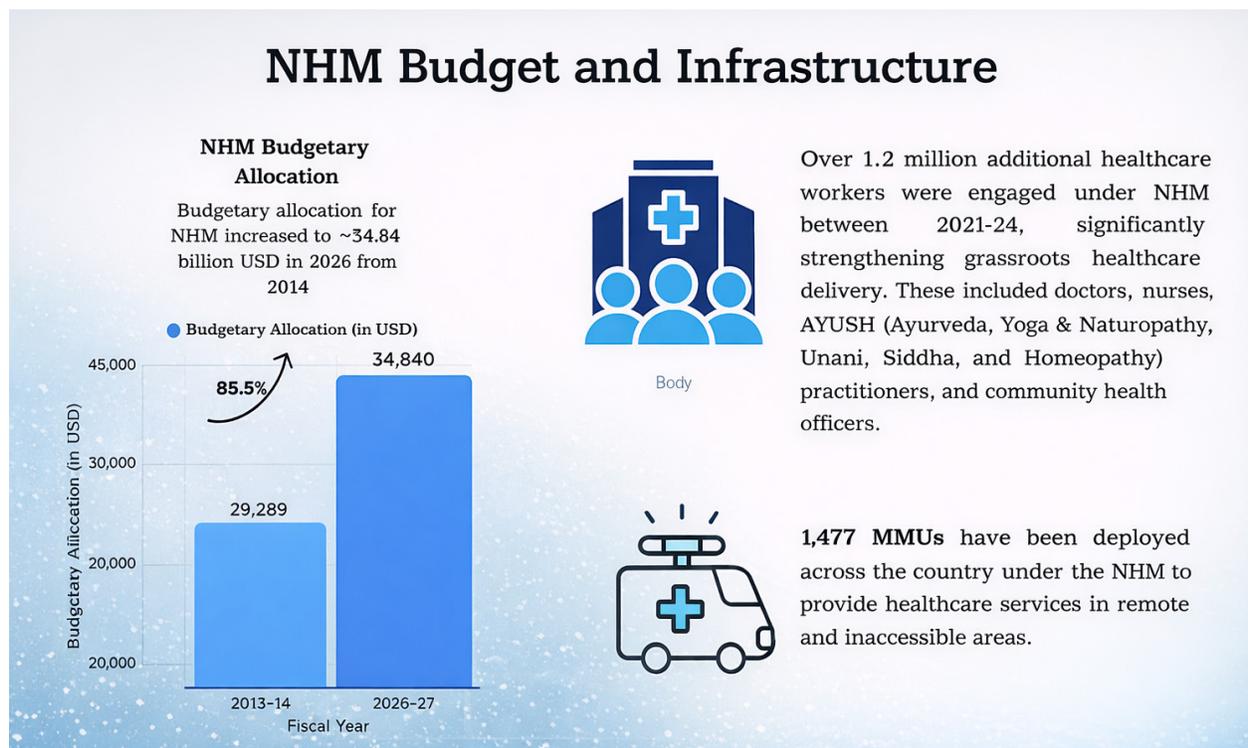
the country, the percentage of zero-dose children to the total population has declined from 0.11% in 2023 to 0.06% in 2024.

Other NHM Programmes, Infrastructure and Impact

Other than the immunisation programme, the National Health Mission runs a wide network of programmes for all kinds of ailments and health conditions.

Budgetary Increase

Increase in NHM funding and capacity building has resulted in the improvement of India's public health indicators over the past few decades.



Key Achievements of National Health Mission:

- **COVID-19:** Over 2.2 billion vaccine doses administered nationwide
- **Maternal Health:** Maternal Mortality Ratio declined by 83% since 1990, surpassing the global decline of 45%
- **Child Health:** Under-5 Mortality Rate reduced by 75% since 1990, higher than the global reduction of 60%
- **Tuberculosis:** TB incidence reduced from 237 per 1,00,000 population in 2015 to 195 in 2023; over 940,000 TB patients supported by 156,000 Ni-kshay Mitra volunteers under the Pradhan Mantri TB Mukh Bharat Abhiyan
- **Measles-Rubella:** 97.98% vaccination coverage achieved under the Intensified Mission Indradhanush (IMI) 5.0; over 347.7 million children vaccinated
- **Sickle Cell Anaemia:** Over 26.1 million individuals screened in tribal areas under the National Sickle Cell Anaemia Elimination Mission
- **Dialysis:** Over 220,000 patients have availed dialysis services and over 2.5 million hemodialysis sessions held under the scheme (as on June 30, 2024).
- **Tobacco Control:** 17.3% reduction in

tobacco use over the past decade.

Integration of Artificial Intelligence in Healthcare

From 2022 to 2025, India has fundamentally restructured its public health delivery by integrating artificial intelligence (AI) into a unified strategy, that bridges specialist shortages and scales proactive care. In February 2026 during the AI Summit in New Delhi, the Ministry of Health and Family Welfare launched the Strategy for AI in Healthcare for India (SAHI), the first nation in the South-Eastern region to do so. The strategy encourages innovation and rapid increase in the application of AI in healthcare, while emphasising ethical use and conduct. The Government of India has already integrated AI into its ABDM infrastructure and other programmes.

Artificial intelligence is increasingly being operationalised across disease areas and health system functions in India. Some examples are:

- Eka Doc, a clinic management system, is an ABDM-enabled application that supports triaging, protocol searching, and summarising patient records for doctors; it has triaged over one million patients and summarised over 1.7 million records.
- Sunoh.AI by eClinicalWorks is an AI-powered scribing tool that

enables doctors to create electronic prescriptions using voice technology, supporting the creation of hundreds of thousands of ePrescriptions.

- In tuberculosis management, an Adverse Outcome Prediction tool uses predictive analytics to flag patients at high risk of treatment failure at the time treatment is initiated, with a reported 27% decline in adverse outcomes following nationwide deployment.
- For diabetes-related eye care, MadhuNetrAI enables non-specialists to take retinal photographs which are then graded by AI to prioritise urgent specialist referrals; launched in December 2025 as India's first AI-based community screening programme, it has benefited 7,100 patients across 38 facilities.

Making Medicines Affordable

Apart from making healthcare more accessible and affordable, the Government of India makes available quality generic medicines at affordable prices through the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP). The medicines are available at the 17,990 Janaushadhi Kendras country wide. Over 2,000 medicines and 315 surgical products are available at the Kendras and are sold at 50-90% lower rates than the market price. These medicines provide treatment for a range of diseases and ailments, such as cardiovascular

diseases, cancer, diabetes and others. The scheme has saved beneficiaries about Rs. 30,000 crores (~\$3.31 billion USD) in the past decade.

To complement the PMBJP, the government launched the Affordable Medicines and Reliable Implants for Treatment (AMRIT) initiative, aimed specifically at supporting tertiary healthcare. AMRIT Pharmacies act as centralised supply points for branded, branded-generic, and generic drugs, as well as surgical items, consumables, and medical implants—especially those required for high-end treatments. There are 255 pharmacies in India, with a vision to expand this network to 500 outlets across the country (as of November 2025).

Pharmacy of the World

India's strong pharmaceutical sector, the 3rd largest in the world by volume, has enabled it to become the largest supplier of generic medicines providing 20% of the world's supply. The country exports to about 200 countries and territories. India is also a key player in affordable vaccines.

For the Global South, India's pharmaceutical supplies – low cost and of good quality – provides essential health security. The country currently supplies over 70% of global anti-retroviral medicines, ensuring affordable access for nations in need.

During the COVID-19 pandemic, India developed indigenous vaccines including

Covaxin and Covishield, demonstrating its unique capacity to integrate research and large-scale production.

The Central Drugs Standard Control Organisation (CDSCO), along with the National Regulatory Authority of India (NRA) and affiliated institutions, were found to meet the World Health Organisation's published indicators for a functional vaccine regulatory system in October 2024.

India's pharmaceutical sector has long been a global vaccine supplier, providing 55–60% of UNICEF's vaccines and meeting a significant share of global demand for DPT, BCG, and measles vaccines, saving millions of lives across continents.

India is now using biotechnology to manufacture high-value biologics, biosimilars and innovative therapeutics. India's bio-economy sector has seen a 13-fold increase over the past decade, from \$10 billion USD in 2014 to over \$165.7 billion USD in 2024 and is projected to reach \$300 billion USD by 2030.

The Union Budget 2026–27 lunched of Biopharma SHAKTI, designed to

strengthen India's end-to-end ecosystem for biologics and biosimilars through investments in domestic manufacturing, workforce development, a nationwide network of over 1,000 accredited clinical trial sites, and enhanced regulatory capacity at the Central Drugs Standard Control Organisation (CDSCO). Three new National Institutes of Pharmaceutical Education and Research (NIPERs) will be established, and seven existing ones upgraded, to meet the growing demand for specialised human resources in biopharma. This initiative, along with existing National Biopharma Mission, aims to catalyse India's global role in the next industrial revolution and establish India as a global biomanufacturing hub.

The National Biopharma Mission (NBM)—"Innovate in India (i3)"—has already catalysed transformative outcomes since its launch in 2017. Co-funded by the World Bank and implemented by the Biotechnology Industry Research Assistance Council (BIRAC), the Mission supports 101 projects involving over 150 organisations and has generated more than 1,000 jobs, including 304 scientists and researchers. Breakthroughs include India's first indigenously developed MRI scanner at a fraction of the cost of imported machines, the country's first biosimilar of Liraglutide for Type 2 diabetes priced at nearly one-third of the imported version, and the world's first DNA-based COVID-19 vaccine, ZyCoV-D, developed by Zydus Cadila. These innovations are

India's contribution to making quality healthcare more affordable.

Health Education Expansion

Due to the growing medical sector and rising demand for services, the Government of India is systematically expanding medical education to keep pace. Over the past 11 years, the Government of India made gains in making quality medical education more accessible. There are now 23 publicly funded and leading All India Institute of Medical Sciences institutes, including the first-ever AIIMS in the northeastern area in Assam. There are 2,045 medical colleges, including 780 allopathy, 323 dental and 942 AYUSH institutions. Medical education seats for the MBBS (Bachelor of Medicine and Bachelor of Surgery) increased by 130% (from 51,348 to 118,190), and postgraduate seats grew by 138% (from 31,185 to 74,306).

Conclusion

India's transformation from a nation battling endemic diseases to a global medical tourism hub and health technology leader demonstrates what strategic government intervention can achieve. The infrastructure built—from over 180,000 Ayushman Arogya Mandirs to the world's largest digital health ecosystem with over 860 million health IDs—has not only improved health outcomes domestically but positioned India as a destination for

quality, affordable healthcare worldwide. As the nation moves toward its 2047 vision of Viksit Bharat, the foundation is firmly in place: robust public health systems,

cutting-edge digital architecture, and an unwavering commitment to ensuring that every citizen, regardless of geography or income, has access to quality healthcare—making India a model for health equity in the developing world.

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8

Foundations of Women Empowerment



Introduction

A nation's economic strength is closely tied to the well-being and participation of its women and children. When girls grow up healthy, educated, and safe, they are better able to learn, work, and contribute meaningfully to society. Conversely, gaps in nutrition, healthcare, safety, and access to education limit opportunities not only for individuals but also for communities and the economy at large. Recognising this, the Government of India has prioritised a life-cycle approach to empowerment—one that begins in early childhood and continues through adolescence and adulthood.



At the centre of this approach is the Ministry of Women and Child Development, which implements a range of targeted interventions to strengthen foundational services in nutrition, care, protection, and support. Key umbrella initiatives include Saksham Anganwadi and Poshan

2.0 to improve nutritional outcomes and early childhood care, Mission Shakti to enhance women's safety, security, and empowerment, and Mission Vatsalya to strengthen child protection systems. In addition to these are the programmes run by Ministry of Education and Ministry of Health & Family Welfare to provide for the educational and health needs of women and children. Together, these programmes aim to build enabling environments where women and children can lead healthy, informed, and secure lives—laying the groundwork for inclusive social and economic development.

Nutrition and Health as the Core Foundation

Good nutrition and strong healthcare are central to building a healthy and prosperous nation. The Government of India has prioritised maternal and child health, recognising that well-nourished citizens drive sustainable growth and social progress.

Through mission-mode, data-driven interventions, the government is tackling malnutrition among children, adolescent girls, and mothers, focusing on reducing stunting, underweight, anaemia, and low birth weight. Integrated community-based services, strengthened frontline systems, and real-time monitoring are delivering measurable improvements and building a healthier, more resilient generation.

Saksham Anganwadi and Poshan 2.0

Mission Saksham Anganwadi and Poshan 2.0 is an integrated nutrition support program to combat malnutrition among children (0-6 years), adolescent girls, pregnant women, and lactating mothers. The program delivers supplementary nutrition, early childhood care and education (ECCE), regular health check-ups, and awareness on hygiene, breastfeeding, and complementary feeding practices in an integrated manner.

Anganwadis are upgraded Anganwadis with improved infrastructure.

The Mission Poshan 2.0 component of the programme works towards malnutrition reduction and improved health, wellness and immunity. Services under this are provided through three components:



The Anganwadi Centres deliver essential nutrition, besides also serving as joyful early learning spaces. They provide play-based pre-school education for children aged 3-6 to build foundational skills, social habits, and school readiness, ensuring a smoother transition to primary school and helping reduce future dropouts. Saksham

Anganwadi Services

Provides an integrated package of services to eligible beneficiaries, including Supplementary Nutrition; Pre-school non-formal education; Nutrition and Health Education; Immunisation; Health check-ups and Referral services. Of

these, immunisation, health check-ups and referral services are health-related and delivered through the National Health Mission (NHM) and public health infrastructure. Poshan Vatikas or Nutri-gardens are also being developed at Anganwadi Centres across the country to provide easy and affordable access to fruits, vegetables, medicinal plants and herbs and encourage diet-diversity and consumption of wholesome local produce.

healthy practices, and builds an ecosystem supporting health, wellness and immunity.

Real-time monitoring is enabled through the Poshan Tracker app, which tracks beneficiary data, efficient service delivery, and Anganwadi performance.

Poshan Tracker App

An Overview (as on January 2026)



Source: Ministry of Women and Child Development

Poshan Abhiyaan

Launched on March 8, 2018, Poshan Abhiyaan is the Government of India's flagship programme to improve nutritional outcomes for children, adolescent girls, pregnant women and lactating mothers. It aims to tackle malnutrition through a convergent, multi-sectoral approach that strengthens service delivery, promotes

Scheme for Adolescent Girls (SAG)

Targets girls aged 14–18 years in all districts of the Northeast and in Aspirational Districts across other states. The scheme addresses intergenerational malnutrition by improving girls' health and nutrition. This includes both nutrition support and non-nutrition support like Iron-Folic Acid (IFA) supplementation, health check-ups,

referral services, nutrition and health education, and skilling initiatives.

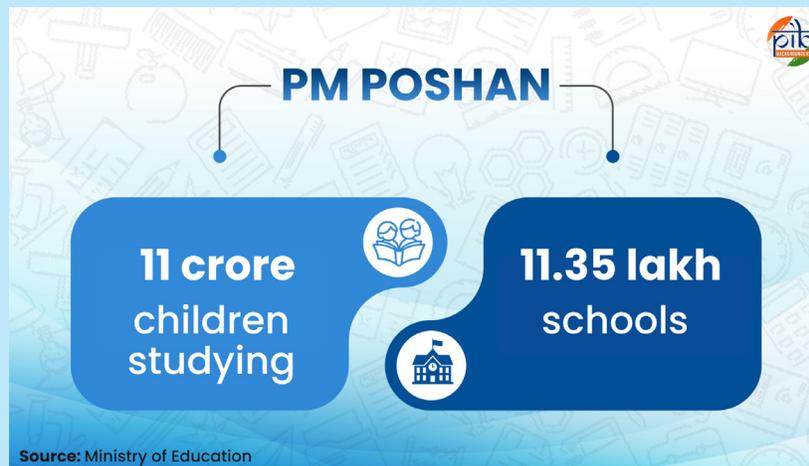
Poshan Bhi Padhai Bhi

Poshan Bhi Padhai Bhi is a flagship campaign of the WCD Ministry that aims to transform Anganwadi Centres into joyful early learning hubs, blending play-based education with nutrition for children aged 0–6. This is aligned with NEP 2020

recommendations on Early Childhood Care and Education. By December 2025, over 8.55 lakh Anganwadi workers and 41,645 master trainers were trained, with Aadharshila (0–3 years) and Navchetana (3–6 years) curricula rolled out nationwide in 12 regional languages—empowering little ones to grow strong, curious, and ready for school.

PM POSHAN

- » Nutritious school meals under PM POSHAN (formerly Mid-Day Meal Scheme) play a vital role in helping children—especially girls—stay hungry-free, attend classes regularly, concentrate better, and thrive in class. This is a centrally-sponsored scheme run by the Ministry of Education, for providing one hot cooked nutritious meal for children studying in Classes I-VIII in Government and Government-aided schools.
- » By easing the burden on low-income families and reducing dropout risks, this initiative fosters sustained enrolment, better learning, and healthier futures for millions of young students.

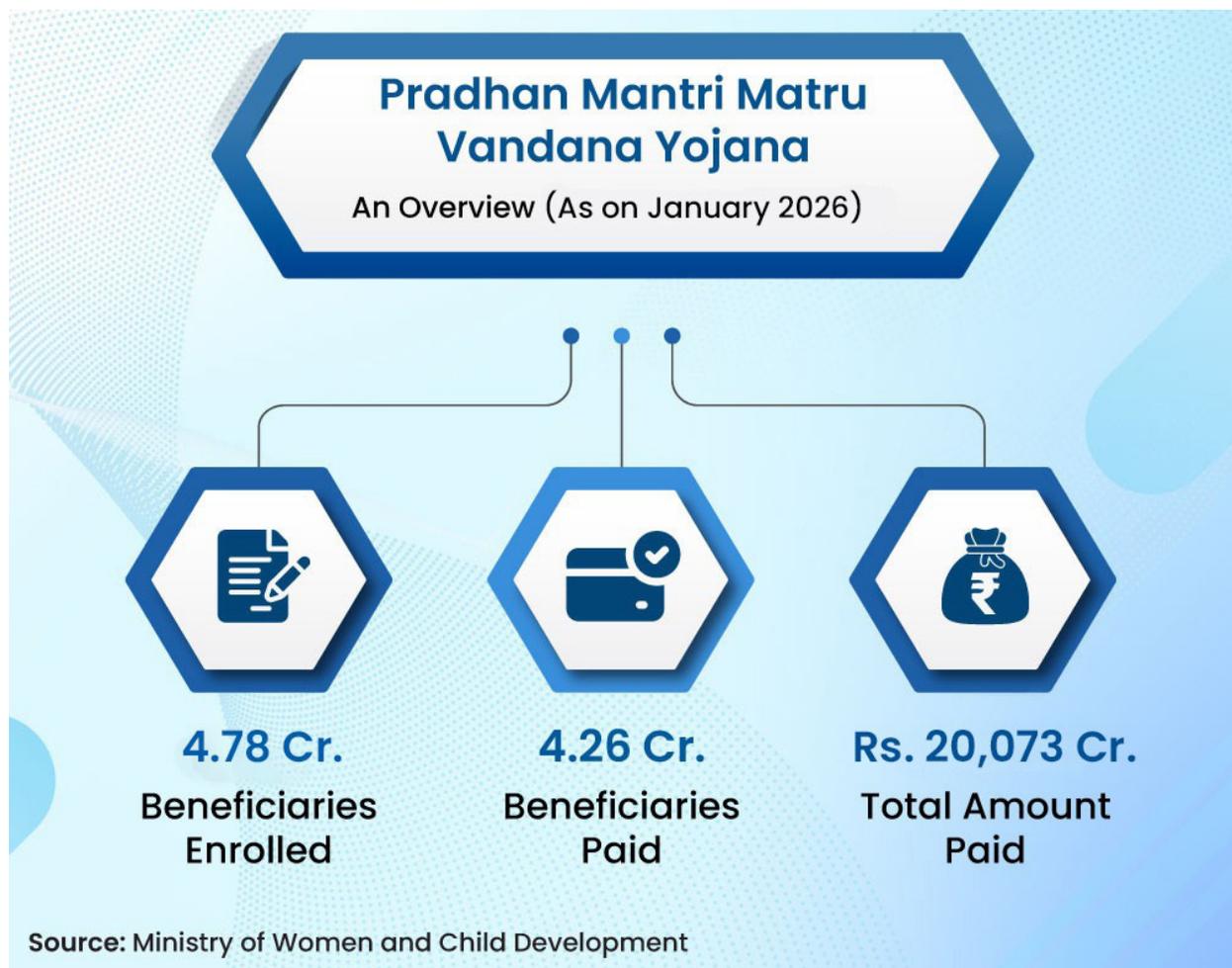


Pradhan Mantri Matru Vandana Yojana (PMMVY)

The Pradhan Mantri Matru Vandana Yojana (PMMVY), is a flagship maternity benefit scheme under Mission Shakti's Samarthyaa sub-scheme. It offers cash incentives to eligible pregnant women and lactating mothers for the first living child, helping cover wage loss and promote better care. Under PMMVY 2.0, effective from April 1, 2022 under the guidelines of Mission Shakti, eligible beneficiaries receive ₹5,000 in two instalments for their first living child.

Additionally, to promote positive attitude towards the girl child, improve sex ratio at birth, and discourage female foeticide, the scheme provides ₹6,000 in a single instalment after the birth of the second living child if it is a girl.

Benefits are disbursed directly via Aadhaar-linked accounts through DBT, with provisions for fresh eligibility in cases of miscarriage/stillbirth. The scheme continues to be implemented nationwide for efficient enrolment and monitoring.



Other Health-linked Efforts

Reproductive, Maternal, New-born, Child and Adolescent Health are an important component of India's National Health Mission of the Ministry of Health & Family Welfare. It provides comprehensive care to women and children through five pillars of reproductive, maternal, neonatal, child, and adolescent health. Flagship schemes like Janani Suraksha Yojana and Janani Shishu Suraksha Karyakram promote safe institutional deliveries by providing cash assistance and free drugs, diagnostics, blood and diet to pregnant women and new born babies especially in low-performing states, to reduce maternal and neonatal risks. Surakshit Matritva Aashwasan (SUMAN) launched in 2019 brings together all the existing schemes for maternal and neonatal health under one umbrella to create a comprehensive and cohesive initiative that provides a service assurance.

Mission Indradhanush: A flagship immunisation drive to achieve full vaccination coverage for children and pregnant women, targeting underserved areas and boosting child survival through routine and catch-up vaccinations.

These schemes collectively contribute to significant national progress in health outcomes. Key achievements include:

- According to the Special Bulletin on Maternal Mortality in India (2019-21),

published by the Sample Registration System (SRS), the country's Maternal Mortality Ratio (MMR) has dropped by 37 points, from 130 per 100,000 live births in 2014-16 to 93 per 100,000 live births in 2019-21.

- According to the UN Inter-agency Group for Child Mortality Estimation (IGME) report released on 25th March 2025, India's under-five mortality rate fell from 48 to 28 per 1,000 live births and neonatal mortality rate from 28 to 17 per 1,000 live births between 2015 and 2023.

These gains reflect improved access to nutrition, safe deliveries, immunisation, and community monitoring—laying a strong foundation for healthier generations.

Education and Skill for Long-Term Empowerment

Education is a powerful tool that opens doors to better opportunities, confidence, and independence, especially for girls and young women. Education plays an important role in building self-confidence among women. It also enables in building confidence to take decisions in a better way.

The government runs various schemes, programmes and initiatives for encouraging education for girls at all levels. The efforts include sustained drives aimed at

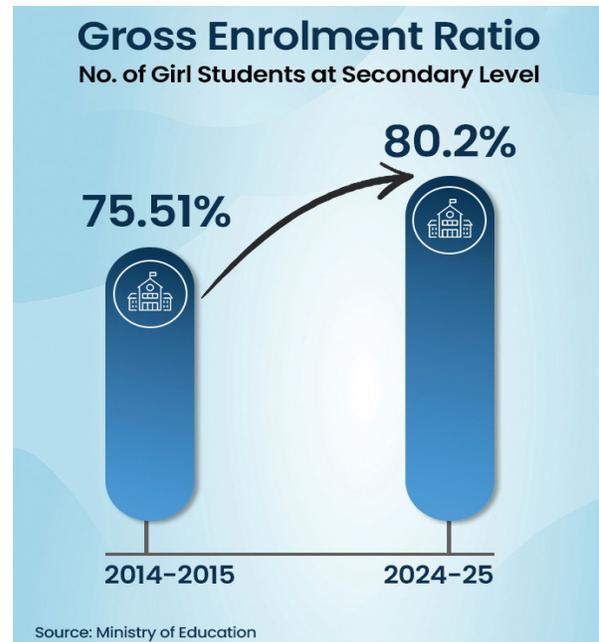
encouraging gender equality, supporting health, nutrition and early childhood and adolescent learning and development for the girl child, incentivising girls' education, providing scholarships and hostels, improving infrastructure, providing support for skilling, STEM and higher education. These interventions are helping build strong foundations for lifelong growth and empowerment.

Beti Bachao Beti Padhao (BBBP)

The Beti Bachao Beti Padhao scheme, launched by Prime Minister Narendra Modi on January 22, 2015, has evolved into a national movement for girl child empowerment, focusing on mindset change, gender equality, and multi-sectoral interventions. The scheme is implemented by the Ministry of Women and Child Development, the Ministry of Health and Family Welfare, and the Ministry of Education. It has exhibited steady progress over the years:

- Sex Ratio at Birth (SRB): Improved nationally from 918 (girls per 1,000 boys) in 2014-15 to 929 in 2024-25, according to the latest Health Management Information System (HMIS) report from the Ministry of Health & Family Welfare.
- Girls' Gross Enrolment Ratio (GER) at the secondary level increased significantly as per the Unified District Information System for Education Plus (UDISE+)

data from the Ministry of Education. This shows higher school participation and retention for girls.



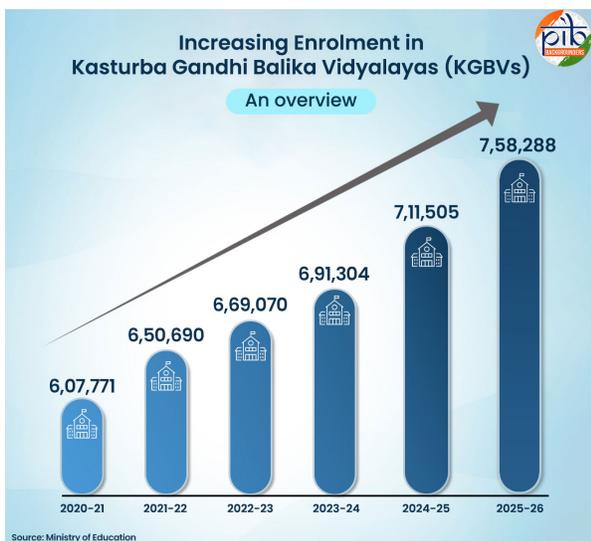
Kasturba Gandhi Balika Vidyalaya (KGBV)

Kasturba Gandhi Balika Vidyalayas (KGBVs) offer safe, residential schooling to girls aged 10-18 from Socio-Economically Disadvantaged Groups (SEDGs)—such as SC, ST, OBC and others—especially in educationally backward blocks. Covering classes VI to XII, these residential schools provide a nurturing space where girls can learn, grow, and transition smoothly from elementary to higher secondary education.

The Ministry of Education under Samagra Shiksha Scheme provides Information and Communication Technology (ICT) Labs and Smart Classrooms in all KGBVs and hostels to empower girls, make them

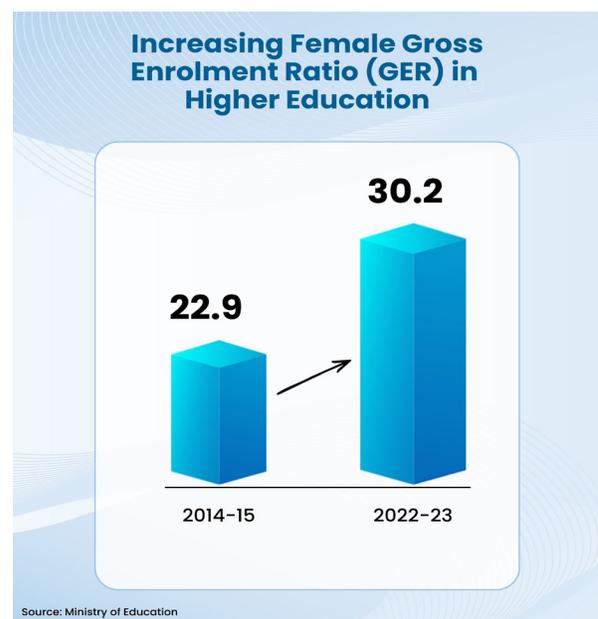
digitally savvy, and enhance their learning outcomes. Department of School Education and Literacy announced on 03.07.2024 to saturate all functional KGBVs with ICT Labs and Smart Classrooms, as per Samagra Shiksha norms. Accordingly, Rs. 28,841.96 lakhs have been allocated/UTs for establishing 3,564 ICT labs and 3,655 smart classrooms across 29 States/UTs in the FY 2024-25.

For the first time since inception, a training program for KGBV Wardens has been designed and being delivered by DSEL in collaboration with the National Institute of Educational Planning and Administration (NIEPA). A KGBV Warden Training Handbook in English and Hindi version has been developed by NIEPA for conducting these training workshops for wardens and is also being translated in all official languages by the States/UTs.



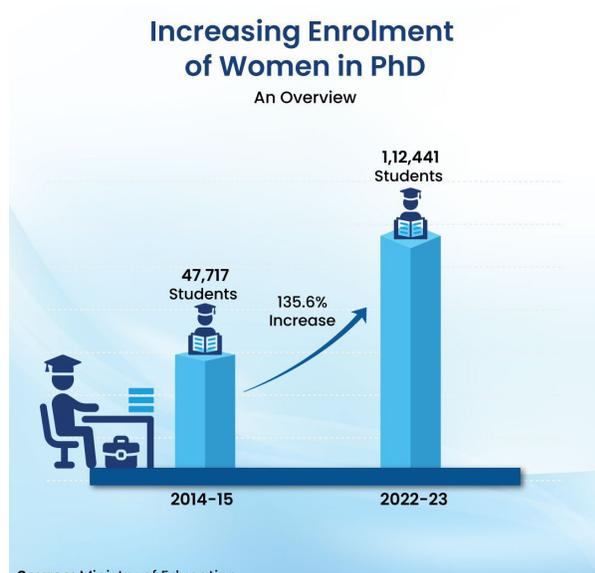
Women in Higher Education

There has been a significant increase in the female Gross Enrolment Ratio (GER) in higher education in India, reflecting improved gender parity. Recent statistics stand testament to the significant government interventions undertaken to improve access for women and girls to quality higher education.



Enrolment of Women in Ph.D. Degree

Female Ph.D. enrolment has more than doubled, with a remarkable 135.6% increase (from 2014-2015 to 2022-2023), adding 64,724 more women researchers. This highlights strong progress of women in advanced academic participation.



Scholarship Schemes for Girl Students

Scholarships and other incentives are given for education of girl students both by the central and the state governments. Some of the important central government scholarships include:

Central Sector Scheme of Scholarship for College and University Students

These scholarships are awarded by Ministry of Education, Government of India on the basis of results of Higher Secondary / Class

XII Board Examination. The objective is to provide financial assistance to meritorious students from poor families for pursuing higher studies. **50% of the scholarships are earmarked for girls.**

National Scholarship for Post Graduate Studies.

Launched in 2023-24, this Central Sector Scheme merges four earlier PG scholarships and offers 10,000 annual slots (30% reserved for women—3,000 selected), equally split between STEM and Humanities. Selected scholars receive ₹1,50,000 per year. Supporting this push, female postgraduate enrolment grew 61.3% from 19.86 lakh in 2014-15 to 32.03 lakh in 2022-23 (AISHE data), adding over 12 lakh more women in higher education.

AICTE PRAGATI Scholarship Scheme

Since 2014-15, the AICTE PRAGATI Scholarship has empowered meritorious girl students in technical education, awarding 10,000 scholarships yearly (5,000 each for Diploma and Degree courses) across 23 States/UTs and extending to the Northeast and J&K. In 2024-25, it reached 35,998 female students—providing crucial financial support so talented girls can focus on their studies and build rewarding careers without worry.

Supporting Women for STEM Education Vigyan Jyoti Scheme

Run by the Department of Science & Technology (DST), Vigyan Jyoti inspires bright girls from classes IX–XII—particularly in rural areas—to chase dreams in STEM fields. It aims to address the underrepresentation of women in different fields of Science, Technology, Engineering and Mathematics (STEM) in the country. Through personalised counselling, lab visits, hands-on workshops, interactions with women role models, science camps, and extra academic support, the scheme builds confidence and opens pathways to STEM careers. Since its launch, it has touched the lives of more than 80,000 meritorious girls across 300 districts in 35 States and Union Territories, helping narrow the gender gap and show girls they belong in STEM.

Supernumerary seats for women

To encourage more women in STEM, supernumerary seats were introduced for girls in IITs and NITs, boosting female participation from under 10% to over 20%. This approach has inspired greater gender diversity in engineering and technical education across institutions nationwide. Programs like IIT Madras’s Vidya Shakti Scheme help rural and female students thrive in STEM. These efforts reflect steady strides toward inclusive, equitable higher education for girls and women.

Nurturing Aspirations through Vocational Training for Young Adolescent Girls (NAVYA)

Launched on June 24, 2025, NAVYA is a collaborative initiative by the Ministry of Women and Child Development (MWCD) and the Ministry of Skill Development and Entrepreneurship (MSDE). It seeks to impart skill training to adolescent girls aged 16–18 years with at least a Class 10 qualification under Pradhan Mantri Kaushal Vikas Yojana 4.0 (PMKVY 4.0). The programme equips these girls with practical vocational skills in emerging, non-traditional fields like digital marketing, cybersecurity, AI-enabled services, and green jobs—along with life skills, financial literacy, and digital competence. It was launched in 27 Aspirational and North-Eastern districts across 19 states, and aims to train 3,850 girls. The pilot phase will cover 9 states and 9 districts. As of December 2025, the scheme has enrolled 1,295 girls, with 671 of them already trained.

Safety and Security: Protecting Lives and Dignity

Safety and security form the bedrock of true empowerment. When women and children can live, work, and grow without fear of violence or harm, they are free to pursue their education, careers, and personal goals. The Government of India addresses this through targeted schemes that provide immediate support, emergency help, long-

term protection, and community-level change. These efforts focus on prevention, response, and rehabilitation to reduce gender-based violence and ensure dignity for all.

Mission Shakti: The Umbrella Framework for Women’s Safety and Empowerment

Mission Shakti is the central umbrella scheme led by the Ministry of Women and Child Development. It integrates safety, security, and empowerment for women and girls under two clear sub-schemes:

- Sambal— focused on safety and security
- Samarthya— focused on economic and social empowerment

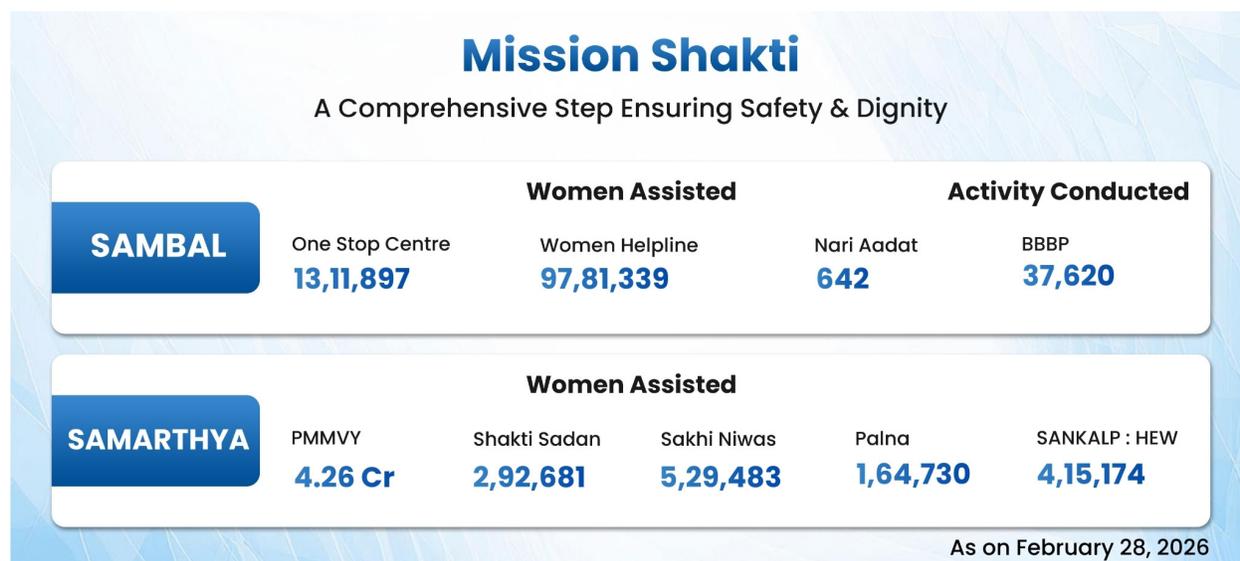
Sambal

The Sambal sub-scheme delivers practical, on-ground protection mechanisms to help women escape and recover from violence.

Some of the key components under Sambal include:

- **One Stop Centres (OSCs)**

Also known as Sakhi Centres (Friend Centres), these provide integrated, immediate support under one roof for women and girls affected by any form of violence (domestic, sexual, acid attacks, trafficking, etc.). Services include emergency medical aid, legal counselling, police assistance, psycho-social support, and temporary shelter referrals.



- **Women Helpline (181)**

A 24x7 toll-free emergency response service that offers counselling, information, and immediate referral to police, medical, or legal help. It acts as the first point of contact in crisis situations. The helpline handles thousands of calls monthly, providing quick support and linking women to nearby services like OSCs, shelters and legal support.

- **Nari Adalat**

Nari Adalats are community-based informal courts that resolve disputes related to domestic violence and harassment through mediation and awareness.

Samarthya

The Samarthya sub-scheme focuses on strengthening women's long-term independence, resilience and participation in public life through support services, skilling and institutional care.

Key components under Samarthya include:

- Shakti Sadan: An integrated support scheme providing shelter, care, counselling, legal aid and rehabilitation for women and girls rescued from trafficking or in difficult circumstances.
- Sakhi Niwas: Safe and affordable hostel

accommodation for working women, with secure living facilities to support their employment and mobility.

- National Creche Scheme (Palna): Provides daycare facilities for children (6 months to 6 years) of working mothers, enabling women's participation in the workforce.
- SANKALP: Hub for Empowerment of Women (HEW): Acts as a coordination and facilitation mechanism at national and state levels to improve access to government schemes, skilling, capacity-building and livelihood opportunities for women.

SHe-Box Portal: Ensuring A Safe Workplace for Women

The Ministry of Women and Child Development (MoWCD) launched the Sexual Harassment electronic Box (SHe-Box) on 29th August 2024 as a single-window, centralised digital platform that creates a national repository for tracking workplace sexual harassment complaints. This, in turn, makes it convenient to monitor the implementation of the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 (SH Act), that was enacted on 9th December 2013.

This user-friendly portal enables women from public, private, organised, or unorganised sectors to file complaints

securely, with automatic forwarding to the relevant Internal Committee (IC) or Local Committee (LC).

Featuring real-time status tracking, multi-lingual support, strong confidentiality safeguards, and a resource hub with training materials and guidance, SHe-Box promotes faster redressal, greater accountability, safer workplaces, and meaningful progress toward women's empowerment.

Mission Vatsalya: Dedicated Protection for Children

Mission Vatsalya is the umbrella scheme focused exclusively on child welfare and safety. It supports vulnerable children—including those affected by abuse, neglect, trafficking, or loss of parental care—through institutional and non-institutional care, sponsorship, foster care, adoption, and aftercare.

- The scheme emphasises family-based care wherever possible, rehabilitation, and reintegration.
- It operates through Child Care Institutions, Child Welfare Committees, Juvenile Justice Boards, and specialised adoption agencies.
- Outcomes include thousands of children placed in safe environments annually, with strong focus on preventing child marriage, trafficking, and exploitation.

- Mission Vatsalya Portal is operational as a unified workspace for all child welfare systems. CARINGS adoption platform is integrated with MV Portal to enhance adoption processes.
- Child Helpline operational across all 36 States/UTs, integrated with ERSS-112 for emergency response. As on January 1, 2026, installation has been completed in 728 districts, enabling a unified national child response mechanism.

These initiatives—Mission Shakti (Sambal) and Mission Vatsalya—work together to create safer homes, workplaces, and communities for women and girls. They reduce gender-based violence, provide timely help in crises, and promote dignity and equality. By combining emergency response, legal support, community engagement, and child-focused protection, they build a stronger foundation for women and children to live fearlessly and participate fully in society.

Conclusion: Building a Resilient Future

India has adopted an integrated approach to advancing the health, education, safety, and security of women and girls. Flagship umbrella programmes such as Saksham Anganwadi and Poshan 2.0, and Mission Shakti, and others ensure strong convergence across Ministries, maximising

reach and impact at the grassroots level. Digital platforms like the Poshan Tracker enhance transparency, accountability, and efficient service delivery.

By investing in the well-being, education, and protection of women and girls, these initiatives strengthen families, uplift communities, and build human capital. They contribute directly to inclusive growth, gender equality, and long-term national development. As India surges ahead, sustained focus on empowering women and girls remains central to achieving transformative and lasting change.

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9

Key Interventions for Women's Economic Advancement



India's Journey Towards Women's Financial Empowerment

Empowering women builds resilient families, thriving communities, and a prosperous nation. Recognising this, India's landscape for women's economic independence has undergone a remarkable transformation in the last 10 years. Guided by a women-centric vision, the government has prioritised expanding access to skills, credit, markets, and livelihoods, with special focus on rural and underserved women. The goal is a fully developed—Viksit Bharat—by 2047, where every woman stands as an equal architect of progress.

Driving this vision forward, the Government of India is working through a comprehensive portfolio of schemes—from self-help groups (SHGs) and targeted credit to drone technology and entrepreneurship platforms. It has also invested in digital tools for financial inclusion and cooperative networks. These advancements are positioning India as a global model for women's economic leadership.

“Nari Shakti” – women's power – is the guiding force, ensuring inclusive growth where no woman is left behind.

Ensuring Financial Security for Girls

Ensuring financial security for girls implies right investment in their education, health, and access to economic opportunities so they can build independent and dignified lives. It strengthens not only individual futures but also families, communities, and the nation as a whole.

Sukanya Samriddhi Yojana delivers exactly that promise: high returns, tax advantages, and unwavering support for every family investing in their daughter's bright future.

Sukanya Samriddhi Yojana

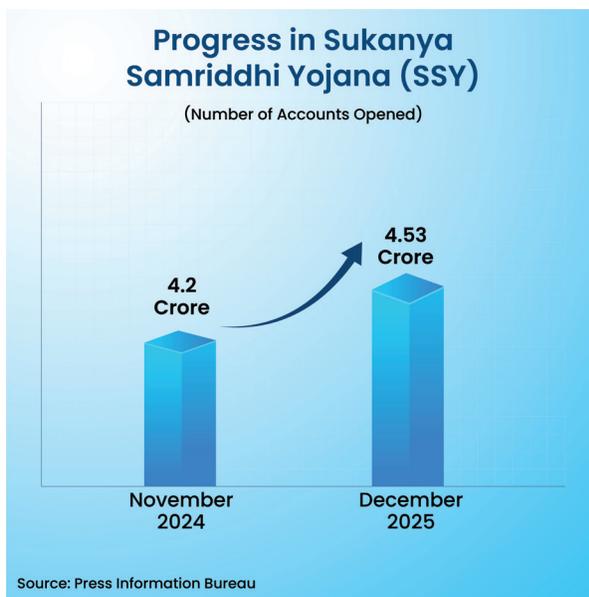
Launched on 22nd January 2015 under the Beti Bachao, Beti Padhao campaign, the Sukanya Samriddhi Yojana (SSY) provides financial security to a girl child. It is a government savings scheme that helps parents and guardians save money for their girls' future needs, mainly education and marriage. The scheme gives high interest rates, tax benefits, and security, encouraging families to invest early and support girls' growth and independence.

Key features and benefits include :

- Interest rate of 8.2% per year (compounded annually).
- Deposits start from ₹250 (minimum), up to ₹1.5 lakh per year in multiples of ₹50).

- Deposits allowed for 15 years; account matures after 21 years from opening.
- Tax-free interest and maturity amount under Section 80C.
- Partial withdrawal (up to 50%) allowed after age 18 (or has passed tenth standard) for higher education or marriage.

Since its inception, total deposits have exceeded ₹3.33 lakh crore (as on December 2025).



Revolutionising Rural Livelihoods, Leveraging Technology

Rural India is witnessing a remarkable transformation, where community strength, skill-building, and access to resources are

unlocking new opportunities for millions of families. Through visionary, tech-based, people-centric initiatives, the Government of India is enabling rural households—especially women—to become confident entrepreneurs, skilled producers, and active contributors to a thriving economy.

Deen Dayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)

Deen Dayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM) is a Ministry of Rural Development flagship program. The programme brings rural women together into Self-Help Groups (SHGs), creating a strong sense of community and mutual trust. Through these Self-Help Groups, women and their families gain access to skill training, affordable credit, and hands-on support to launch small enterprises, shift to higher-income opportunities, or scale up their existing livelihoods.

Over time, this steady support helps them earn more, save for the future, send children to school, and build stronger, more secure lives for their families.

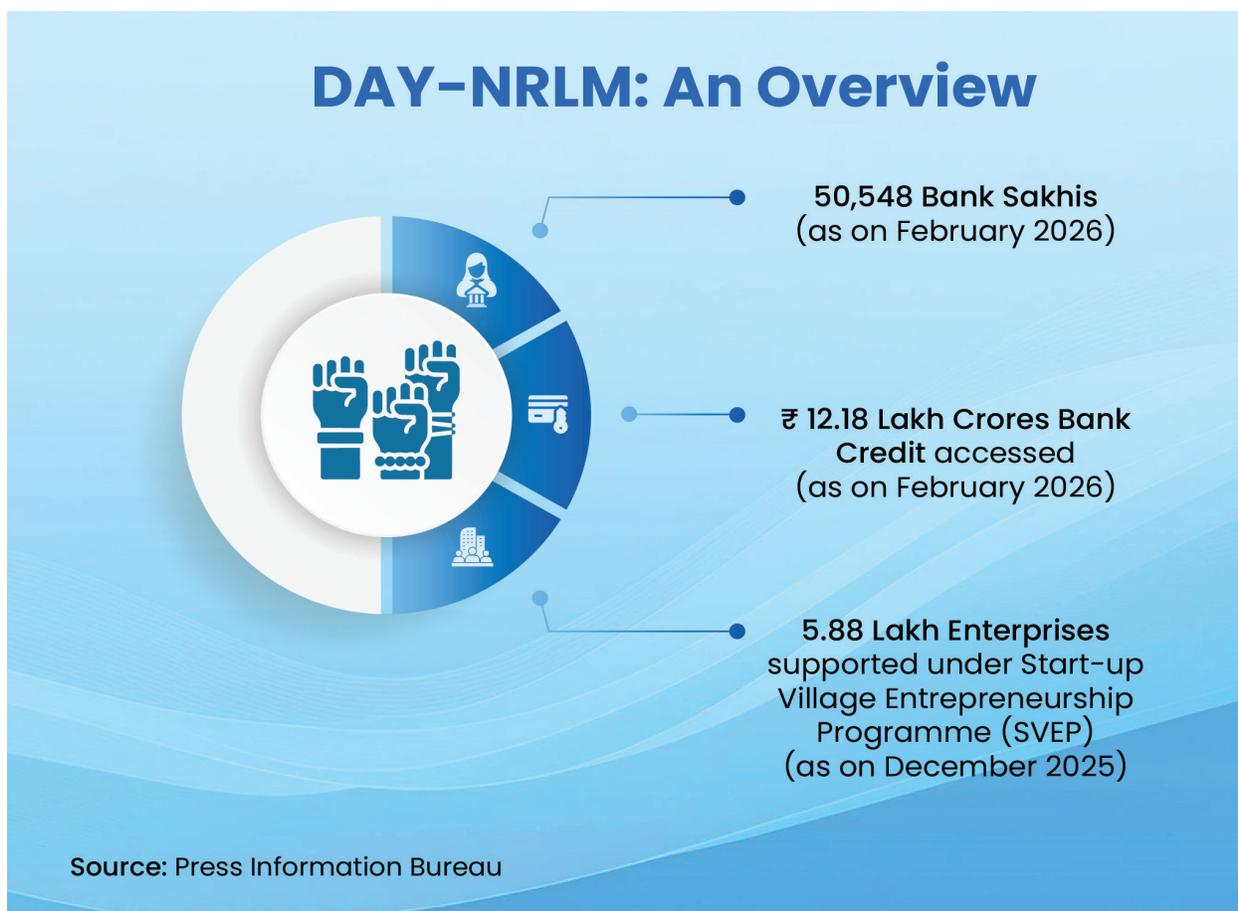
For women, in particular, it helps build sustainable livelihoods through financial inclusion and skill training to help them stride confidently toward economic self-reliance.

Some of its key features are:

- The scheme deploys trained women called Bank Sakhis designated at a bank branch to offer help to SHGs with financial services, such as savings accounts, credit and debit transactions, and loans and other banking facilities.
- Trained helpers like Krishi Sakhi (for crops) and Pashu Sakhi (for animals) are deployed to give advice and support all year round.
- The mission also runs awareness drives on important topics like health, nutrition, education, ending violence at home, and sanitation.

Major achievements include:

- The scheme has successfully mobilised more than 10.05 crore rural women households into over 90.90 lakh Self-Help Groups (SHGs), establishing one of the world's largest networks of women-led community institutions.
- Repayment rate is over 98%, which shows how well the groups manage money.
- DAY-NRLM supports women farmers (called Mahila Kisans) with better farming methods - over 4.6 crore women (as on October 2025) have benefited until now.



- Many women start small businesses in handicrafts, food processing, and more through programs like Start-up Village Entrepreneurship Program (SVEP). Over 5.88 lakh such units have been supported under this scheme.

NaMo Drone Didi Yojana

The NaMo Drone Didi scheme is a transformative Central Sector initiative. It empowers rural women by equipping selected Women Self-Help Groups (SHGs) with drones to provide rental services for precision agriculture—primarily spraying liquid fertilisers and pesticides—while introducing advanced technology to farming and creating sustainable income opportunities.

Key benefits include:

- Introducing modern drone technology to make farming more efficient and precise;
- Boosting crop yields, reducing input costs and operational expenses for farmers;
- Generating significant additional income for women SHGs through drone rental services, fostering financial independence and diversified livelihoods.

Selected SHGs receive 80% Central Financial Assistance (up to ₹8 lakh) toward the drone package. The package also includes training: 15 days for one member

NaMo Drone Didi:
Empowering Women Farmers

15,000 DRONES
to the Women Self Help Groups (SHGs)

RS. 1261 CRORES
Budget Outlay
(from 2023-24 to 2025-26)

Source: Ministry of Agriculture & Farmers Welfare

to become a certified drone pilot (covering operations and agriculture-specific applications) and 5 days for another as a drone assistant (focusing on repairs, maintenance, and support).

By putting drones in the hands of rural women, the scheme not only accelerates technology adoption in agriculture but also opens new economic pathways. This makes work faster and more productive while creating brighter opportunities for women and their communities.

Transforming Women into Successful Entrepreneurs

When women rise as entrepreneurs, entire family finds stability and opportunity. Keeping this in mind, the Government of India has launched many initiatives to push entrepreneurship among women.

Lakhpati Didi Scheme

Lakhpati Didi is a flagship outcome of the Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM), which strives towards rural poverty alleviation and women’s economic empowerment.

Rooted in the vision of rural prosperity led by women, a Lakhpati Didi is a Self-Help Group (SHG) member whose household earns over ₹1 lakh annually, through sustainable livelihood activities, strengthened skills, and improved access

to credit and markets—signifying financial stability, confidence, and community leadership.

Lakhpati Didi
An initiative by the Ministry of Rural Development

KEY FEATURES

- Promotion of SHGs & Women-led Enterprises
- Access to Skill Development Programs
- Entrepreneurship Opportunities
- Financial Literacy & Inclusion
- Community Support & Networking

The infographic features a photograph of a smiling woman wearing a blue headscarf and a blue patterned top, sitting at a table. The background is a dark blue gradient with a subtle floral pattern.

The objective extends beyond mere income generation to fostering entrepreneurship, financial literacy, and positioning women as catalysts for rural economic transformation.

The government has a target to create 6 crore Lakhpati Didis. To fast-track this goal, the Ministry of Rural Development launched a National Campaign on Entrepreneurship in January 2026, aiming to train 50 lakh SHG members through 50,000 Community Resource Persons.

Lakhpati Didi Scheme
An Overview

| | |
|---|---|
| 3,07,33,820 Lakhpati Didis (As on December 2025) | 16,63,93,397 Digital Ajeevika Registers |
|---|---|

Source: Ministry of Rural Development

The infographic has a light blue background with a geometric pattern. It uses white rounded rectangular boxes with blue accents to present the statistics.

SHE-Mart

The Union Budget 2026-2027 has introduced provisions for Self-Help Entrepreneurs via SHE-Mart. This new program will establish community-owned retail outlets in every district, serving as dedicated platforms for marketing products created by women from Self-Help Groups (SHGs) and rural areas, thereby opening up fresh market opportunities.

With this initiative, women involved in animal husbandry, agriculture, and related vocations will transition beyond mere subsistence-level activities to become full-fledged entrepreneurs—a central goal of the scheme.

Technologically, the LokOS app and Digital Aajeevika Register, managed by Digital India Corporation, digitise records and track real-time income data of potential Lakhpati Didis.

Womaniya Initiative

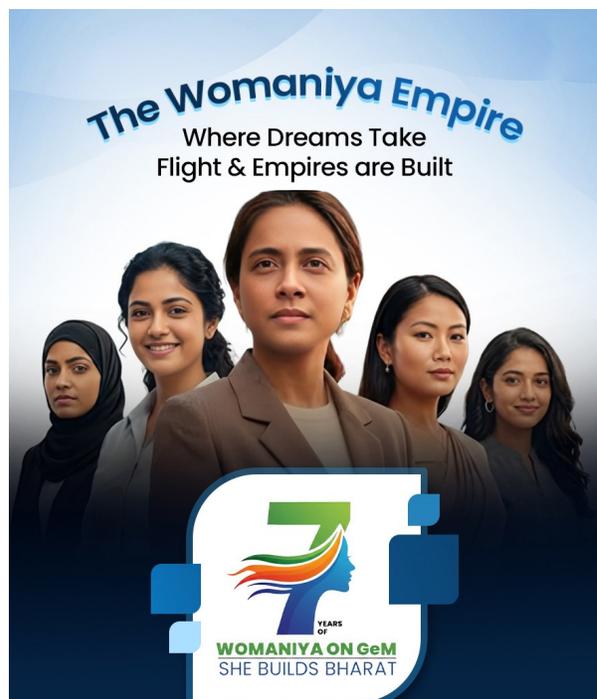
The Womaniya Initiative, a flagship programme of the Government e-Marketplace (GeM) under the Ministry of Commerce and Industry, was launched on 14 January 2019 to boost the participation of women-led Micro and Small Enterprises (MSEs) and Self-Help Groups (SHGs) in public procurement.

To support this, GeM has forged key partnerships through MoUs:

- With Self-Employed Women's Association (SEWA) Bharat (signed in January 2023) to train and enable women-led MSEs, entrepreneurs, and

SHGs in accessing government markets.

- With Usha Silai School (also 2023) to upskill women seamstresses as service providers on GeM.
- With UN Women (signed in November 2025) to advance gender-responsive



procurement, develop training materials, and strengthen hyper-local market linkages for women entrepreneurs.

Most recently, on 14–15 January 2026, GeM signed an MoU with the Women’s Collective Forum (WCF) to raise awareness of business-to-government opportunities, assist with onboarding, compliance, product listing, and deliver structured training and workshops to enhance participation.

These collaborations have helped Womaniya grow into a robust ecosystem, with over two lakh women-led MSEs registered and securing procurement orders worth more than ₹80,000 crore (4.7% of GeM’s total order value) as on January 2026—surpassing the 3% mandated target.

By providing a direct, transparent, and fully digital interface with government buyers, Womaniya eliminates intermediaries and reduces entry barriers that historically constrained participation. It seeks to address the triple challenge of “access to markets,” “access to finance,” and “access to value-addition” faced by women entrepreneurs, aligning them with opportunities to supply products and services to Central and State Government Ministries, Departments, Public Sector Units, and autonomous bodies.

Other Key Interventions for Financial Independence

Women have long played a vital role in families and communities. And now, government schemes are helping them turn their skills and efforts into stronger economic opportunities.

Through better access to training, finance, and markets, these initiatives are enabling millions to build self-reliance, grow their incomes, and achieve greater independence with confidence.

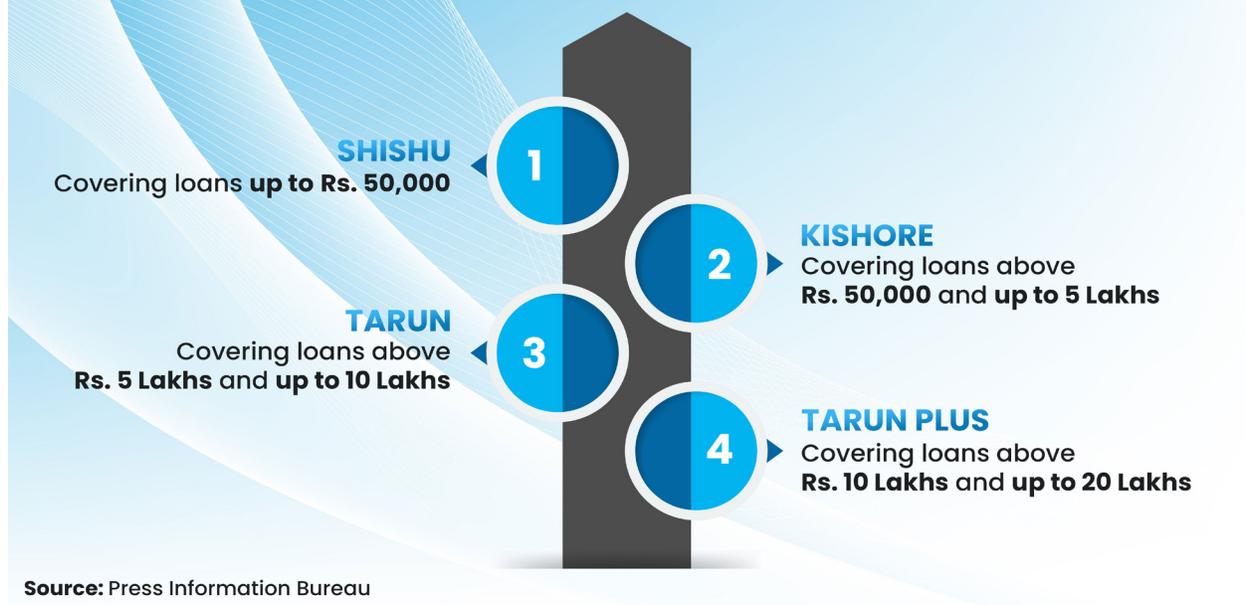
Pradhan Mantri Mudra Yojana (PMMY)

The Pradhan Mantri Mudra Yojana (PMMY), launched on April 8, 2015, provides collateral-free institutional credit to micro-unit enterprises. It intends to support entrepreneurs in starting or expanding ventures without the burden of collateral with a loan offering of up to ₹10 lakh, now enhanced to ₹20 lakh, for a new “Tarun Plus” category for repeat borrowers who have successfully repaid previous loans.

PMMY places a strong emphasis on women’s empowerment, with a majority of the loan accounts held by women



MUDRA LOANS CATEGORIES



Source: Press Information Bureau

MUDRA (Micro Units Development & Refinance Agency Ltd), established under Pradhan Mantri Mudra Yojana (PMMY) and announced in the 2015-16 Union Budget, is a Government of India financial institution. It provides funding to non-corporate small/micro enterprises by refinancing last-mile institutions like banks, non-banking financial institutions (NBFC) and micro finance institutions (MFI).

entrepreneurs. This focus has enabled millions of women to start or grow their businesses, promoting financial inclusion and self-reliance.

Pradhan Mantri Jan Dhan Yojana

The Pradhan Mantri Jan-Dhan Yojana (PMJDY), launched on August 28, 2014, as a National Mission for Financial Inclusion by the Government of India, aims to financially support the unbanked population of the country. It provides universal access to affordable financial services, such as basic savings bank accounts, remittances, credit, insurance, and pensions.

PMJDY has been particularly beneficial for women. Previously, women had limited personal access to formal banking, often relying on family members for financial matters. But now, through PMJDY, millions of women have their own bank accounts, enabling direct receipt of government benefits, greater financial control, and easier access to other schemes for self-reliance and independence.



As on February 18, 2026

There are 32.17 crores women beneficiaries from both the rural and urban areas across the country under PMJDY.

Source: Pradhan Mantri Jan Dhan Yojana (PMJDY) dashboard

Some of the key features of PMJDY include:

- Zero-balance accounts with interest on deposits.
- Issuance of a RuPay debit card, accidental insurance cover of ₹2 lakh (for accounts opened after August 28, 2018; ₹1 lakh earlier).
- An overdraft facility of up to ₹10,000 for eligible account holders.
- Linkage to other schemes like Direct Benefit Transfer (DBT), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Pradhan Mantri Suraksha Bima Yojana (PMSBY), Atal Pension Yojana (APY), Micro Units Development & Refinance Agency Bank (MUDRA) scheme.

Accounts can be opened at any bank branch or through Business Correspondents, making it accessible to all without requiring prior banking relationships.

Pradhan Mantri SVANidhi Scheme

The Prime Minister Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi) scheme, launched in June 2020 by the Ministry of Housing and Urban Affairs, provides collateral-free working capital loans to street vendors, especially women, impacted by the COVID-19 pandemic.

Women make up 44% of the beneficiaries under the PM SVANidhi



Source: Press Information Bureau

- It offers initial loans up to ₹15,000 (first tranche), with subsequent tranches up to ₹25,000 and ₹50,000, along with a 7% interest subsidy on timely repayment, digital cashback incentives, and UPI-linked RuPay Credit Cards for eligible vendors.
- Recently restructured with an extended lending period until March 2030 and a total outlay of ₹7,332 crore, the scheme aims to benefit 1.15 crore street vendors, including 50 lakh new ones.
- As on December 2025, over 1.46 crore loans have been sanctioned, significantly empowering urban street

vendors through financial inclusion and formal recognition.

Stand-Up India Scheme

The Stand-Up India Scheme has ignited a wave of entrepreneurship across India, empowering women and individuals from Scheduled Caste (SC) and Scheduled Tribe (ST) communities to turn their bold ideas into thriving businesses. Launched by the Government of India, this initiative makes it easy to access bank loans for launching enterprises in manufacturing, services, trading, or agri-allied activities. By providing dedicated financial support and opening doors to credit, Stand-Up India is not just funding startups—it's fuelling dreams, creating jobs, building economic independence, and driving inclusive growth from the ground up. Some of its key features include:

- Women can access loans from ₹10 lakh to ₹1 crore, with up to 7 years for repayment (including moratorium period), making it easier to start or grow a business independently.
- Every bank branch reserves at least one loan slot for a woman borrower.
- Through the Stand-Up India portal, women receive guidance on applications, linkages to training, and mentorship, helping them become job creators, gain financial independence, and reduce gender gaps in entrepreneurship.

Conclusion: A Path Forward for All

India's women-led development story has moved from savings to enterprise, from fields to markets, and from beneficiaries to leaders. Schemes like Sukanya Samriddhi Yojana, NaMo Drone Didi, DAY-NRLM, Pradhan Mantri Jan Dhan Yojana, Pradhan Mantri Mudra Yojana, and the Womaniya Initiative have collectively transformed the economic landscape for women enabling them to access credit, technology, skills, and markets with dignity and ease.

Millions of women today are not just earners but owners of farms, enterprises, and their own futures. They are piloting drones, supplying to government ministries, leading community institutions, and building household prosperity from a position of strength.

Viksit Bharat rests on this very foundation—where every woman is the architect of her own prosperity, and where her success is neither an exception nor an aspiration but expectation.

Fostering financial independence for women is fostering India's future.

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10

Creative Industries as Growth Engines



Creativity at the Centre of Economic Power

The twenty-first century is being shaped as much by imagination as by industry. Economic strength is no longer measured only in factories and freight corridors, but in intellectual property, digital platforms, and cultural influence. Ideas travel faster than goods, narratives move markets, and creative ecosystems increasingly determine how nations are seen, heard, and partnered globally. In this environment, the creative economy has emerged as a defining arena of growth and strategic presence.

The creative economy includes industries where value is generated primarily from creativity, culture, technology, and intellectual property. It includes media and entertainment, animation and visual effects, gaming, live cultural experiences, and digital content platforms that operate across borders at scale. These are not peripheral cultural pursuits. They are technology-intensive, globally tradeable sectors embedded within modern services economies and international value chains.

Globally, creative industries have moved from cultural margins to economic mainstream. Across countries, they contribute between 0.5 and over 7 percent of GDP, with live entertainment generating strong spillovers across tourism and urban services. Within this global transformation,

India's creative economy is emerging as a major pillar of growth, employment, and value creation.

India at Scale:

1. The media and entertainment sector was valued at approximately ₹2.5 trillion in 2024.
2. Digital media accounts for around one-third of sector revenues, reshaping production and distribution models.
3. High-growth segments are scaling rapidly:
 - Animation and visual effects: ~₹103 billion
 - Gaming: ~₹232 billion
 - Live entertainment: ~₹100 billion+
4. The sector supports over 10 million livelihoods, directly and indirectly.
5. Annual output stands at approximately ₹3 lakh crore.

This trajectory reflects more than sectoral expansion. It signals the consolidation of creativity as a strategic capability, linking economic growth with global influence in an increasingly platform-driven world.

Media and Entertainment as Economic Infrastructure

| Segment | 2024 | 2025 | 2026 | 2027 |
|----------------------|--------------|--------------|--------------|--------------|
| Digital media | 802 | 903 | 1,004 | 1,104 |
| Television | 679 | 676 | 671 | 667 |
| Print | 260 | 262 | 264 | 267 |
| Online gaming | 232 | 260 | 288 | 316 |
| Filmed entertainment | 187 | 196 | 204 | 213 |
| Animation and VFX | 103 | 113 | 130 | 147 |
| Live events | 101 | 119 | 142 | 167 |
| Out-of-home media | 59 | 66 | 73 | 79 |
| Music | 53 | 60 | 68 | 78 |
| Radio | 25 | 27 | 28 | 30 |
| Total | 2,502 | 2,682 | 2,873 | 3,067 |

India's media and entertainment sector is on a steady expansion path, with revenues projected to grow at around 7 percent annually through 2027. Total sector size is estimated to rise from ₹2,502 billion in 2024 to ₹3,067 billion in 2027, underscoring its role as a durable growth engine within the services economy.

AVGC-XR: Engines of Digital Creativity and Innovation

Animation, Visual Effects, Gaming, Comics and Extended Reality, collectively referred to as AVGC-XR, represent the most

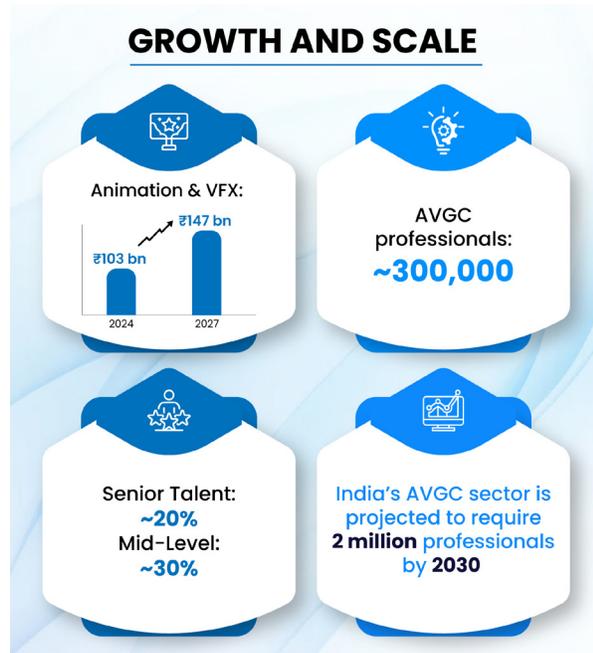
technology-driven frontier of the creative economy. Behind every blockbuster visual effect, immersive game world, or interactive digital experience is a generation of artists, coders, designers, and engineers working at the intersection of imagination and advanced computing. These industries combine creative talent with real-time rendering, immersive design, and digital production tools that now power global film, streaming platforms, advertising campaigns, and virtual production pipelines.

Gaming has evolved into a mainstream digital medium woven into daily life,

while animation and VFX shape the visual language of global entertainment. Together, these sectors convert creativity into scalable intellectual property, positioning AVGC-XR and gaming at the heart of the next phase of the global creative economy.

Animation, Visual Effects, Comics and XR

India's animation, visual effects, comics, and XR ecosystem now operates as a globally connected production base. Indian teams contribute to international films, streaming content, advertising, and immersive experiences, working within tightly integrated global workflows. The sector reflects growing technical depth and creative confidence.



A strong and layered talent pool underpins this expansion. Experienced professionals lead complex international assignments, supported by a broad mid-level workforce

capable of sustaining scale. This balance of capability and continuity has positioned India as a dependable creative collaborator in the global AVGC-XR landscape.

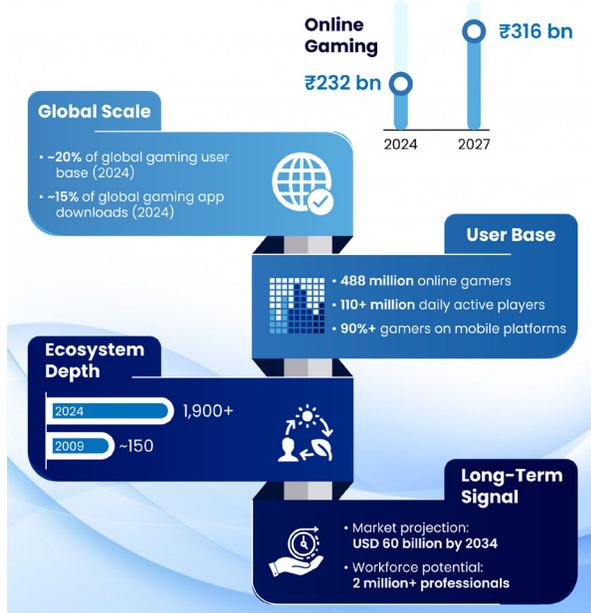
Gaming

Gaming has become one of the most visible expressions of India's digital transformation. Across metros and small towns, millions log in each day to compete, collaborate, and build virtual worlds of their own. Mobile devices double as arenas and social spaces, blurring the line between entertainment and interaction. For a digitally native generation, gaming is not a passing trend. It is part of everyday life. That scale of participation has translated into structured market growth. India now ranks among the world's largest gaming markets, supported by a vast and deeply engaged user base. Rising monetisation, expanding domestic studios, and stronger integration with global platforms are transforming gaming from mass engagement into a scalable digital industry. It reflects how consumer behaviour, technology adoption, and creative capability are converging to shape a new growth frontier within India's media and entertainment landscape.

Policy and Institutions: Structuring the AVGC-XR Ecosystem

India's push in AVGC-XR is not just about building an industry. It is about creating pathways for young designers, animators,

GAMING SECTOR IN INDIA



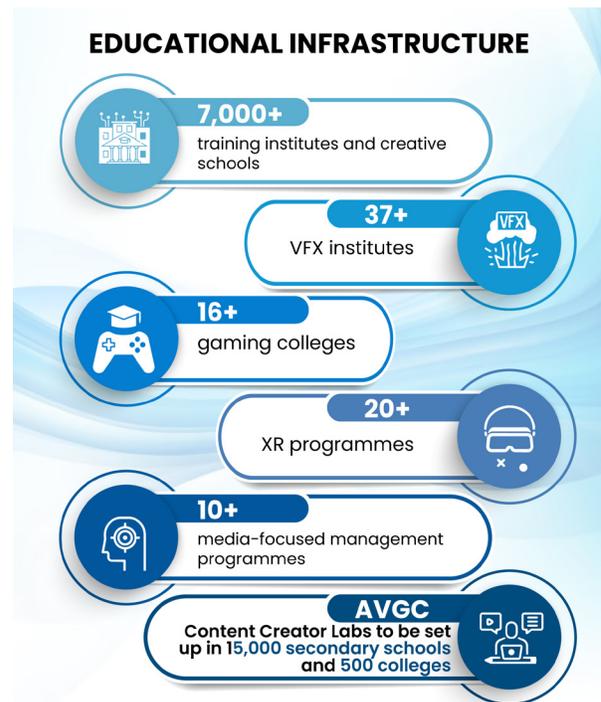
coders, and storytellers to turn creative skill into stable, global careers. A dedicated national roadmap now focuses on talent development, original intellectual property, industry collaboration, and international market access. With projections of nearly 20 lakh direct and indirect jobs over the next decade, the sector is being positioned as a meaningful employment engine for the digital generation.

At the heart of this effort is the Indian Institute of Creative Technologies (IICT), established as a National Centre of Excellence for AVGC-XR and gaming.

IICT brings structured training, advanced infrastructure, and industry collaboration under one roof, helping bridge the gap

between classroom learning and real-world production demands. For aspiring creators, it offers not just certification, but entry into global workflows.

This effort is reinforced by a wide training ecosystem and growing regional hubs across the country. Established centres such as Bengaluru, Hyderabad, Mumbai,



Pune, Chennai, and Thiruvananthapuram anchor the industry, while emerging cities are building their own creative clusters. Together, these networks expand opportunity beyond a few metropolitan pockets, allowing talent from across India to participate in and contribute to a rapidly evolving global creative economy.

Live Entertainment and Experiential Economies

India's live entertainment landscape has moved far beyond occasional spectacles. It is about shared experiences that bring cities alive. From stadium nights in Ahmedabad and Navi Mumbai to festival weekends in Mumbai and Delhi, concerts now shape travel plans, anchor cultural calendars, and turn large gatherings into collective memories. What was once dependent on sponsorship cycles has evolved into an audience-driven ecosystem where people actively choose to participate, spend, and return.



India today features regularly on global touring routes, with international performers and homegrown artists drawing massive crowds across cities such as Mumbai, Delhi, Bengaluru, Hyderabad, and Ahmedabad. The growth is visible not only in ticket lines but in expanding venue infrastructure – from Narendra Modi Stadium to premium spaces like NMACC – supported by professional

production networks and specialised event companies operating at global standards. Behind every headline performance is an ecosystem of technicians, stage designers, logistics teams, hospitality workers, and local businesses that move in rhythm with the show.

Live entertainment has therefore become more than a cultural outlet. It energises urban economies, stimulates tourism, creates employment, and strengthens India's cultural presence on the world stage. It reflects a society increasingly confident in gathering at scale and participating in a global cultural circuit.

The Orange Economy: Policy, Platforms, and Global Integration

The Orange Economy treats culture and creativity as sources of real economic value. It includes cultural industries, creative services, heritage-based activities, and experience-driven sectors where ideas and intellectual property generate income and jobs. Across the world, these industries are recognised for creating employment, supporting exports, and driving growth in cities and tourism.

For India, the Orange Economy has a deeper meaning. It turns the country's rich cultural heritage, diversity, and creative talent into economic opportunity and global visibility. It connects tradition with

modern platforms, allowing India's stories, skills, and creative output to travel beyond borders and contribute to national growth.

Platforms and market access:

Operationalising the Orange Economy

India's approach to growing the Orange Economy is centred on creating pathways for scale and global reach. Platforms are being designed to help creators move from local recognition to international markets, connecting talent with investors, producers, and global audiences.

The World Audio Visual and Entertainment Summit (WAVES) served as a focal point for this ecosystem. It brought together creators, startups, industry leaders, and policymakers from across the world, turning dialogue into deal-making and collaboration. Supporting this effort, WaveX enables startup innovation through investor engagement and incubation, while WAVES Bazaar operates as a marketplace for scripts, music, comics, and audio-visual rights, facilitating co-productions and cross-border partnerships.

Creator discovery was equally central. Initiatives such as the Create in India Challenge identifies emerging talent and links them directly to global platforms, ensuring that ideas developed locally could compete, collaborate, and commercialise internationally. Together, these platforms moved the Orange Economy from aspiration to execution.

Education, skilling, and institutional foundations

The expansion of the Orange Economy is being anchored in deliberate investment in education, skilling, and institutions. Recognising that creative industries are fundamentally talent-driven, India is building a pipeline that spans early exposure in schools, specialised training, and innovation-led entrepreneurship.

At the centre of this effort stands the IICT, which is providing industry-aligned training, startup incubation, advanced infrastructure, and collaboration with global technology partners, enabling creators and developers to move from learning to real-



world production across animation, visual effects, gaming, and immersive media.

This institutional push is being strengthened through the proposed establishment of AVGC Content Creator Labs in 15,000 secondary schools and 500 colleges. By embedding creative skills within the formal education system and expanding access across regions, the initiative is preparing a new generation of talent in line with projections that the AVGC sector will require nearly two million professionals by 2030.

Strategic Outlook: India and the Next Decade of Creative Power

Across classrooms, coding labs, film sets, concert arenas, and digital platforms, a new creative ecosystem is coming together. What connects these spaces is not just talent, but purpose. Institutions are being strengthened, markets are being organised, and creators are being connected to capital and global audiences. Policy is no longer separate from practice; it is shaping the conditions that allow imagination to become livelihoods, enterprises, and international partnerships.

The impact is already visible. Young artists are entering global production pipelines. Startups are building intellectual property that reaches audiences beyond borders.

Cities are hosting events that attract international circuits. Creative industries are becoming channels through which India creates jobs, exports services, and strengthens its global presence.

Continued investment in skills, platforms, and institutions will determine how effectively creativity turns into lasting economic strength. As global competition increasingly moves through culture, content, and digital ecosystems, India is positioning its creative economy not as a side sector, but as a strategic capability. In doing so, it is ensuring that imagination is not only expressed, but organised – and that creativity becomes a steady driver of growth and global engagement in the decade ahead.

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11

WAVES 2025: Catalysing Growth through Global Participation and Creative Collaboration



WAVES as a Strategic Platform for the Global Creative Economy

WAVES 2025 – the World Audio Visual and Entertainment Summit – began with a simple but ambitious idea: to bring together creative voices from around the

world into one collaborative space. From 1st to 4th May 2025, Mumbai’s Jio World Convention Centre and Jio World Garden transformed into a dynamic crossroads, where storytellers, technologists, investors, policymakers, and industry leaders came together not merely to exchange ideas, but to forge meaningful partnerships.



Conceived as India's first dedicated global convergence platform for media and entertainment, WAVES was designed to move beyond the format of a traditional summit and function as a living interface between creators and markets, ideas and institutions.

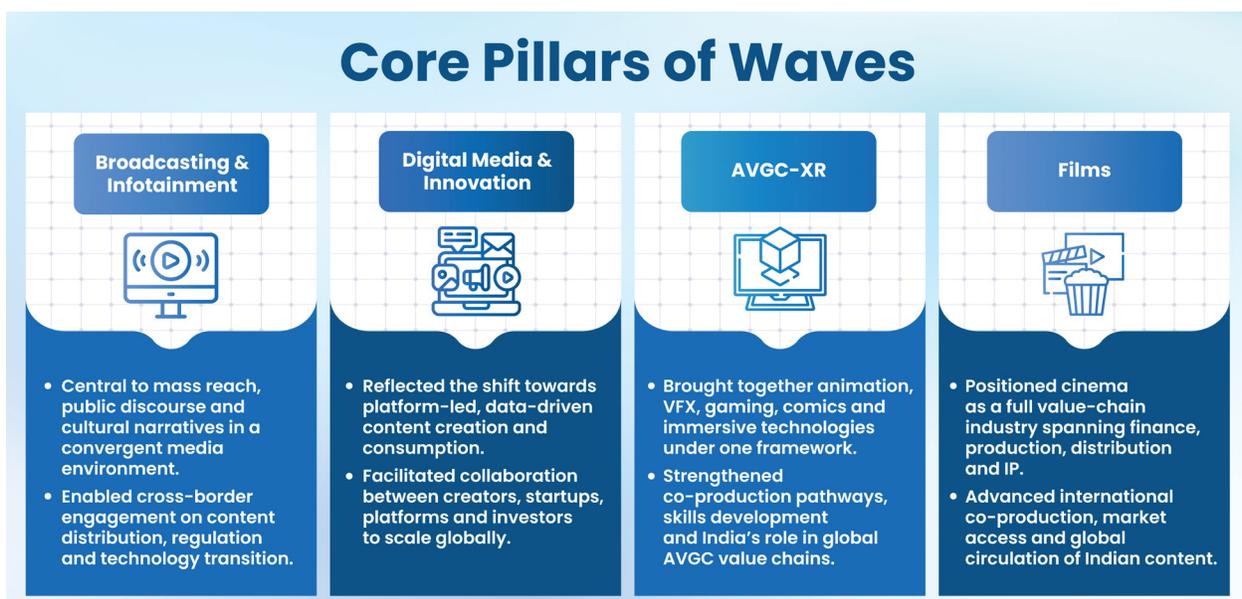
At a time when creative industries are shaping economies as much as they shape imaginations, WAVES placed collaboration at the centre of its design. The objective was clear: to connect Indian and global creative ecosystems in ways that generate real opportunity – in content creation, creative technology, intellectual property and market access. The scale of participation reflected that ambition. Stakeholders from over 100 countries, including policymakers, global studios, startups, investors and independent creators, engaged across broadcasting, films, digital media, Animation, Visual Effects, Gaming, Comics, and Extended Reality (AVGC-XR)

and emerging formats.

More than a one-time gathering, WAVES signalled a shift in how India engages with the global creative economy. Instead of fragmented conversations across sectors and regions, it brought together policy, commerce and creative talent into a single, integrated framework.

Institutional Architecture and Core Pillars

WAVES was structured around a set of core industry pillars that collectively represent the breadth and future trajectory of the global media and entertainment ecosystem. By bringing these segments onto a single platform, the summit enabled cross-sector interaction, policy alignment and commercial exchange, reflecting the increasingly convergent nature of creative industries worldwide.



Create in India Challenge

At the heart of WAVES was the Create in India Challenge, a platform built to discover new voices and place them on a global stage. The first season drew nearly one lakh registrations, including over 1,100 international participants from more than 60 countries. The numbers spoke volumes, but the momentum behind them spoke louder. Creators from across continents saw India not merely as a market, but as a dynamic meeting ground where ideas intersect, collaborate, and find new direction.



From this vast pool, 750 finalists were selected to showcase their work at Creatosphere, a curated space within WAVES where emerging talent could engage directly with studios, platforms and decision-makers. Among them were 43 international finalists from over

20 countries, turning the showcase into a genuine exchange of talent and perspectives, rather than a one-directional display.

By linking talent discovery with real industry exposure, the Create in India challenge moved beyond recognition. It created pathways for collaboration, co-creation and cross-border opportunity, reinforcing WAVES as a platform where creative ambition could find global resonance.

WAVES Bazaar

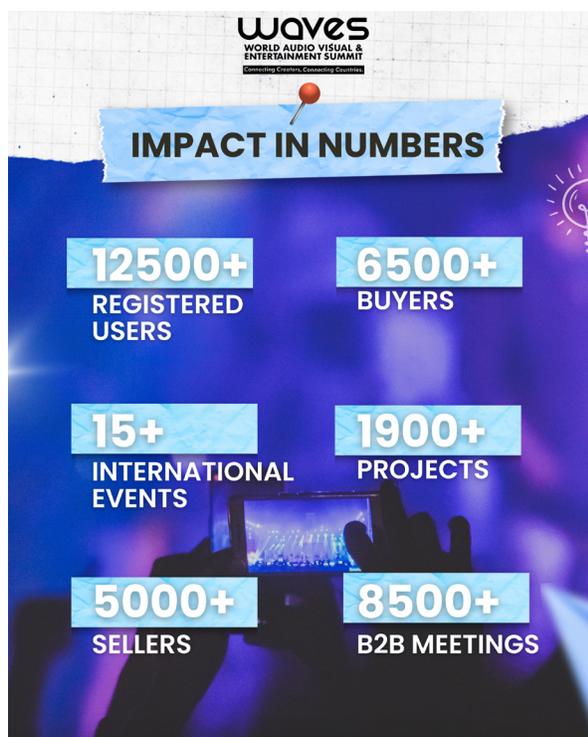
If Create in India was about discovering voices, WAVES Bazaar was about giving them a marketplace. As the commercial backbone of the Summit, it brought together creators, studios, platforms, broadcasters, distributors and investors across film, television, gaming, music and immersive media – structured not just for networking, but for real deals and lasting business relationships. Launched ahead of the Summit and designed to operate year-round, it reflected

Key Outcomes:

- Enabled structured buyer-seller engagement, including curated B2B meetings, project pitching and content discovery formats.
- Facilitated over 3,000 B2B meetings, generating business transactions exceeding ₹800 crore, with deal values

projected to cross ₹1,000 crore as negotiations progressed beyond the summit.

- The Buyer-Seller Market alone accounted for over ₹500 crore in revenues, reflecting strong commercial traction.
- The Pitch Room shortlisted 16 projects from more than 100 submissions, offering creators direct access to global buyers and investors.
- The Viewing Room showcased 100 films from eight countries, strengthening international visibility and distribution opportunities.



- Enabled concrete cross-border outcomes, including announcements of international co-productions involving Indian and global partners.

The impact of WAVES Bazaar extends far beyond the Summit itself. As a year-round global marketplace, it continues to generate sustained industry engagement and measurable outcomes.

Culturals and Concerts

Within WAVES, live cultural performances were not merely part of the program- they were shared experiences that sparked connection, celebrated diversity, and brought the spirit of the gathering to life. Across four days in Mumbai, WAVES Culturals & Concerts brought together India's classical, folk and contemporary traditions alongside international artists, turning the stage into a space of shared expression. From orchestral compositions and dance to cross-border collaborations, these performances embodied the spirit of "Connecting Creators, Connecting Countries."

By weaving culture into the Summit's core, WAVES positioned live artistic exchange not merely as a celebration, but as a catalyst for collaboration, creative dialogue and global resonance.

Live Events and Collaborations at WAVES 2025

Invocation

Opening musical performance led by M. M. Keeravaani with a live orchestra and leading vocalists, culminating in the WAVES Anthem.

Rhythms of India, Echoes of the World (YouTube-curated)

Global fusion concert featuring A. R. Rahman, Shreya Ghoshal, Tetsuo Sisters, Dharavi Dream Project, Beatpella House, King, and Alan Walker.

Cross-border Collaborations

Live collaborations such as Dharavi Dream Project × Beatpella House and King × Alan Walker, showcasing international creative exchange.



Sankalp The Resolve

Inaugural narrative performance by Sharad Kelkar (Sutrathar), tracing India's storytelling and cinematic evolution.

'Waves of India' Album Launch

Multi-composer album with contributions from M. M. Keeravaani, A. R. Rahman, Shankar Mahadevan, Ricky Kej, and Meet Bros.

WaveX (WaveXcelerator)

WaveX infused WAVES with the dynamism of the startup ecosystem. Centered on innovation in media, entertainment, and language technologies, it created a bridge between emerging ventures, government institutions, investors, and global industry leaders- turning ideas into pathways for scale and impact.

At WAVES 2025, over 30 startups pitched live to major players such as Microsoft, Google and Lumikai, while nearly 100 startups showcased their solutions, opening doors to capital and partnerships. Beyond the Summit, WaveX continues to support startups through incubation, mentorship and institutional partnerships with T-Hub, IIT Delhi and a nationwide network of centres – embedding innovation into

India's creative ecosystem and linking it to global opportunity.

Global Media Dialogue

The Global Media Dialogue was a high-level government-to-government initiative held as a centrepiece of the WAVES 2025 in Mumbai. It gave WAVES its institutional depth, bringing governments, regulators and industry leaders onto a shared multilateral platform. It provided space to address the structural shifts reshaping media worldwide – from technology and governance to inclusion and cross-border cooperation.

At its core was the adoption of the WAVES Declaration – a formal, collective

commitment by participating nations to strengthen global cooperation in

media and entertainment. The Declaration underscored ethical media practices, digital inclusion, cultural diversity and the responsible use of emerging technologies, while encouraging cross-border partnerships and co-productions. By formally anchoring these principles, the

Dialogue moved beyond discussion to deliberate alignment, positioning WAVES as a platform where shared vision translates into coordinated action, and global consensus in the creative economy begins to take shape.

WAVES Declaration

Adopted at the Global Media Dialogue during WAVES 2025 in Mumbai on 2nd May 2025, the WAVES Declaration was endorsed by 77 participating nations, marking a collective commitment to strengthening global cooperation in media and entertainment.

Key commitments and principles:

- » Reaffirms the role of media and entertainment in fostering global harmony, cultural understanding and resilience in a post-pandemic, uncertain world.
- » Commits to bridging the digital divide by promoting access, affordability and citizen-centric media ecosystems, ensuring equitable participation across communities.

- » Emphasises ethical, inclusive and responsible media, including the promotion of diverse voices, public interest content, and fact-based journalism.
- » Recognises media and entertainment as engines of inclusive growth and employment, with a focus on youth, women and underrepresented groups.
- » Supports fair and open markets, protection of intellectual property, and cross-border partnerships, including co-productions, trade and joint funding models.
- » Affirms the responsible and ethical use of emerging technologies, particularly artificial intelligence, guided by transparency, accountability and inclusivity.
- » Calls for strengthened cooperation to counter misinformation and disinformation, while upholding human rights and cultural sensitivities.
- » Reiterates commitment to the Sustainable Development Goals, linking creative industries to long-term peace, progress and prosperity.

Strategic Direction: A Blueprint for India's Creative Economy

Beyond the stages and marketplaces, the conference track of WAVES 2025 posed a deeper question: what kind of creative future is India shaping? Framed as a “Blueprint for a Creative India,” the conversations moved past celebration to strategy- recasting media and entertainment not simply as cultural expressions, but as engines of economic growth, capable of expanding exports, generating employment, and amplifying India’s cultural voice on the global stage.

The conversations recognised creators and startups not as peripheral participants, but as economic actors shaping new markets. From the rapid expansion of India’s creator economy to the integration of AVGC-XR into mainstream media, advertising and immersive storytelling, the message was clear: creativity today is inseparable from technology, entrepreneurship and global ambition.

Embedding innovation within education systems, incubation networks and policy frameworks emerged as a shared priority, reinforcing the idea that creative industries are not just niche domains but export-ready, future-facing sectors.

Participation, Outcomes, and Industry Impact

Scale and Global Participation

WAVES 2025 unfolded at a scale that signalled serious global intent. Representatives from over 100 countries came together in Mumbai, spanning policymakers, industry leaders, creators, startups and enterprises across broadcasting, digital media, AVGC-XR, films and allied sectors. More than one lakh people engaged with the Summit. Among them were over 10,000 delegates, 1,000 creators, more than 300 companies and 350 startups. The significance lay not only in the scale, but in the composition. Decision-makers, innovators and storytellers shared the same space, turning WAVES into a meeting point for creative ideas, investment and international collaboration within the creative economy.

Policy and Institutional Outcomes

At the policy level, the Global Media Dialogue provided a formal multilateral platform for engagement among governments and institutions. 77 countries participated in the Dialogue, culminating in the adoption of the WAVES Declaration, which articulated shared commitments on ethical media practices, digital inclusion, cultural diversity and international cooperation. This outcome elevated WAVES beyond just a consultative

exchange, positioning it as a forum capable of producing collective frameworks and reinforcing India's role as a convener in global media and cultural governance.

Creators, Talent and CreatoSphere Outcomes

The Create in India Challenges turned talent discovery into access. What began as entries across 33 categories grew into a global creative exchange, drawing participants from India and more than 60 countries. The scale reflected not just interest, but confidence in India as a shared stage. For over 750 finalists, CreatoSphere became more than a showcase. It was a point of entry into global networks. Across eight creative zones, creators connected with studios, platforms and collaborators. The WAVES Creator Awards recognised more than 150 of them, but the lasting outcome was structural. A pathway now exists for emerging talent to move from recognition to real opportunity within the global creative economy.

Startup Innovation and WaveX Engagement

For the over 200 startups that engaged on the WaveX platform, participation translated into progression. Live pitches by more than 30 ventures and exhibition showcases by nearly 100 did not end on stage. They led to investor follow-ups, partnership discussions and structured entry points into larger industry networks.

Several founders converted these interactions into tangible next steps – refining product strategy, securing mentorship commitments, initiating pilot conversations and exploring funding pathways. The platform reduced the distance between innovation and market. WaveX did not simply convene startups; it helped convert exposure into execution.

Market Platforms and Industry Integration

Through WAVES Bazaar, commercial conversations translated into active deal-making. Structured buyer–seller meetings and curated rights discussions enabled creators and enterprises to move projects into negotiation stages, initiate co-production talks and formalise distribution pathways across film, television, music, animation and digital media.

For participating companies, the platform reduced friction between pitch and partnership. Discussions matured into commercial alignments, content licensing explorations and cross-border collaborations. WAVES Bazaar did not simply connect markets. It accelerated entry into them, strengthening India's positioning within global creative value chains through tangible commercial movement.

Institutional Capacity Building and Ecosystem Support

WAVES 2025 signalled a shift toward long-term capacity building in the creative economy. The positioning of IICT as the National Centre of Excellence for AVGC-XR reflected a clear institutional commitment to strengthening advanced skills and production capabilities in emerging creative technologies. In the months that followed, this direction was reinforced by the announcement of AVGC Content Creator Labs across 15,000 secondary schools and 500 colleges, aimed at building a workforce of two million professionals by 2030. Together, these steps suggest that the vision articulated at WAVES is translating into structural expansion, strengthening the talent pipeline needed for India's creative industries to scale globally.

Conclusion: From Convening Power to Enduring Capability

WAVES 2025 highlighted a pivotal moment for India. The creative economy has moved from the sidelines to the center of growth and diplomacy. It is now a key driver of how nations connect, compete, and collaborate. The Summit showcased not just scale, but confidence. Creators expressed global ambition, startups unveiled solutions for international markets, and policymakers engaged with the understanding that

culture, technology, and commerce are increasingly intertwined.

The impact of WAVES lies in the bridges it has begun to build. Between independent storytellers and global studios. Between early-stage founders and institutional capital. Between governments navigating common technological shifts. These were not symbolic gestures. They were working relationships taking shape in real time. Perhaps the most meaningful outcome is continuity. Networks remain. Partnerships progress. Young creators return home with global contacts. Startups refine products with sharper direction. Institutions carry forward shared frameworks. In this way, WAVES shifts from being an event to becoming infrastructure. If sustained with care, this platform has the potential to deepen India's presence in global creative value chains not through assertion, but through participation and partnership. The future of the creative economy will be shaped by those who can combine imagination with organisation. WAVES suggests that India intends to do both.

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12

India's Resilient Production Systems in Agriculture



Introduction

India's agricultural sector continues to play a pivotal role in sustaining **rural livelihoods, ensuring economic resilience, and safeguarding national food security**. Agriculture and allied activities account for nearly **one-fifth** of the country's gross value added at current prices, employ approximately 46.1 percent of the workforce, and support close to **55 percent** of the population, underscoring their substantial socio-economic significance. Over the past five years, the sector has achieved an average annual growth rate of around **4.4 percent** at constant prices, reflecting enhanced expansion supported by **improved farm practices, technological integration, and more resilient production systems**.

India's Agricultural Production Performance

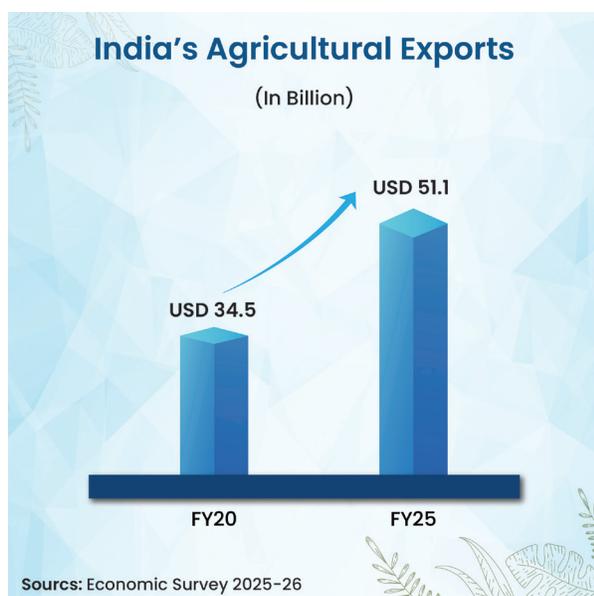
In the agricultural year 2024-25, India recorded an unprecedented foodgrain output of **357.73 million metric tonnes (MMT)**, marking an increase of **25.43 million metric tonnes (MMT)** over the preceding year, reflecting sustained gains in productivity, improved input management, and strengthened institutional support to farmers. The increase was primarily driven by higher production of **rice, wheat, maize, and coarse cereals** (including millets, designated as **Shree Anna**).

Horticulture has simultaneously emerged as a major driver of agricultural transformation and value addition. Total horticulture production reached **362.08 million tonnes (MT)** in 2024-25, indicating a structural shift towards high-value crops. According to the second advance estimates, production increased from **280.70 million tonnes** in 2013-14 to **367.72 million tonnes** in 2024-25. This output comprises approximately 114.51 million tonnes of fruits, **219.67 million tonnes** of vegetables, and **33.54 million tonnes** from other horticultural crops. The gradual scaling of both foodgrain and horticultural production underscores India's strengthening domestic agricultural base and its growing prominence in global agri-food systems.

India in Global Agricultural Markets

India's agricultural exports have grown steadily in recent years. Agricultural export earnings increased from **USD 34.5 billion in FY20** to **USD 51.1 billion in FY25**, reflecting a **CAGR of 8.2 percent**. In FY25, agri-food exports, including processed food products, amounted to **USD 49.43 billion**, accounting for about **11.2 percent** of total exports. Notably, the share of **processed food exports** has also risen consistently, from **14.9 percent in FY18** to **20.4 percent in FY25**, indicating a progressive shift toward higher value-added within the agricultural export basket.

These trends underline the expanding role of processed and diversified agricultural products in strengthening export competitiveness while creating new opportunities across production, processing, and global market integration.



India holds a strong position in global agriculture, supported by diversified production systems and region-specific strengths across cereals, pulses, horticulture, and plantation crops. With the **world's second-largest agricultural land area**, India is a **global leader in farm output**, ranking among the world's top producers across several commodities, reflecting both the scale and sustainability of its agricultural production.

India's Dominance in Cereals, Pulses, and Millets, Rice and Wheat

India ranks as the world's **second-largest producer** of both **rice and wheat**, with output reaching **150.18 million tonnes of rice** and **117.94 million tonnes of wheat** during the agricultural year 2024-25. Rice production is primarily concentrated in states such as Uttar Pradesh, Telangana, and West Bengal. At the same time, Uttar Pradesh, Madhya Pradesh, and Punjab constitute the leading wheat-producing regions, reflecting the **geographic concentration of cereal production** within the country.

Pulses and Millets

India also leads globally in **pulse production**, recording an output of **25.68 million tonnes (2024-25)**, with **Madhya Pradesh, Maharashtra, and Rajasthan** serving as the **principal producing states**. The country also **ranks first** worldwide in millet production, achieving approximately **18.59 million tonnes (2024-25)**, largely driven by **Rajasthan, Maharashtra, and Karnataka**.

In terms of trade performance, **Rice exports** reached **USD 12.95 billion in 2024-2025**, while exports of **pulses and millets** amounted to **USD 855 million** and **USD 59.20 million**, respectively. These figures underscore the growing international demand for diversified, climate-resilient cereal crops, reinforcing India's strategic role in global food and nutrition security.

India's Global Position in Horticulture

Fruits and Vegetables: India is the world's **second-largest producer of fruits and vegetables**, with output reaching **114.51 million tonnes of fruits and 219.67 million tonnes of vegetables in 2024-25**. Fruit production is primarily concentrated in **Andhra Pradesh, Maharashtra, Uttar Pradesh, Gujarat, Karnataka, and Tamil Nadu**, while **Uttar Pradesh, West Bengal, Madhya Pradesh, Bihar, and Gujarat** lead vegetable output. Exports of fruits and vegetables amounted to **USD 1,818.56 million in 2024-25**, reflecting the increasing contribution of high-value horticulture crops to India's agricultural trade and in global market integration.

Dry Onion: India also ranks **first globally in dry onion production**, contributing nearly **25 percent** of total world output, largely from **Maharashtra, Madhya Pradesh, and Gujarat**.

India's Leadership in High-Value Cash Crops

Sugarcane: In high-value cash crops, India is the **second-largest producer of sugarcane**, with output of **454.61 million tonnes (2024-25)**, mainly from **Uttar Pradesh and Maharashtra**.

Cotton: India ranks as the world's second largest producer of cotton, with output estimated at approximately **5.05 million tonnes** (converted from bales) in **2024-**

25. Production is concentrated mainly in **Karnataka, Maharashtra, and Gujarat**, which constitute the principal cotton-growing states. India's cotton exports during the **2024-25** cotton season were estimated at about **18.00 lakh bales (170 kg each)**, which is approximately **0.31 million metric tonnes**.

Tea: India ranks **second globally in tea production**, with output reaching **1.203 million tonnes during April-December 2024-25**. Production is concentrated in **Assam, West Bengal, Tamil Nadu, Kerala, and Karnataka**. Tea exports during the period from **April to October 2025-26** amounted to **USD 605.90 million, up 15.16 percent** from the corresponding period of the previous year.

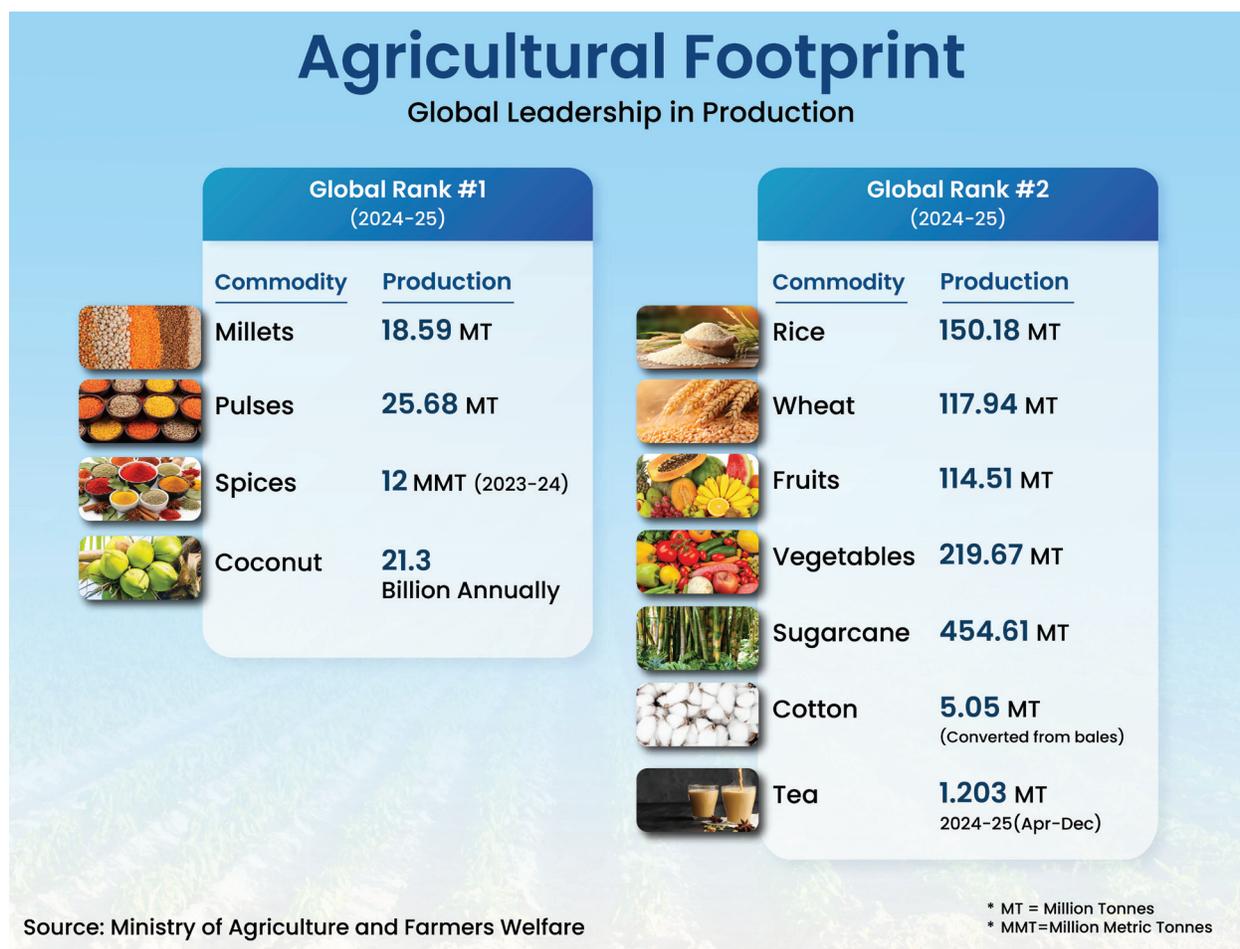
Spices: India continues to lead the world as the leading producer, with total production reaching **12 million metric tonnes in 2023-24**. Major producing states include **Madhya Pradesh, Gujarat, and Andhra Pradesh**. Spices exports reached **USD 4.52 billion in FY25**, underscoring India's strong global market presence in this segment.

Coconut: India ranks **first globally in coconut production**, with an annual output of approximately **21.3 billion nuts**. Coconut exports were valued at **USD 513 million in 2024-25**, reflecting steady international demand.

Coffee: India produces **around 0.36 million tonnes** of coffee annually, with nearly

70 percent exported to 128 countries. Karnataka, Kerala, and Tamil Nadu are the principal producing states. During April-October FY 2025-26, coffee exports

amounted to **USD 1,176.31 million**, representing an increase of approximately **12 percent** over the corresponding period of the previous year.



The **Union Budget 2026-27** has emphasised on the promotion of **high value crops**, by announcing targeted support for **coconut, sandalwood, cocoa and cashew in coastal regions, agar trees in the North Eastern states, and high value nuts such as almonds, walnuts and pine nuts in hilly areas**. This region-specific approach reflects a policy intent to harness local agro-climatic strengths, and encourage diversification towards crops that offer higher economic returns.

Therefore, India's diversified commodity base and geographically balanced production systems strengthen its role in stabilising **global food supply chains**. The integration of improved production practices with **expanding export markets** reflects a transition towards resilient agriculture that boosts economic growth while promoting long-term environmental balance.

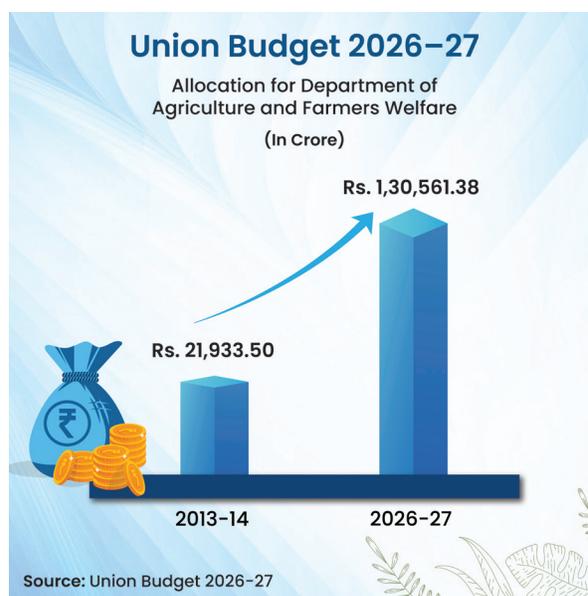
Public Policy Interventions Supporting Resilient Production Systems

India's agricultural policy framework combines **financial support**, **productivity enhancement**, and **risk management** measures to strengthen farmer welfare and sectoral resilience.

Budget Allocation

The Government has significantly enhanced budgetary allocations to the agriculture sector, underscoring a long-term policy commitment to strengthening farmers' welfare and rural livelihoods, and over the years, reflecting a consistent commitment to farmers' welfare.

Budget allocation for the **Department of Agriculture and Farmers Welfare** increased from **Rs. 21,933.50 crore** (approximately USD 2.64 billion) in **2013-2014** to **Rs. 1,27,290.16 crore** (approximately USD 15.34 billion) in **2025-26**, representing



a **substantial enhancement in public investment over the period**. Building on this trajectory, the budget allocated (2026-27) of **Rs. 1,30,561.38 crore** (approximately USD 15.73 billion) to the **Department of Agriculture and Farmers Welfare** reaffirms the continued prioritization of agricultural development.

From Input Support to Resilient Growth: India's Productivity-Led Agricultural Strategy

India's agricultural development strategy has progressively shifted toward enhancing productivity through improved input-use efficiency, technological adoption, and the promotion of sustainable agronomic practices. Mission-oriented interventions, including the **National Food Security and Nutrition Mission**, the **Mission for Atmanirbharta in Pulses**, and the **National Mission on Edible Oils-Oilseeds and Oil Palm**, along with targeted extension and

institutional credit support, are driving this structural transformation toward higher productivity, reduced import dependence, and enhanced resilience within the agricultural sector.

- As of mid-November 2025, approximately 25.55 crore Soil Health Card scheme cards have been issued to promote balanced and site-specific nutrient management.

- » The **National Food Security and Nutrition Mission (NFSNM)**, formerly the National Food Security Mission (NFSM), is a centrally sponsored scheme to increase the production of rice, wheat, pulses, and nutri-cereals/coarse cereals in the country.
- » The **Mission for Aatmanirbharta in Pulses (2025–31)** aims to achieve **self-sufficiency in pulses** by significantly enhancing domestic production reduce import dependence, and pave the way for an “**Aatmanirbhar Bharat**” in pulses.
- » The **National Mission on Edible Oils (NMEO)**, including the **Oil Palm (NMEO-OP) and Oilseeds (NMEO-Oilseeds)** initiatives, aims to achieve self-reliance in edible oil production by 2030-31. It focuses on expanding cultivation areas, improving seed quality, enhancing technology, and increasing farm income to reduce import dependency.

Quality Seeds and Soil Health

- Under the **Sub-Mission on Seeds and Planting Materials (SMSP)** initiative (a centrally sponsored scheme under the umbrella scheme of “Green Revolution-Krishonnati Yojana”), approximately **6.85 lakh Seed Villages** have been established, resulting in the production of **1,649.26 lakh quintals** of quality seeds.
- The share of gross irrigated area has increased to **55.8 percent** under **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)**, reflecting progress in expanding irrigation coverage and improving water-use efficiency.

- » **Sub-Mission on Seeds and Planting Material initiative (SMSP)** seeks to expand the supply of certified and quality seeds while improving the seed replacement rate and the standard of farm saved seeds. It also works to modernise seed production, processing, testing and storage infrastructure, and encourages the adoption of advanced techniques across the seed value chain.
- » A **Soil Health Card** is issued to farmers for each landholding, detailing soil status based on 12 parameters including **Nitrogen, Phosphorus, Potassium, Sulphur, Zinc, Iron, Copper, Manganese, Boron, pH, Electrical Conductivity, and Organic Carbon**. Issued every two years, it guides farmers on suitable fertilisers and soil treatments to maintain long term soil health.
- » **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)** aims to improve on farm water efficiency by promoting drip and sprinkler irrigation systems. It also supports small scale water storage and conservation measures to strengthen water availability for micro irrigation.

Credit, Mechanisation and Technology

- Ground-level agricultural credit disbursement reached **Rs. 28.69 lakh crore** in FY 2024-25, reflecting the structural expansion of institutional finance to the farm sector.
- As of 31 March 2025, **7.72 crore operative Kisan Credit Card (KCC)** accounts were in operation, strengthening farmers' access to timely and affordable credit.
- Between 2014-15 and 2025-26, **25,689 Custom Hiring Centres (CHCs)** were

established to enhance smallholder access to farm mechanisation services. A Custom Hiring Centre (CHC) is a unit comprising a set of farm machinery, implements, and equipment meant for hiring by farmers.

- Livestock sector productivity has been supported through large-scale technology and health interventions, including approximately **125 crore vaccinations** against Foot and Mouth Disease (FMD) since 2020 and **88.32 million artificial inseminations** conducted during 2024-25.

Kisan Credit Card (KCC) scheme meets the financial requirements of farmers at various stages of farming. The scheme aims at providing adequate and timely credit support from the banking system under a single window with flexible and simplified procedure to the farmers for their cultivation and other needs like short term credit requirements for cultivation of crops, post-harvest expenses, investment credit requirement for agriculture and allied activities, produce marketing loan, consumption requirements of farmer household, working capital for maintenance of farm assets and activities allied to agriculture.

Sustainable Agriculture, Extension, and Mission Mode Initiatives

- Natural farming expanded to **17,632 clusters** covering **6.39 lakh hectares**, with **15.79 lakh** farmers enrolled.
- Kisan Call Centres handled **30.65 lakh** farmer queries in 2024-25.
- Oilseed mission recorded over **18 percent** increase in oilseed area, nearly **55 percent** in production, and about **31 percent** in productivity between **2014-15** and **2024-25**.
- Domestic edible oil availability reached **121.75 lakh tonnes** in 2023-24.
- Ethanol blending saved over **Rs.1.44 lakh crore** in foreign exchange as of **August 2025**.

These interventions reflect a shift towards technology-driven, resource-efficient, and improved production systems that strengthen farm productivity and resilience.



Enhancing Productivity through Inputs, Technology and Sustainable Practices

Quality Seeds and Soil Health

Share of Gross Irrigated Area is **55.8%**



6.85 Lakh
Seed Villages
1649.26 Lakh Quintals
Quality Seeds



25.55 Crore
Soil Health Cards Issued

Formal Credit Support

Rs. 28.69 Lakh Crore Ground Level Credit Disbursed



7.72 Crore
Kisan Credit Card
Accounts



25,689 Custom Hiring
Centres Established

Technology Support for Livestock

Artificial Insemination Coverage of **40%** of Breedable Females



125 Crore
FMD Vaccinations



88.32 Million
Artificial Inseminations

Sustainable Agriculture & Extension

17,632 Clusters and **6.39 Lakh Ha** under Natural Farming



15.79 Lakh
Farmers Enrolled



30.65 Lakh Calls Answered
Kisan Call Centres

Mission Mode Approach (Oilseed Initiatives)

Increase in Oilseed Area (**18%**), Production (**55%**), Productivity (**31%**)



121.75 Lakh Tonnes
Domestic Edible Oil Availability



Rs. 1.44 Lakh Crore Saved
from Ethanol Blending

Source: Economic Survey 2025-26

Integrated Support for Farmers' Welfare, Risk Management, and Collective Action

Securing stable farm incomes, institutionalising risk mitigation mechanisms, and strengthening cooperative networks are integral to enhancing farmer resilience and sustaining agricultural growth amid increasing climatic and market variability.

Price and Income Support

- The **Minimum Support Price (MSP)** has been announced for **22 mandated crops** and fixed at **1.5 times** the cost of production, with upward revisions for the **Kharif Marketing Season (KMS)**

2025-26 and **Rabi Marketing Season (RMS) 2026-27.**

- Under **Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)**, over **Rs.4.09 lakh crore** has been disbursed in **21 instalments** (till **2025**), providing direct income support to farmers.
- The **Pradhan Mantri Kisan Maandhan Yojana (PMKMY)** has enrolled **24.92 lakh farmers** as of **31 December 2025**, extending social security coverage to small and marginal cultivators.

- » **Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)**, is a **Central Sector Scheme** offering **annual financial assistance of Rs. 6,000/-** to each **eligible farmer family**, delivered in three equal instalments of **Rs. 2,000/-**, into their Aadhaar seeded bank accounts of farmers through DBT mode.
- » **Pradhan Mantri Kisan Maandhan Yojana (PMKMY)** scheme aims to provide social security net for the **Small and Marginal Farmers (SMF)** by way of pension, as they have minimal or no savings to sustain their livelihood during their old age and to support them in the event of consequent loss of livelihood. Under this scheme, a minimum fixed pension of **Rs.3,000/-per month** will be provided to the eligible small and marginal farmers, subject to certain exclusion clauses, on attaining the age of 60 years. The scheme is a voluntary and contributory pension scheme, with entry age of 18 to 40 years.

Crop Insurance Protection:

- The Pradhan Mantri Fasal Bima Yojana (PMFBY) insured **4.19 crore** farmers during **2024-25**, covering **6.2 crore** hectares.
- Since **2016-17**, over **86 crore** applications have been processed, with claims exceeding **Rs.1.90 lakh crore** disbursed.
- Coverage expanded by **32 percent** compared to **2022-23**, strengthening protection against climate and market-related risks.

is operational in **11 PACS**, with **500 new godowns** announced in **2024** to enhance local storage capacity.

- Institutional reforms through the **National Cooperation Policy** and **Tribhuvan Sahkari University** aim to strengthen governance and capacity-building within the cooperative sector.

Collectively, these interventions consolidate income stability, institutional risk protection, and expand collective market access, thereby reinforcing the resilience and long-term sustainability of India's agricultural economy.

Pradhan Mantri Fasal Bima Yojana (PMFBY) is a crop insurance scheme aiming to provide financial protection to farmers against crop loss due to natural disasters (hail, drought, famine), pests, and diseases. PMFBY provides crop insurance at a cost-effective premium to all Indian farmers through a network of insurance companies and banks.

Strengthening Cooperatives and Collective Systems

- Of **67,930 Primary Agricultural Credit Societies (PACS)** under computerisation, **54,150** have been onboarded onto **Enterprise Resource Planning (ERP)** platforms, with **43,658** operational.
- A total of **18,183 new multipurpose cooperative societies** were registered by **March 2025**.
- A decentralised grain storage programme



Did You Know?

Primary Agricultural Credit Societies (PACS) are village-level institutions that provide short-term credit and financial services to rural borrowers, and facilitate the collection of repayments.



Income, Insurance and Cooperative Support for Farmers

Price and Income Support

- MSP announced for **22 mandated crops**, fixed at **1.5 times** the cost of production
- MSPs increased for **KMS 2025–26** and **RMS 2026–27**
- PM KISAN: Over **Rs.4.09 Lakh Crore** released in **21 installments**



Crop Insurance Protection



Pradhan Mantri Fasal Bima Yojna:

- **4.19 Crore** Farmers Insured in 2024–25
- Over **Rs.1.90 Lakh Crore** Claims Disbursed

Strengthening Cooperatives & Collective Systems

- **67,930 PACS** Under Computerisation
- **18,183** New Multipurpose Cooperative Societies Registered



Source: Economic Survey 2025–26



Market Reforms, Value-Chain Modernisation, and Public Food Distribution

The strengthening of **food management systems, market infrastructure, and value addition** mechanisms has emerged as a central pillar of India's farm-to-market strategy. Strategic investment in storage capacity, processing facilities, digital market platforms, and public distribution reforms is enhancing supply chain efficiency, stabilising prices, and improving farm-level remuneration. Collectively, these interventions are fostering a more resilient, transparent, and integrated food ecosystem that balances producer incentives with consumer welfare.

Market Linkages and Infrastructure

Significant investments in market linkages and post-harvest infrastructure have strengthened agricultural value chains and improved producers' integration with formal markets. As of 31 December 2025, **49,796 storage projects** had received financial assistance amounting to **₹4,832.70 crore**, while **25,009 marketing infrastructure projects** had received subsidies totalling ₹2,193.16 crore. The **e-National Agriculture Market (e-NAM) platform** expanded its outreach to **1.79 crore farmers, 2.72 lakh traders, and 4,698 Farmer-Producer Organisations (FPOs)** across **1,522 mandis** in 23 States and 4 Union Territories, enhancing digital price discovery and inter-market trade.

The **e-National Agriculture Market (e-NAM)** is a pan-India electronic trading portal designed to integrate existing APMC (Agricultural Produce Market Committee) mandis across the country into a unified online platform, enabling **"One Nation One Market"** for agricultural commodities. The platform streamlines agricultural marketing by offering single-window services such as commodity arrivals, AI-based quality assaying, e-bidding, and direct e-payment to farmers. It aims to enhance transparency, efficiency, and competitiveness in agricultural trade while expanding market access for farmers and reducing information asymmetry.

Under the Formation and Promotion of **10,000 FPOs** scheme launched in 2020, 10,000 FPOs had been registered by 31 December 2025. In the fisheries sector, collectivisation has been reinforced through the formation of **2,195 Farmers' Fisheries Producer Organisations (FFPOs)**, alongside the extension of **Kisan Credit Card benefits to 4.39 lakh fishers**, thereby broadening institutional credit access and enhancing sectoral resilience.

Food Processing and Value Addition

The food processing sector plays a significant role in India's industrial landscape, accounting for **12.91 percent** of organised manufacturing employment. Under the **Pradhan Mantri Kisan Sampada Yojana (PMKSY)**, 1,185 projects had been completed as of 30 November 2025, strengthening **modern processing and cold-chain infrastructure**. The **Production Linked Incentive Scheme for the Food Processing Industry (PLISFI)** approved 169 applications, mobilising investments of

₹9,207 crore, with incentives amounting to **₹2,162.55 crore** disbursed by 31 December 2025.

Additionally, the **Pradhan Mantri Formalisation of Micro Food Processing Enterprises Scheme (PMFME)** supported **4,04,062 applications**, facilitating **1,72,707 loans** with term lending of **₹14.19 thousand crore** and extending seed capital assistance of **₹1,277.45 crore** to women Self-Help Groups as of **31 December 2025**, thereby promoting decentralised value addition and inclusive enterprise development.

- » **Pradhan Mantri Kisan Sampada Yojana (PMKSY)** constitutes a comprehensive initiative aimed at developing modern infrastructure for the food processing sector. It seeks to establish an integrated and efficient supply chain spanning from the farm gate to retail markets. The scheme enhances farmers' price realisation, minimises post-harvest losses, promotes value addition, and supports income enhancement. Additionally, it generates rural employment, increases processing capacity, and strengthens the export competitiveness of processed food products.
- » **The Production Linked Incentive Scheme for the Food Processing Industry (PLISFI)** proposes financial incentive to modernize and enhance competitiveness of the food processing industry by manufacturing specific categories of food products having high potential for growth in output and value addition.
- » **Pradhan Mantri Formalisation of Micro Food Processing Enterprises Scheme (PMFME)** is a Centrally Sponsored Scheme by the Ministry of Food Processing Industries, designed to address the challenges faced by the micro-enterprises and to tap the potential of groups and cooperatives in supporting the upgradation and formalization of these enterprises.

Procurement and Food Security

The Central Government procures foodgrain to ensure food security, while providing price support to farmers through Minimum Support Prices announced by the Department of Agriculture and Co-operation. The details of the procurement of food grains are as follows:

- RMS 2025–26 (Wheat): **300.35 LMT** procured; **25.13 Lakh** farmers benefited.
- KMS 2024–25 (Paddy): **832.17 LMT** procured; **118.59 Lakh** farmers benefited.
- KMS 2025–26 (Paddy) (as on 17.11.2025): **243.48 LMT** procured; **21.22 Lakh** farmers benefited.
- Coarse Grains/Millet 2024–25: **11.72 LMT** procured.
- KMS 2025–26 (Coarse Grains/Millet) (as on 16.11.2025): **64,365 MT** procured (ongoing).

Therefore, the government maintains adequate food stocks to meet buffer norms for food security, ensure regular supply

through the **Public Distribution System**, and enable market intervention to stabilise open market prices

Under the **National Food Security Act**, subsidised foodgrains have been provided to **81.35 crore** beneficiaries, covering up to **75 percent of the rural population** and **50 percent of the urban population**.

Storage and Public Distribution System

The implementation of the **One Nation One Ration Card (ONORC)** has achieved **99.8 percent Aadhaar seeding of ration cards**. It has been operationalised across all 36 States and Union Territories, enhancing beneficiary portability and inclusion. Over **99 percent** of the 5.43 lakh Fair Price Shops are equipped with **electronic point-of-sale (ePoS)** devices, facilitating the digitisation of more than **98 percent** of transactions and strengthening transparency in distribution. In FY24, **₹267.6 crore** was transferred through Direct Benefit Transfer (DBT) to over **10 lakh beneficiaries**, improving targeting efficiency and accountability. Collectively, these reforms reinforce market integration, **reduce distribution inefficiencies**, and **strengthen food security** within an increasingly digitised farm-to-distribution ecosystem.



Food Management, Processing and Market Infrastructure

Market Linkages and Infrastructure

49,796 storage projects supported with **Rs.4,832.70 crore**

25,009 marketing infrastructure projects received **Rs.2,193.16 crore**



Food Processing and Value Addition

Food processing contributes **12.91 percent** of organised manufacturing employment

Pradhan Mantri Kisan Sampada Yojana: **1,185** projects completed

Procurement and Food Security

Subsidised foodgrains under NFSA for **81.35 crore** beneficiaries



Storage and Public Distribution System

99.8 percent Aadhaar seeding for ration cards

Over **99 percent of 5.43 lakh** Fair Price Shops equipped with electric point of sale (ePOS) devices

Source: Economic Survey 2025-26

Sustainable Development Goals Linkages

India's agricultural initiatives are closely aligned with the **UN Sustainable Development Goals (SDGs)**, integrating national development priorities with global sustainability commitments. Productivity enhancement, public procurement and food security measures directly contribute to **SDG 2 (Zero Hunger)**. Initiatives promoting sustainable agriculture, including soil health management, natural farming and resource-efficient practices support **SDG 12 (Responsible Consumption and Production)** and **SDG 13 (Climate Action)**. Strategic Investments in post-harvest infrastructure, value addition, storage, and digital agricultural markets reinforce **SDG 9 (Industry, Innovation and Infrastructure)**. Together, these interventions reinforce a resilient and resilient agricultural ecosystem aligned with global development priorities.

Conclusion

India's **agricultural transformation** reflects a balanced approach that combines strong production growth, expanding **global market presence**, and **targeted policy interventions** across the **farm-to-market value chain**. Record foodgrain and horticulture output, **growing exports**, and diversified commodity leadership demonstrate the sector's **sustainability** and **adaptability** to changing economic and climatic conditions. Mission-driven support through inputs, income protection, market infrastructure, and digital food systems has **strengthened productivity**, **improved farmer welfare**, and **enhanced food security outcomes**. As resilient production systems continue to evolve, the expanding role of agriculture provides

a strong foundation for deeper integration with allied activities, further supporting rural livelihoods, value addition, and long-term economic stability.

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13

Strengthening Allied Sector and Market Access



Introduction

India's agricultural progress is increasingly supported by the expansion of **allied sectors** such as **livestock, dairy, poultry, and fisheries**. These sectors have become major contributors to agricultural **Gross Value Added (GVA)** and **rural employment**. Over the last decade, agriculture and allied sectors have witnessed a steady 3-5% CAGR, fuelled by extensive government efforts, private innovations, and sizeable domestic demand. It is estimated that by 2047, the sector could potentially triple in size, powering India's growth.

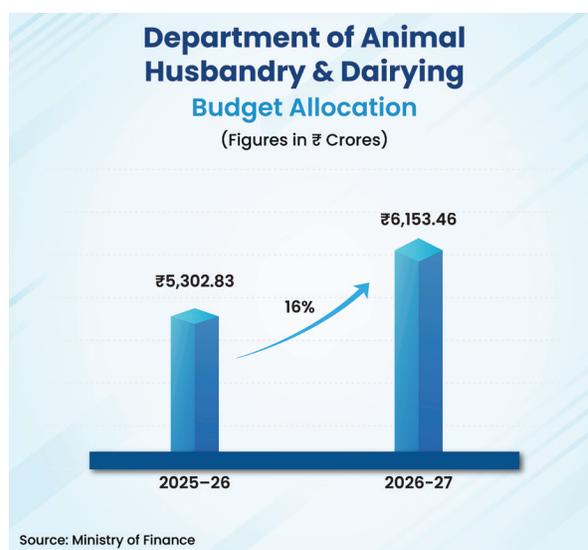
Although rural livelihoods remain largely agriculture-based, changes in **land use, climate variability, and income uncertainty** have encouraged households to adopt additional income sources. For small and marginal farmers, diversification has become an important way to manage **seasonal income fluctuations** and ensure more **stable earnings**.

Diversification includes income from **farm, allied, and non-farm activities** to reduce risk and smooth household consumption. Rather than moving away from agriculture, it reflects a more integrated and resilient rural economy where farming remains central but is supported by multiple livelihood options. Stronger institutions such as **cooperatives, Farmer Producer Organisations (FPOs), and Self-Help Groups (SHGs)** have improved access to **credit, technology, and organised markets,**

helping small producers connect better with value chains.

Livestock and Fisheries: Drivers of Rural Income Diversification and Growth

Within allied agricultural activities, **livestock and fisheries** have demonstrated relatively stable growth rates of approximately **5-6 percent**, underscoring their strategic importance in generating rural incomes. Their economic significance lies in generating regular and comparatively



predictable cash flows. **Dairy production** facilitates frequent income realisation through routine milk sales, while fisheries enable **multiple production cycles**, thereby providing sustained employment opportunities. Furthermore, dairy-based rural households commonly integrate crop cultivation for food and fodder



with livestock rearing, enabling circular resource use and reducing dependence on external inputs. Such diversification reduces reliance on a single income source and enhances resilience to seasonal and market shocks.

Between FY15 and FY24, the sector's Gross Value Added (GVA) increased by nearly 195 percent, reflecting a compound annual growth rate (CAGR) of 12.77 percent at current prices. In the Union Budget 2026-27, ₹6,153.46 crore has been allocated to the Department of Animal Husbandry & Dairying, reflecting a 16 percent increase from ₹5,302.83 crore in FY 2025-26. This expansion underscores the sector's role in income diversification and livelihood resilience,

supported by investments in breed improvement, veterinary infrastructure, and disease control.

India as a Global Leader in Livestock and Fisheries

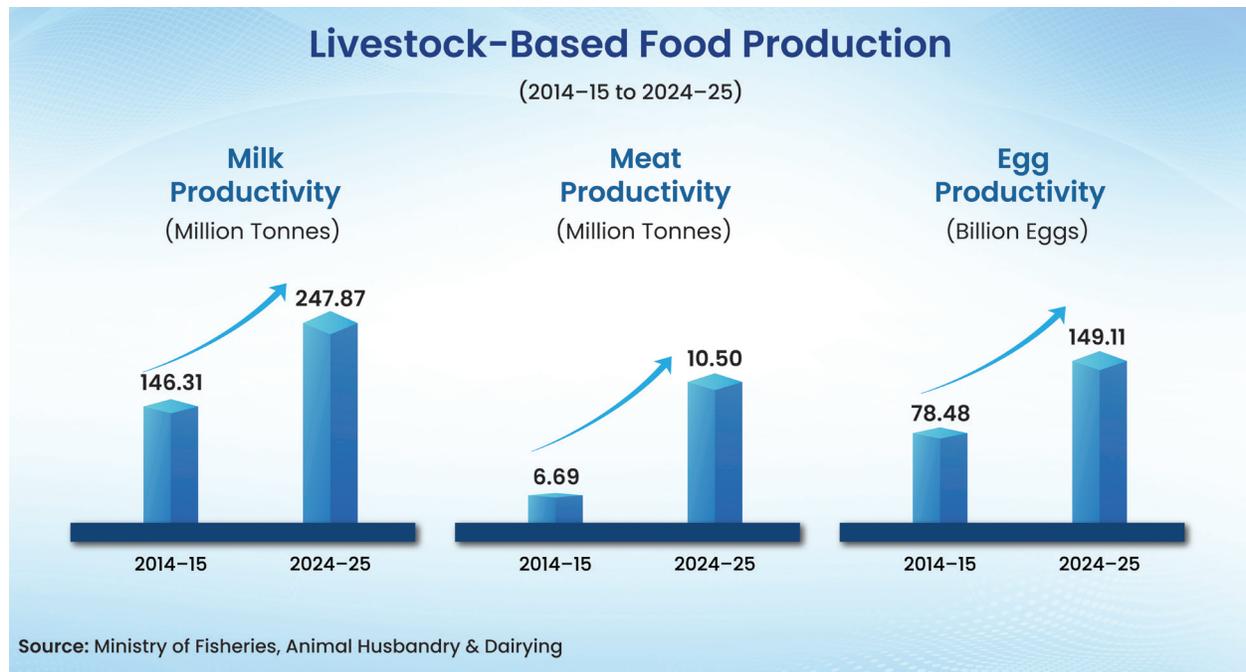
India holds the leading global position in milk production, accounting for nearly 25 percent of global output. Over the decade, the sector has recorded a compound annual growth rate of 5.41 percent, with production increasing from 146.31 million tonnes in 2014-15 to 247.87 million tonnes in 2024-25, representing a growth of over 69.4 percent. This sustained expansion has contributed to improved nutritional access, reflected in per capita milk availability of 485 grams per day in 2024-25, significantly exceeding the global average of 328 grams.

India ranks second globally in egg production. National output has increased from 78.48 billion eggs in 2014-15 to an estimated 149.11 billion eggs in 2024-25, reflecting a compound annual growth rate (CAGR) of 6.63 percent more than a decade. This sustained expansion has translated into improved access to nutrition, with per capita egg availability rising from 62 eggs per annum in 2014-15 to 106 eggs per annum in 2024-25.

India is the world's second-largest fish producer. Output has increased to 19.77 million tonnes in FY 2024-25 from 9.58

million tonnes in FY 2013-14. It contributes nearly **8 percent** of global output and supports over **30 million livelihoods**,

as a major contributor within the domestic and global agri-food economy.



thereby constituting a central pillar of the blue economy. Coastal States and Union Territories, comprising approximately **4,434 fishing villages**, account for **72 percent** of production and **76 percent** of seafood exports. The sector contributes **7.43 percent** to agricultural GVA, with policy measures such as reducing GST on key fish products and enhancing domestic demand and export competitiveness.

India **ranks fourth globally** in meat production. Output has increased from **6.69 million tonnes** in 2014-15 to **10.50 million tonnes** in 2024-25, reflecting a compound annual growth rate (CAGR) of **4.61 percent**. Taken together, these indicators affirm India's prominent position

Policy-led Intervention for Livestock Productivity

The expansion of India's livestock sector has been driven by focused government interventions through initiatives such as the **National Livestock Mission (NLM)**, the **Rashtriya Gokul Mission (RGM)**, and the **National Animal Disease Control Programme (NADCP)**, which emphasise productivity improvement, animal health, breed development, and livestock-based entrepreneurship. Together, these initiatives have strengthened livestock systems, reduced production risks, and reinforced livestock as a resilient and diversified source of income for rural households.

- » The **National Livestock Mission** promotes livestock-based entrepreneurship, improves breed productivity, and boosts production of meat, eggs, milk, and fodder.
- » The **Rashtriya Gokul Mission** focuses on conserving indigenous bovine breeds, enhancing milk productivity, and making dairying more remunerative for rural farmers.
- » The **National Animal Disease Control Programme (NADCP)** focuses on controlling Foot and Mouth Disease (FMD) and Brucellosis through 100% vaccination of cattle, buffalo, sheep, goats, and pigs against FMD, and vaccination of all female bovine calves (4–8 months) against Brucellosis.

Genetic Improvement through Artificial Insemination with Last Mile Service Delivery

Genetic improvement interventions under the RGM have reinforced productivity-led growth within the livestock sector mentioned as follows:

- A total of **14.56 crore artificial inseminations** have been conducted, covering **9.36 crore animals** and **benefiting 5.62 crore farmers**.
- The training of nearly **39,810 MAITRI artificial insemination technicians** has strengthened last-mile service delivery.

These measures have accelerated genetic gains, improved milk yields, and strengthened the income potential of dairy-based livelihoods.

Strengthening Animal Health and Risk Mitigation

Livestock productivity and income stability are closely linked to disease control. Under the **NADCP**, large-scale vaccination and surveillance efforts have significantly reduced disease incidence. Over **125.75 crore Foot and Mouth Disease (FMD)** vaccinations were administered, and approximately **26.27 crore farmers** benefited. Vaccination coverage expanded in 2025 to include pastoral sheep and goats.

- » **FMD outbreaks reduced** sharply from **132 cases in 2019** to **6 cases in 2025**
- » **Brucellosis outbreaks** have been **reduced to zero**

Did You Know



Foot and Mouth Disease is a highly contagious viral disease affecting animals such as cattle, buffaloes, sheep, goats, and pigs. It affects milk yield, slows growth, and impairs reproduction.

Brucellosis is a bacterial disease in cattle and buffaloes that affects the reproductive system, leading to infertility, abortions, and reduced milk production.

The decline in disease outbreaks has mitigated productivity losses.

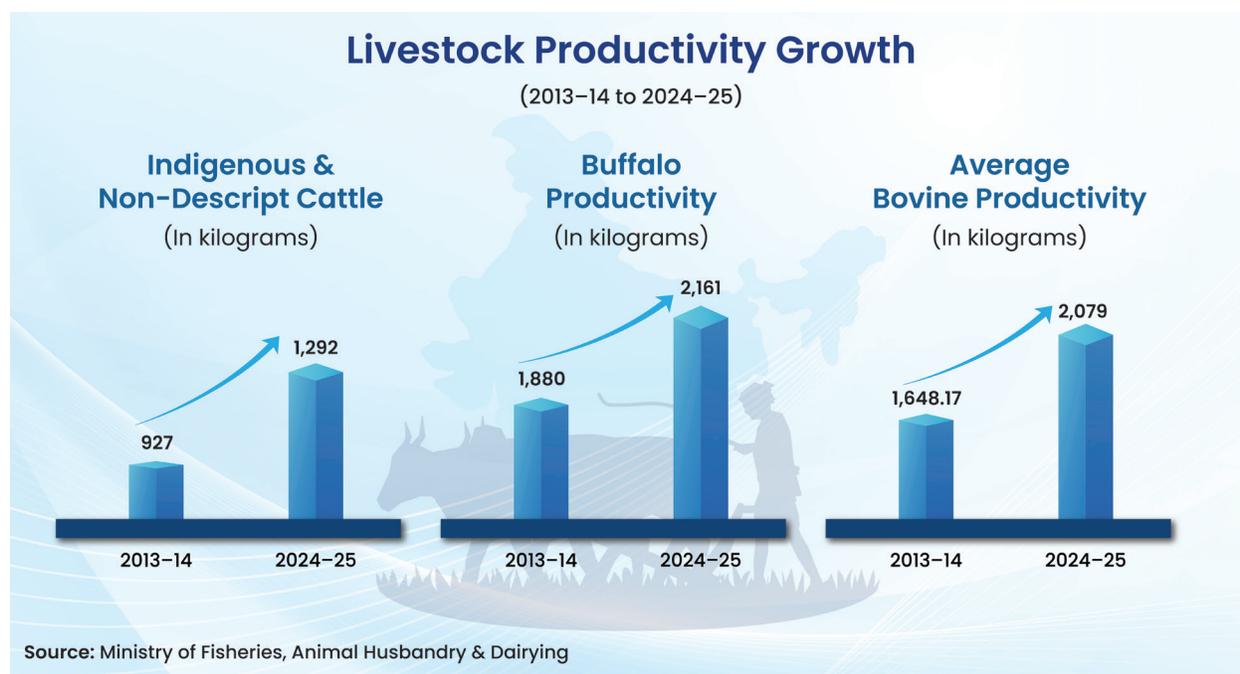
Livestock Productivity Enhancement Supporting Livelihood Diversification

The combined impact of genetic and health

interventions is reflected in sustained improvements in bovine productivity. India is home to the world's largest bovine population and has witnessed significant growth in meat and poultry production.

- » **Indigenous (local) and non-descript (mix-breed) cattle productivity increased from 927 kg per animal per year (2014–15) to 1,292 kg (2023–24), a rise of 39.37 percent.**
- » Buffalo productivity increased from **1,880 kg to 2,161 kg, registering 14.94 percent growth** during the same period.
- » Average bovine productivity improved from **1,648.17 kg (2013–14) to 2,079 kg (2024–25), reflecting a 27 percent rise.**

These productivity gains represent one of the highest recorded improvements



globally and directly enhance income realisation from dairy-based livelihoods.

Scaling Milk Procurement and Processing Capacity

The expansion of dairy cooperatives has played a pivotal role in strengthening market integration by incorporating smallholders into organised procurement and processing systems.

The dairy network encompasses:

- » **22 milk federations, 241 district unions, 28 marketing dairies,**
- » **25 Milk Producer Organisations (MPOs), covering approximately 2.35 lakh villages and 1.72 crore farmer-members.**
- » **31,908 dairy cooperative societies** have been organised, integrating **17.63 lakh producers** into formal value chains and increasing daily milk **procurement** by **120.68 lakh kilograms.**

Dairy Infrastructure Supporting Market Linkages

61,677 Village-Level Milk Testing Laboratories and 279 Upgraded Dairy Plant Laboratories

6,000 Bulk Milk Coolers
149.35 Lakh Litres Total Chilling Capacity



Source: Ministry of Animal Husbandry & Dairying

- » India is strengthening value addition through the planned expansion of **milk processing capacity to 100 million litres per day** by 2028–29, from the current **660 lakh litres per day**, strengthening the sector's contribution to food security and farm incomes.

Institutional Credit Support for Livestock

Access to **affordable institutional credit** has been instrumental in enabling **livelihood diversification** within the livestock and fisheries sectors, facilitating producers' transition from **subsistence-based operations** to **formal market integration**. Under the **Kisan Credit Card (KCC)** scheme, substantial credit support has been extended to allied activities to meet working capital requirements, promote **asset formation**, and **reduce reliance on informal lending** channels. The facts and figures indicate a strong institutional response to credit demand in allied agricultural activities.

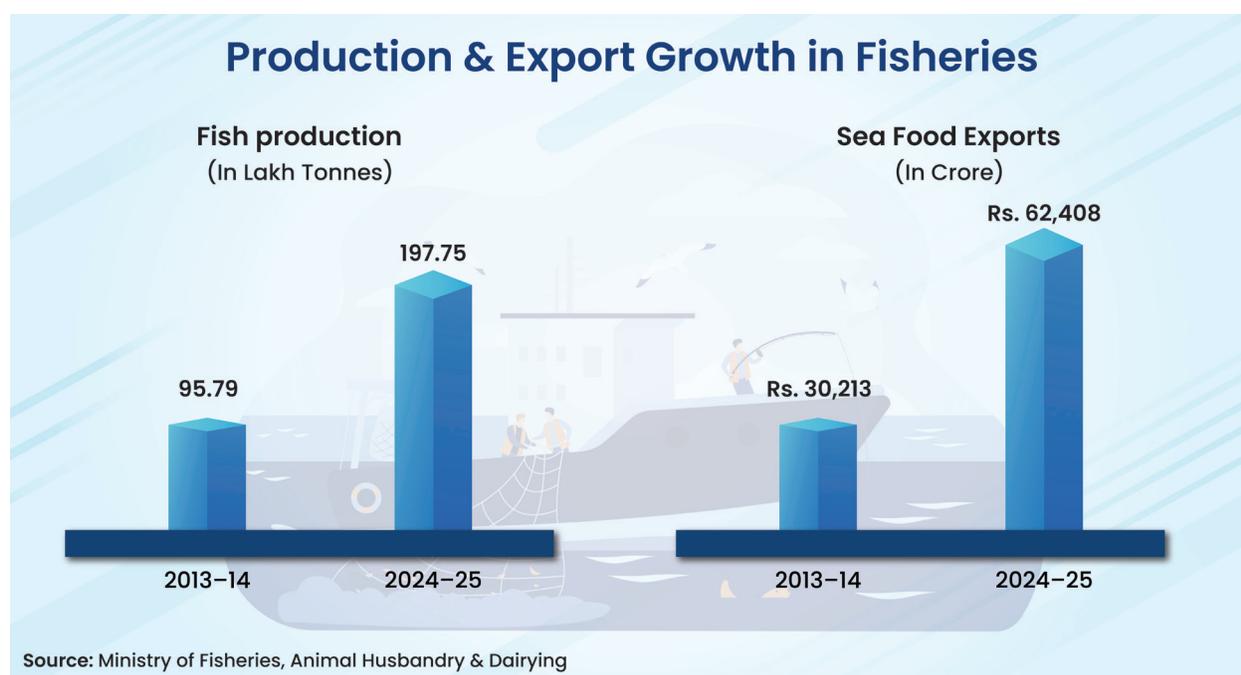
In animal husbandry, the exceptionally high acceptance rate, **55.08 lakh** out of **55.9 lakh** applications, reflects effective screening mechanisms and sustained policy support. The sanctioning of **39.22 lakh** applications further suggests substantial credit flow, translating into actual financial support.

Policy-led Intervention for India's Fisheries Sector

Over the decade, India's fisheries sector

has recorded a sustained average annual growth rate of **8.74 percent**, with total fish production increasing from **95.79 lakh tonnes** in 2013–14 to **197.75 lakh tonnes** in 2024–25. Inland fisheries and aquaculture have been the primary drivers of this expansion, registering a **147 percent increase** from **61.36 lakh tonnes** to **151.60 lakh tonnes** during the same period. The **Union Budget 2026-27** allocated a record **₹2,761.80 crore** (approximately USD 332.75 million) to fisheries, reinforcing **sustained investment** initiated under the **Blue Revolution** and consolidating India's leadership in aquaculture and seafood exports. This trajectory underscores fisheries as a key growth engine within non-farm livelihood diversification, particularly in rural and coastal regions.

Deep-sea and offshore fisheries further integrate India into global seafood value chains, strengthening the sector's economic and food security importance. This integration has been reinforced through focused interventions under the Pradhan Mantri Matsya Sampada Yojana (PMMSY) and Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY), under which seafood exports have more than doubled from ₹30,213 crore in 2013–14 to ₹62,408 crore in 2024–25, reaching over 130 countries.



- » **Pradhan Mantri Matsya Sampada Yojana (PMMSY)** promotes fisheries development through infrastructure, modernization, and value chain strengthening to boost production, exports, jobs, and fishers' incomes.
- » **Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY)**, a sub-scheme of PMMSY, supports sector formalisation through insurance, credit, performance incentives, and traceability to improve income security and sustainability for fish farmers.

Strengthening Fisheries Infrastructure and Market Access

Under PMSSY, Productivity gains have been accompanied by large-scale infrastructure development to reduce post-harvest losses and improve market access.

- » **27,189** fish transportation and handling units established
- » **6,733** fish retail markets and kiosks sanctioned
- » **128** value-added enterprise units supported

To bridge infrastructure gaps, the **Fisheries and Aquaculture Infrastructure Development Fund (FIDF)**, launched in 2018–19 with a corpus of **₹7,522.48 crore**, supports fishing harbours, landing centres, aquaculture units, and cold-chain logistics.

Institutional Credit Support for fisheries

In fisheries, **6.83 lakh applications** were received under the **Kisan Credit Card**

(KCC), of which **6.77 lakh** were accepted. Of which, **4.82 lakh applications** were sanctioned, indicating a meaningful conversion of demand into credit access. Financial inclusion and welfare programmes have extended KCC benefits to **4.39 lakh fishers**, providing insurance coverage to **3.3 million beneficiaries**, and delivering livelihood assistance to an average of **7.44 lakh fisher families** during lean periods. These measures underscore the role of **formal credit** in enhancing resilience, stabilising incomes, and deepening integration with organised markets.

Sustainable Governance of Marine Fisheries and EEZ Resources

India's extensive coastline of over **11,099 km** and an Exclusive Economic Zone (EEZ) of approximately **24 lakh square kilometres** sustain the livelihoods of more than **50 lakh members** of the fishing community across 13 maritime States and Union Territories. Marine fisheries constitute a strategic component of the **blue economy**,

contributing to **export earnings** and **national nutritional security**.

To ensure responsible harnessing of aquatic resources, the Government has notified the **Rules and Guidelines for Sustainable Harnessing of Fisheries** in the EEZ and High Seas (2025), establishing a **forward-**

compliance safeguards mitigate misuse. The **Marine Products Export Development Authority (MPEDA)** further anchors sustainable export growth through **quality assurance, market facilitation**, capacity building, and ecological stewardship, reinforcing long-term resource security and livelihood resilience.

Mission-Driven Reservoir Development and Fisheries Value Chain Expansion

India possesses one of the world's largest inland reservoir networks, spanning approximately **31.5 lakh hectares**, which presents significant potential for expanding inland fisheries. Under **Mission Amrit Sarovar**, the Government of India has facilitated the development of **68,827 Amrit Sarovars**, including **1,222 water bodies** integrated with fisheries activities, thereby promoting **fish culture, livelihood diversification**, and the **enhancement of aquatic ecosystems**. The targeted interventions are proposed to integrate the development of **500 reservoirs and Amrit Sarovars** to further consolidate the **fisheries value chain**, particularly across coastal and inland regions. These measures seek to **strengthen market linkages** and **value addition** by involving startups, **women-led collectives**, and **Fish Farmer Producer Organizations (FFPOs)**, fostering inclusive growth, entrepreneurship, and sustainable fisheries-based livelihoods.

looking regulatory framework aligned with sustainability and international compliance standards. Policy measures granting **duty-free status** to catch landed abroad and treated as exports aim to enhance price realisation and global competitiveness, while **traceability, sustainability, and**

Data-driven Institutional Reform in Livestock and Fisheries Sectors

Digitalisation has become a critical instrument for enhancing **efficiency,**

transparency, and **producer welfare** in the dairy sector. The introduction of the **12-digit unique livestock identification system, Pashu Aadhaar**, has established a foundational **digital architecture** for recording animal health, breeding, and service delivery transactions, thereby enabling data-driven planning and **real-time access** for farmers and veterinarians.

By January 2026, more than **36.45 crore livestock** had been registered on the **Bharat Pashudhan Portal**. Complementing this, the **Automatic Milk Collection System (AMCS)** has improved transparency in procurement through **automated quality testing** and pricing, ensuring **timely payments**.

The **Internet-based Dairy Information System (i-DIS)** further integrates data across unions and federations, enabling performance monitoring.

- Operational in 12 States and Union Territories,
- AMCS covers over **26,000 cooperative societies** and benefits **17.3 lakh producers**.

Parallel digital reforms in fisheries include the **National Fisheries Digital Platform (NFDP)**, launched in 2024, under the Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana. NFDP creates digital identities and a unified national database for

Sustainable Marine and Dairy Economies Advancing Inclusive Growth and the SDGs

- » India's marine and dairy economies constitute foundational pillars of **sustainable livelihoods, nutritional security, and inclusive growth** aligned with the Sustainable Development Goals (SDGs). Sustainable management of marine resources, aligned with **SDG 14**, is particularly critical given India's **EEZ exceeding 2 million square kilometres**, necessitating **effective governance of deep-sea** and offshore fisheries to prevent overexploitation, **conserve biodiversity, and safeguard food and livelihood security**.
- » Complementing this, the dairy sector advances multiple social SDGs by sustaining the livelihoods of nearly **150 million farmers**, particularly smallholders, thereby contributing to poverty reduction (**SDG 1**), productive employment (**SDG 8**), and reduced inequalities (**SDG 10**). Collectively, sustainable fisheries and inclusive dairy development reinforce integrated and equitable progress across key Sustainable Development Goals.

fishers and enterprises, facilitating **access to credit, insurance, traceability, and performance incentives**. With over **28 lakh stakeholders registered**, integration of 12 banks on a common digital platform, and 217 loans disbursed, the platform advances formalisation, financial inclusion, and transparency in the fisheries value chain. Together, these digital platforms are reinforcing market integration, reducing transaction costs, and improving income certainty.

Conclusion

India's strategic focus on **livelihood diversification** through the dairy and fisheries sectors has successfully transitioned rural households from **subsistence-oriented production to market-integrated, commercially viable models**. Beyond enhancing farm incomes, diversification contributes to **employment generation, risk mitigation, and the strengthening of food system resilience**. India has emerged as the **world leader in milk production** and ranks second in fish and egg production, achieving significant productivity gains without necessarily increasing herd sizes. The expansion of cooperatives, Farmer-Producer Organizations (FPOs), and Self-Help Groups (SHGs) has deepened market integration, providing small producers with **better bargaining power and structured value chains**.

The deployment of digital public

infrastructure, such as Pashu Aadhaar and the National Fisheries Digital Platform, alongside the expansion of Kisan Credit Cards (KCC), has **enhanced transparency, reduced transaction costs, and provided essential liquidity to rural producers**. These sectors are vital for the **economic empowerment of women and smallholders**, supporting livelihoods on a large scale, and aligning with global Sustainable Development Goals (SDGs) for poverty reduction and **environmental stewardship**. Together, the convergence of productivity-led growth, institutional support, and technological innovation has created a resilient rural economy capable of withstanding seasonal and market shocks while ensuring **national nutritional security**.

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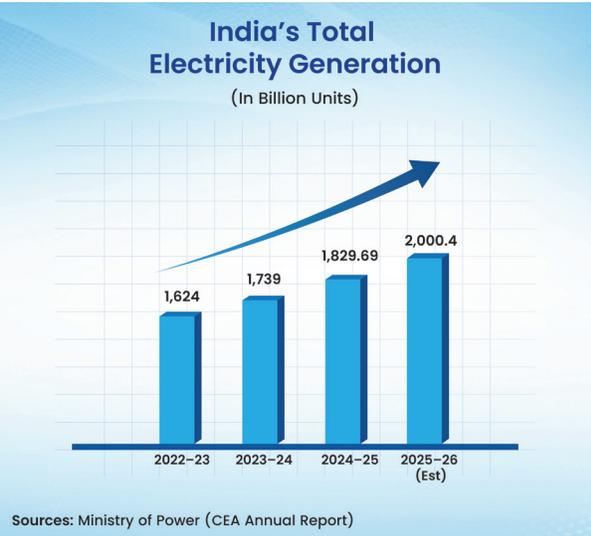
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The Evolving Spectrum of Energy Sources



Every day, as lights turn on across homes, schools, farms, factories, and hospitals, we rarely think about where that energy comes from. The fan that cools a classroom, the pump that waters a field, and the train that carries passengers all depend on a vast and carefully managed energy system working silently in the background.

Today, that system in India is changing. As the country advances, the focus is on ensuring reliable, affordable, cleaner, and more secure energy for every household and enterprise.



Improved power availability has been a key outcome of ongoing reforms. The average electricity availability in rural areas has increased from 12.5 hours in 2014 to 22.6 hours, while urban areas now enjoy up to 23.4 hours of power supply, up from 22.1 hours in 2014. These improvements reflect significant progress in the reliability and reach of electricity services across the country.

Today, India is among the world's **top three energy consumers**, and electricity demand continues to grow every year. The total electricity generation increased from **1,739.09 Billion Units (BU) in 2023-24 to 1,829.69 BU in 2024-25**, a growth of **5.21%**. For 2025-26, the generation target has been set at **2,000.4 BU**.

This shift is being shaped by clear government initiatives, from **scaling renewable energy** and launching the **National Green Hydrogen Mission**, to **modernising nuclear laws through the Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Act**, strengthening energy efficiency, reforming power distribution, and building digital energy infrastructure.

India's evolving energy spectrum is not about abandoning the old overnight. It is about carefully building the new, step by step, so that the country can power growth, improve livelihoods, and move toward its long-term commitment of achieving Net Zero emissions by 2070.

Scaling Renewable Energy: From Expansion To Global Leader

India's renewable energy expansion reflects a policy-driven transformation that combines scale, speed, manufacturing depth, and global engagement. Meanwhile, according to the International Renewable

Energy Agency (IRENA)'s Renewable Energy Statistics 2025, India ranks fourth globally in total installed renewable energy capacity.

Solar energy, in particular, has seen rapid growth; installed solar capacity rose from 3 GW in 2014 to **140 GW in January 2026**. This **increase** has helped push non-fossil fuel capacity beyond 50 percent of total

installed electricity capacity.

Wind energy also plays a substantial role: India's cumulative installed wind capacity reached about **54.65 GW by January 2026**, contributing significantly to the renewable mix and strengthening grid diversification alongside solar. Together, solar and wind account for a dominant share of India's clean energy capacity.



Government programmes have supported this scale-up across households, agriculture, infrastructure, and manufacturing:

- **PM Surya Ghar** has enabled **23.9 lakh households** to install rooftop solar systems, adding **7 GW** of distributed clean energy capacity.

- **Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyaan (PM-KUSUM)** promotes solarisation in agriculture, reducing diesel dependence and stabilising farm energy supply. The scheme aims to install **14 lakh standalone pumps** (by 31.03.2026) promoting clean rural energy use.

- **55 solar parks** across 13 states, have been approved, with a sanctioned capacity of nearly 40 GW, accelerating large-scale deployment.
- The **Production Linked Incentive (PLI) Scheme**, with an outlay of ₹24,000 crore, is strengthening domestic solar manufacturing and reducing import dependence.

Renewable expansion now spans generation, infrastructure, manufacturing, and global engagement. The focus has shifted from simply adding capacity to building a competitive and self-reliant clean energy ecosystem.

Green Hydrogen: Building the Next Energy Frontier

Green hydrogen has emerged as a key pillar of India's clean energy transition, particularly for sectors where reducing emissions is difficult, such as steel, fertilisers, refining, shipping, and heavy transport.

India has set a target of producing **5 million metric tonnes (MMT) of green hydrogen annually by 2030** under the National Green Hydrogen Mission (NGHM), launched in 2023. The Mission is expected to:

- Attract over **₹8 lakh crore in investments**.
- Reduce fossil fuel imports by more than **₹1 lakh crore**.

What is Green Hydrogen?

Green Hydrogen is Hydrogen produced using renewable energy, such as solar or wind power, instead of fossil fuels. In this process, water is split into hydrogen and oxygen through electrolysis, using electricity from solar panels or wind turbines. According to standards notified by Govt of India, Hydrogen made this way is considered "green" if the total emissions from the process are very low, not more than **2 kg of CO2 equivalent for every 1 kg of Hydrogen** produced, taken as an average over last 12-month period. Green Hydrogen can also be produced by converting biomass (like agricultural waste) into hydrogen, as long as emissions remain below the same limit.

- Avoid nearly **50 MMT of greenhouse gas emissions annually by 2030.**

National Green Hydrogen Mission Outcome

- 5 MMT of Green Hydrogen Produced Annually by 2030.
- 6 lakh+ green jobs Created Across the Value Chain.
- ₹1 lakh crore reduction in fossil fuel imports.
- 50 MMT of greenhouse gas emissions avoided annually.



Sources: MNRE, Ministry of Ports, Shipping and Waterways

To support this scale-up, the government has approved an outlay of **₹19,744 crore till FY 2029–30**, including **₹17,490 crore under the SIGHT programme**, which provides incentives for domestic electrolyser manufacturing and hydrogen production.

Implementation is already underway:

- India's first port-based green hydrogen pilot has been commissioned.
- Hydrogen mobility pilots are operational across **10 routes**, involving buses and trucks.
- The **Green Hydrogen Certification Scheme (2025)** ensures that hydrogen produced in India meets defined emission standards, strengthening

credibility for domestic and export markets.

Green hydrogen connects renewable energy expansion with industrial decarbonisation. It is positioned not only as an environmental solution but also as a strategic tool for energy security, manufacturing growth, and global competitiveness. Nuclear, solar, and wind energy, green hydrogen, battery storage, and critical minerals to address both energy security and transition imperatives. Together, these measures position green hydrogen as the next frontier in India's evolving energy spectrum.

Nuclear Energy: Legislative Modernisation and Baseload Expansion

Nuclear energy provides steady, **round-the-clock electricity** with **very low greenhouse gas emissions**. As renewable energy expands, nuclear power plays an important role in ensuring grid stability and a reliable baseload supply.

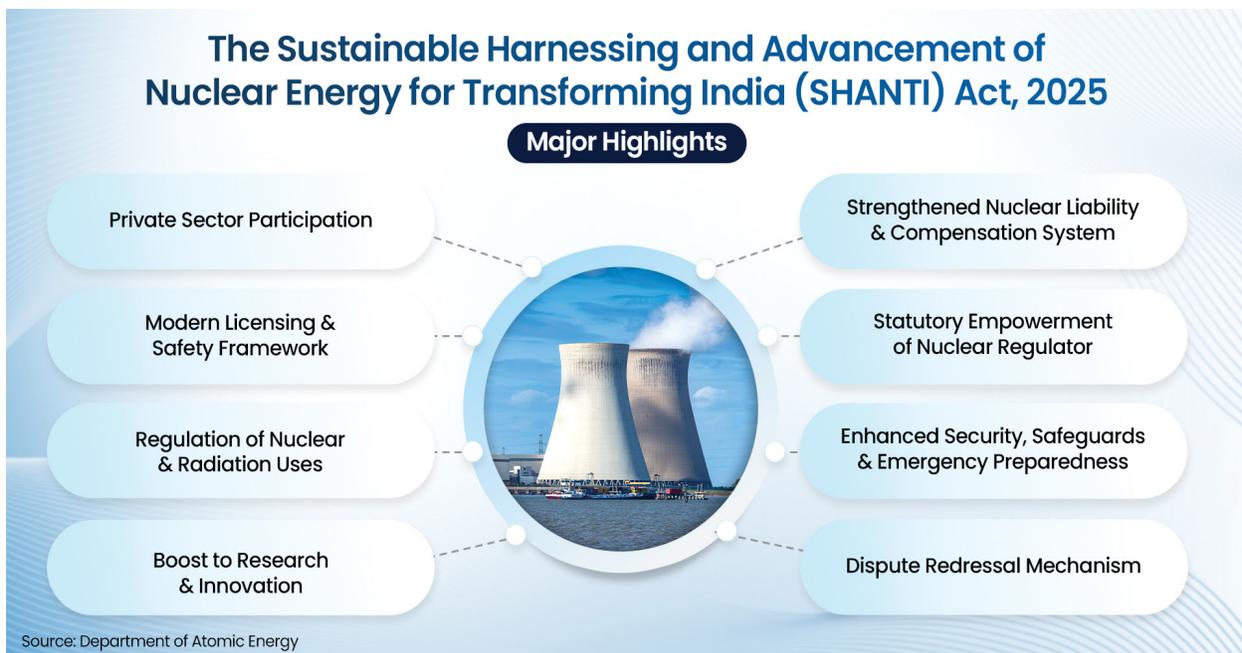
India's present nuclear capacity stands at **8.78 GW**. With new reactors under development, capacity is projected to rise to **22.38 GW by 2031–32**. The Government has further announced a long-term Nuclear Energy Mission with a vision of achieving **100 GW by 2047**, aligning nuclear expansion with India's clean energy and energy security goals.

A major institutional reform supporting this expansion is the **Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Act, 2025**. The Act consolidates and modernises India's nuclear legal framework. It:

- Enables limited private sector participation under regulatory oversight.
- Grants statutory recognition to the Atomic Energy Regulatory Board (AERB).
- Introduces a graded liability framework.
- Strengthens safety, security, and safeguards.

- Retains sovereign control over sensitive nuclear fuel-cycle activities.

Complementing large reactors, the Nuclear Energy Mission allocates ₹20,000 crore for the development of **Small Modular Reactors (SMRs)**, targeting at least **five indigenously designed SMRs by 2033**. These advanced reactors are designed to be more flexible, scalable, and suitable for diverse energy needs.



Strengthening Energy Efficiency & Carbon Markets

Energy efficiency is not only about producing clean energy, but it is also about using energy wisely. It means accomplishing the same tasks while consuming less electricity, fuel, or heat. This lowers costs and improves system reliability, while conservation focuses on avoiding waste.

India has strengthened its efficiency framework through policy reform and market-based mechanisms over the years.

A major shift has been the transition from the **Perform, Achieve and Trade (PAT)** scheme to the **Carbon Credit Trading Scheme (CCTS)**. Under CCTS:

- Emission-intensive industries are assigned greenhouse gas intensity targets.
- Entities that perform better than their targets earn tradable carbon credits.
- Credits can be bought and sold, creating a market incentive for efficiency improvements.

At the household level, energy efficiency programmes are being implemented to promote the adoption of efficient appliances and lighting. The **UJALA programme** has distributed **36.87 crore**

LED bulbs, resulting in:

- **47,883 million kWh** of annual energy savings.
- **3.88 million tonnes of CO₂ reduction per year.**

Do You Know?

UJALA's LED-bulb distribution model is being exported beyond India. The state of Melaka in Malaysia adopted a UJALA-type scheme under an agreement with Energy Efficiency Services Limited (EESL). Earlier, the government had launched UJALA-UK to promote efficient lighting.

Digital platforms such as the **Urja Dakshata Information Tool (UDIT)** further improve transparency, monitoring, and compliance across sectors.

Energy efficiency reduces demand pressure on the grid while complementing renewable expansion. It ensures that growth in electricity access does not automatically lead to proportionate growth in emissions.

Power Sector Reforms and Distribution Strengthening

Reliable electricity depends not only on how power is generated, but also on how efficiently it is transmitted, distributed, billed, and managed. Strengthening the distribution system has therefore been a central focus of reform.

Under Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS), and Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA), about **₹1.85 lakh crore** was invested to upgrade distribution infrastructure. As a result, **18,374 villages** were electrified, and **2.86 crore households** gained electricity connections, significantly expanding access across the country.

The next phase of reform has focused on improving the financial and operational health of DISCOMs. The Revamped Distribution Sector Scheme (RDSS), launched in 2021 with an outlay of **₹3.03 lakh crore**, has approved projects worth

₹2.8 lakh crore to modernise infrastructure and implement smart metering.

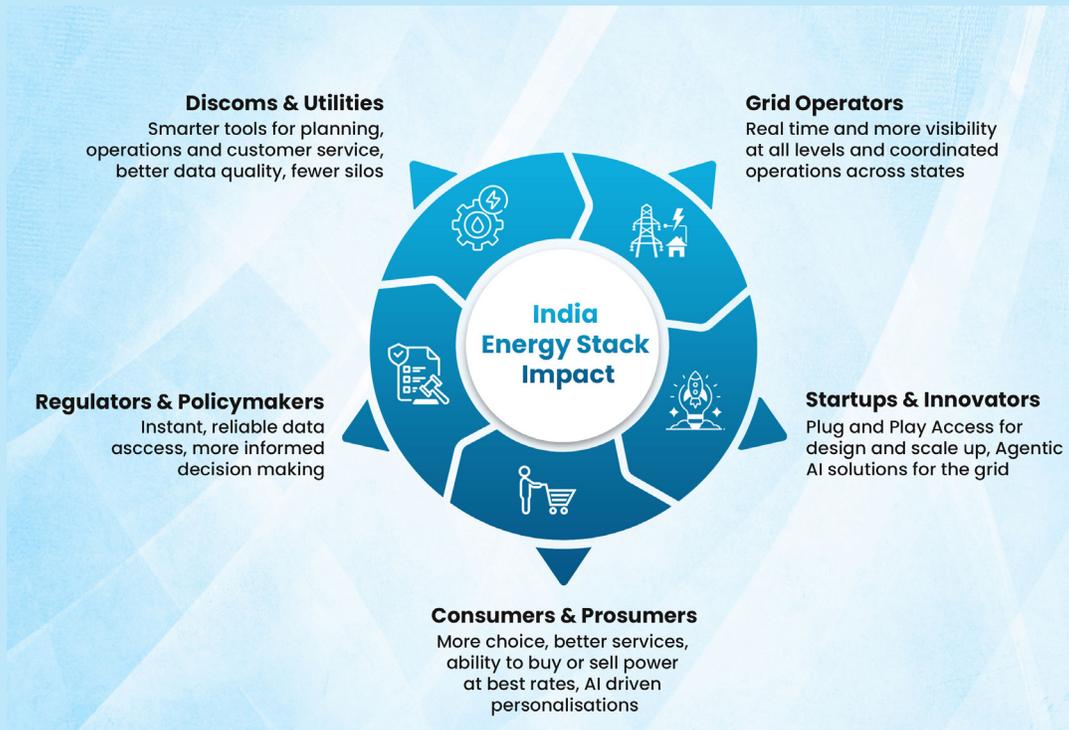
As part of this digital transformation, **5.62 crore smart electricity meters** have been installed across the country under various schemes. These meters improve billing accuracy, reduce technical and commercial losses, and enable better demand management through near real-time data.

Legislative reform complements these structural improvements. The proposed draft **Electricity (Amendment) Bill, 2026**, seeks to strengthen the financial viability of the sector, enhance the competitiveness of the Indian industry, promote optimal utilization of the distribution network, and improve regulatory accountability.

Draft **National Electricity Policy, 2026**, lays out strategies for achieving the vision of providing reliable **24x7** quality power through a financially viable and environmentally sustainable power sector, furthering energy security at an affordable price.

India Energy Stack (IES): From Energy Access to Energy Agency

IES is a Digital Public Infrastructure (DPI) designed to enable trusted digital interactions across consumers, utilities, regulators, and distributed energy assets. Conceived to address fragmented data systems and costly integrations,



IES will provide **common digital rails based on open standards and consent-based data sharing**, while ensuring that data remains with rightful owners. The initiative standardises **data exchange to help create an ecosystem that is , interoperable, competitive, and capable of converting participation into economic value .**

IES aims to transform consumers into active energy participants by enabling:

- Portable and simplified onboarding across utilities.

- Meaningful consumer choice through consent-based data sharing.
- Monetisation of rooftop solar, batteries, EV chargers, and flexible loads at scale.

By embedding “policy as code” and enabling near real-time settlement, IES strengthens transparency, reduces disputes, and enhances grid coordination. By aligning open innovation with system efficiency and livelihood creation, IES strengthens the energy agency, giving consumers the ability to choose and earn from the energy transition at scale.

Global Leadership and Strategic Partnerships

As India strengthens its domestic energy transition, it is also shaping global conversations on clean energy, affordability, and sustainability. International partnerships complement national reforms and position India as an active contributor to global energy solutions.

India plays a leading role in multilateral platforms such as the **G20 Energy Transitions Working Group**, where it has advanced cooperation on clean fuels and energy security. During its G20 Presidency, India launched the **Global Biofuels Alliance (GBA)**, which now includes **25 countries and 12 international organisations**, promoting affordable and low-carbon biofuels worldwide.

The country has further strengthened cooperation in energy efficiency by joining the **International Energy Efficiency Hub (2024)**, aligning domestic initiatives with global best practices.

Under the **UNFCCC framework**, India has committed to achieving **Net Zero by 2070**, reducing the emissions intensity of GDP by **45% by 2030**, reflecting its balanced approach to growth and climate responsibility.

Together, these engagements position India as a constructive voice of the Global South on affordable clean energy, equitable climate finance, and access to technology.

India's global clean energy outreach is anchored in two major initiatives, the **International Solar Alliance (ISA)** and **India Energy Week (IEW)**, both together advance solar cooperation and broader energy dialogue at the international level.

International Solar Alliance (ISA): Co-founded by India, ISA brings together over 125 member and signatory countries to mobilise solar finance, promote technology transfer, and expand affordable solar deployment, particularly across developing nations.

India Energy Week (IEW): Hosted by India, IEW serves as a global platform for governments, industry leaders, investors, and technology providers to engage on energy security, clean fuels, renewables, and transition pathways, strengthening India's role as a convenor in the global energy landscape.

Conclusion

India's energy journey is no longer defined by a single source; it's now drawing strength from solar parks, rooftop panels, hydrogen pilots, modernised nuclear frameworks, smart meters, and digital platforms.

Milestones such as expanding renewable capacity, advancing the National Green Hydrogen Mission, strengthening DISCOMs, and building the India Energy Stack reflect a transition that is both structured and forward-looking. This transformation is not sudden. It is planned. It is layered. And it is supported by policy reform, infrastructure investment, technological innovation, and global cooperation.

As India moves toward its Net Zero 2070 commitment, the evolving spectrum of energy sources shows that growth and sustainability can move together. The power that supports homes, farms, factories, and data centres will come from a system designed to be resilient, inclusive, and prepared for future needs. India is not just generating power. It is redesigning how power is produced, delivered, and shared for a future that is secure, sustainable, and self-reliant.

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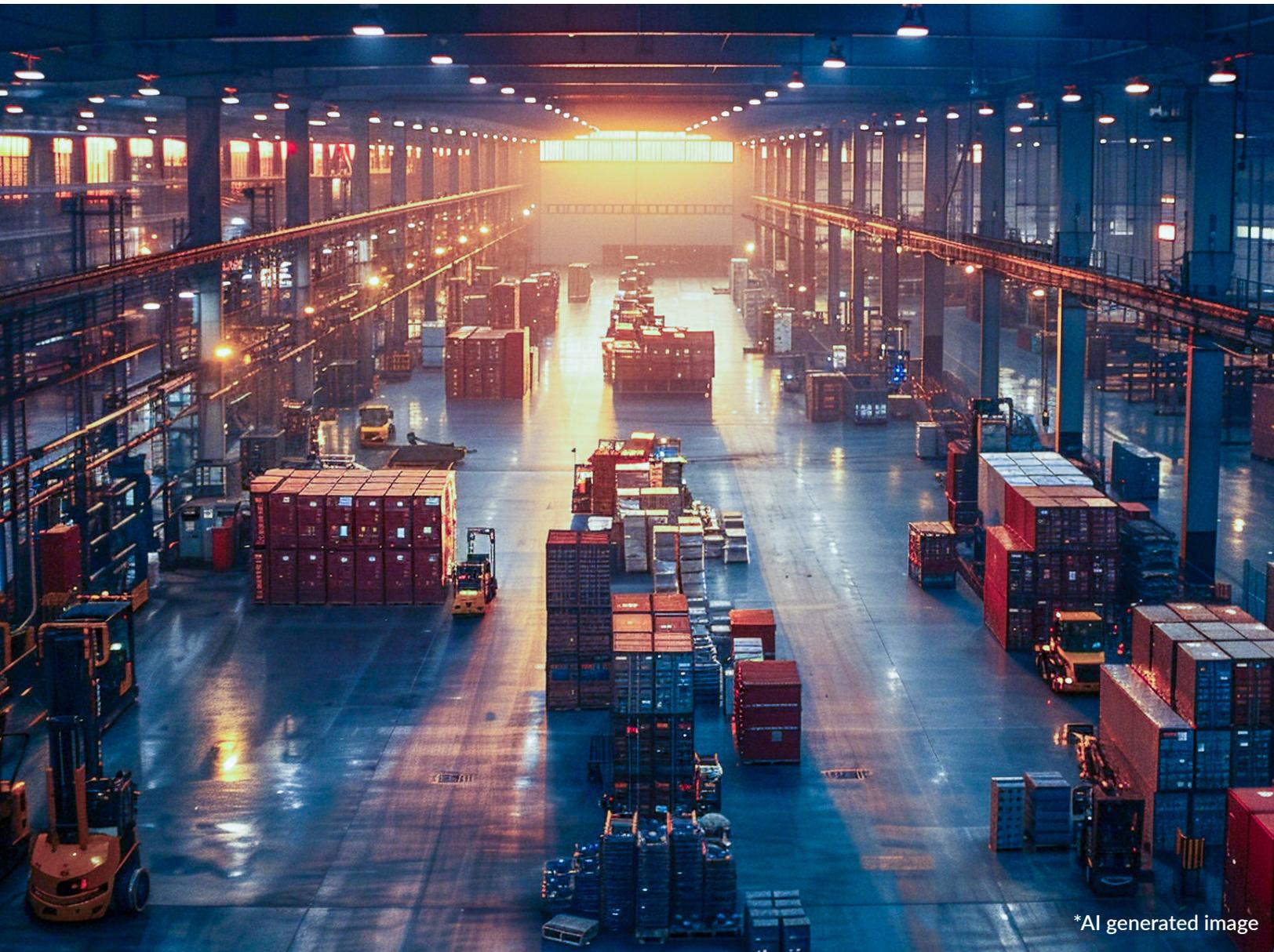
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15

Transforming India's Logistics Ecosystem

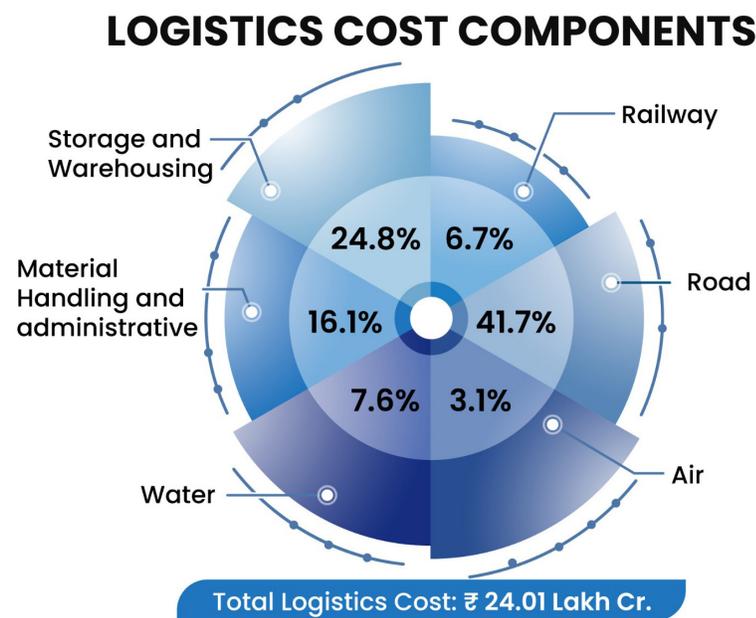


The logistics industry plays a critical role in economic growth and trade by enabling the efficient movement of goods across supply chains. It supports manufacturing, retail, e-commerce, agriculture, and services through the management of inventory, transportation, storage, warehousing, and distribution, linking producers to consumers within the country and across global markets. For an economy of India's scale and diversity, the performance of the logistics sector directly influences competitiveness, productivity, and the cost of doing business.



Recognising its strategic importance, a **dedicated logistics division** was created under the Department of Commerce in 2017 to oversee the **integrated development of the logistics sector**. Since

then, India's logistics ecosystem has entered a phase of structural transformation, driven by coordinated policy reforms, institutional realignment, digital platforms, and large-scale infrastructure planning. These efforts aim to address long-standing challenges such as fragmented planning, modal inefficiencies, limited visibility across supply chains, and high logistics costs.



Source: Ministry of Commerce & Industry

This transition is underpinned by robust, data-driven assessment. A **first-of-its-kind national study on logistics costs**, undertaken by the Department for Promotion of Industry and Internal Trade (DPIIT) in collaboration with the National Council of

Applied Economic Research (NCAER), estimates India's logistics cost at **7.97 per cent of GDP in 2023–24**, amounting to approximately **₹24.01 lakh crore**. This assessment establishes a credible baseline for policy action and underscores the scale and economic significance of the logistics sector.

Key Enablers of India's Logistics Reforms

India's logistics reforms are anchored in a set of mutually reinforcing policies, digital platforms, and infrastructure initiatives aimed at improving efficiency, reducing costs, and strengthening supply chain integration.

National Logistics Policy (NLP)

The **National Logistics Policy (NLP)**, launched in September 2022, provides a comprehensive roadmap for creating an efficient, integrated, and cost-effective logistics ecosystem. The policy focuses on improving logistics efficiency, reducing costs, enhancing service quality, and strengthening India's global trade competitiveness.

The NLP places strong emphasis on digital integration, standardisation, and process reforms. It introduced key digital initiatives such as the **Unified Logistics Interface Platform (ULIP)** and the **Logistics Data Bank (LDB)** to improve transparency, enable real-time tracking, and support data

driven decision-making. By addressing both physical and digital bottlenecks, the policy seeks to transform logistics into a strategic enabler of economic growth rather than a passive support function.

- **Unified Logistics Interface Platform (ULIP)**

The **Unified Logistics Interface Platform (ULIP)** serves as the digital backbone of India's logistics ecosystem by integrating data from multiple ministries, departments, and logistics related systems into a single interface through secure APIs. The platform enables real-time tracking, estimated time of arrival (ETA) visibility, and improved inventory and transport planning for stakeholders. As of December 2025, ULIP has recorded **over 225 crore API transactions**, reflecting widespread adoption and its growing role in reducing information asymmetry and operational inefficiencies across supply chains.

- **Logistics Data Bank (LDB) and LDB 2.0**

The **Logistics Data Bank (LDB)** is a technology-enabled platform that provides real-time visibility of export-import (EXIM) container movement across the logistics network. As of December 2025, LDB has tracked **over 91 million EXIM containers** and serves a large and growing base of users each month. Building on this foundation,

LDB 2.0 integrates with ULIP to offer end-to-end multimodal tracking across road, rail, sea, and high seas, supported by features such as live container heatmaps and shipment tracking through container, vehicle, and railway freight record numbers.

PM GatiShakti National Master Plan

The **PM GatiShakti National Master Plan**, launched in October 2021, is a transformative initiative for integrated infrastructure planning and multimodal connectivity. It brings together **57 Central ministries and all States and Union Territories** on a unified digital platform, incorporating over **1,700 data layers** to support coordinated planning and execution of infrastructure projects. The launch of **PM GatiShakti Public** and the **Unified Geospatial Interface** now enables private stakeholders to access **230 curated datasets**, supporting more informed investment decisions and logistics planning strategies. States and districts are increasingly adopting this framework. So far, **27 States have notified their State Logistics Policies, and 28 Aspirational Districts are using the GatiShakti District Master Plan Module** for planning. The initiative is expected to expand to all **112 Aspirational Districts** in the near future. By enabling holistic assessment of transport corridors, logistics nodes, and economic zones, the plan reduces project delays, avoids duplication of assets, and strengthens multimodal freight movement across the country.

Dedicated Freight Corridors

A key component of the infrastructure push is the development of **Dedicated Freight Corridors (DFCs)**. The DFCs aim to decongest existing passenger rail routes, reduce transportation costs, enhance transit reliability, and improve energy efficiency. By separating freight from passenger traffic, they increase network capacity and strengthen multimodal connectivity, particularly between ports, industrial clusters, and logistics hubs.

Two major corridors are being implemented: the **Eastern Dedicated Freight Corridor (EDFC)** from **Ludhiana to Sonnagar** and the **Western Dedicated Freight Corridor (WDFC)** from **Jawaharlal Nehru Port Terminal (JNPT) to Dadri**. About **2,741 km (96.4 %)** of the **2,843 km DFC network** has been completed with the **Eastern DFC (1,337 km) fully completed** and **1,404 km of the 1,506 km Western DFC completed**. These corridors are easing congestion on the passenger network, significantly reducing freight transit times and contributing to lowering logistics costs. Further expanding this network, the **Union Budget 2026–27** proposed the development of additional Dedicated Freight Corridors connecting **Dankuni in the East to Surat in the West**, reinforcing the long-term strategy of building high-capacity freight infrastructure to support India's growing logistics demand.

Logistics Ease Across Different States (LEADS)

The **Logistics Ease Across Different States (LEADS)** initiative is a national benchmarking framework that assesses logistics performance across States and Union Territories. It evaluates parameters such as infrastructure quality, logistics services, regulatory and institutional support, operating environment, and sustainability, helping identify regional strengths and areas for targeted improvement.



The **LEADS 2025 framework** marks a significant advancement by integrating both perception-based assessments and objective performance data, with objective indicators accounting for **32.5 per cent of the overall evaluation** and expected to increase further. The assessment monitors **five to seven key transport corridors**, capturing real-time data on journey times, average truck speeds, and waiting periods. API-enabled tools support

section-wise monitoring of road speeds, enabling the identification of delay points and performance gaps. By combining data-driven insights with stakeholder feedback, LEADS provides a robust mechanism to track progress, strengthen logistics efficiency, and enhance supply-chain resilience across States and Union Territories.

Multimodal Logistics Parks (MMLPs)

Multimodal Logistics Parks (MMLPs) are a critical component of India's strategy to enhance freight efficiency and reduce logistics costs. These parks are designed as integrated hubs with mechanised warehouses, container terminals, cold storage facilities, and connectivity to road and rail networks.

A total of **35 MMLP locations** have been identified across the country, with **five expected to become operational by 2027**. By enabling efficient modal shifts, reducing cargo handling time, and supporting regional industrial clusters, MMLPs play a key role in strengthening India's multimodal logistics infrastructure.

Goods and Services Tax (GST)

The introduction of the **Goods and Services Tax (GST)** in 2017 marked a transformative structural reform with significant implications for India's logistics ecosystem. By replacing multiple state-level indirect taxes with a unified national tax framework, GST simplified the movement of goods

across the country and enabled the creation of a common national market. The removal of interstate check posts and tax-related stoppages reduced transit delays, facilitated seamless freight movement across state borders, and enabled more efficient and cost-effective supply-chain planning.

Building on these gains, subsequent GST reforms in **September 2025** have further strengthened logistics efficiency. The reduction of GST on commercial goods vehicles, including trucks and delivery vans, from **28 per cent to 18 per cent** lowers the capital cost of freight vehicles. These vehicles form the backbone of India's supply chain and account for nearly **65–70 per cent of goods traffic**. Lower acquisition costs are expected to reduce freight rates per tonne-kilometre and improve affordability for logistics operators, particularly small transporters and young entrepreneurs. In addition, the reduction of GST on third-party insurance of goods carriages from **12 per cent to 5 per cent with input tax credit (ITC)** further reduces operational costs. Together, these measures reinforce GST's role not only as a tax reform but as a structural enabler of efficiency, cost rationalisation, and competitiveness within India's logistics sector.

Introduction of the e-Way Bill System

The **e-Way Bill** system, introduced under the GST framework, is a digital mechanism

designed to further streamline the transportation of goods across India. It replaces physical documentation with an online, real-time permit, enhancing transparency, reducing paperwork, and improving compliance. The system is mandatory for the movement of goods valued at **over ₹50,000** between states using motorised transport.

As on 31 January 2026, a total of **723.84 crore e-way bills** have been generated, reflecting sustained growth in goods movement. By enabling advanced generation and electronic verification of transport details, the e-Way Bill has simplified interstate vehicle movement and reduced opportunities for tax evasion. It has also contributed to faster clearance, improved predictability of transit times, and better monitoring of freight movement across corridors. Together with GST, the e Way Bill system has played a critical role in modernising India's logistics processes, supporting smoother cargo flows and more efficient national supply chains.

SMILE (Strengthening Multimodal and Integrated Logistics Ecosystem)

The **SMILE programme**, implemented by DPIIT in collaboration with the Asian Development Bank, focuses on developing integrated logistics planning at the state and city levels. The initiative supports data-driven logistics plans to identify bottlenecks, optimise freight movement, and align local logistics networks with

SMILE: Logistics Made Smarter

An integrated plan to connect cities, corridors, and commerce.

Mapping
Existing
Infrastructure

01

Identifying
Operational
Gaps

02

Delivering
Actionable
Roadmaps
to Cut
Congestion
and Costs

03

Source: Ministry of Commerce & Industry

national infrastructure priorities. As part of SMILE, integrated logistics planning has been undertaken in **eight pilot cities across eight states**, strengthening urban and regional supply chains and improving coordination across modes.

The **SMILE programme** operates through a two-tier approach. At the state level, it connects growth centres with trunk routes, economic corridors, and major logistics gateways. At the city level, it integrates urban freight planning with city mobility frameworks, master plans, and land-use policies, ensuring logistics is embedded into economic and spatial planning.

Under SMILE, each of the **eight pilot**

cities is developing an integrated logistics plan covering urban and peri-urban areas. These plans map and optimise freight-intensive activities such as retail distribution, e-commerce delivery routes, warehousing clusters, truck terminals, and last-mile corridors. The focus is on data-driven planning, institutional coordination, congestion and noise reduction, adoption of low- and zero-emission vehicles, process automation, and better alignment between freight and passenger movement.

This coordinated framework brings together central, state, and city governments with private players and start-ups, supporting more efficient and sustainable urban freight, cleaner cities, faster movement of

SMILE Program: Pilot States and Cities for Integrated Logistics Planning

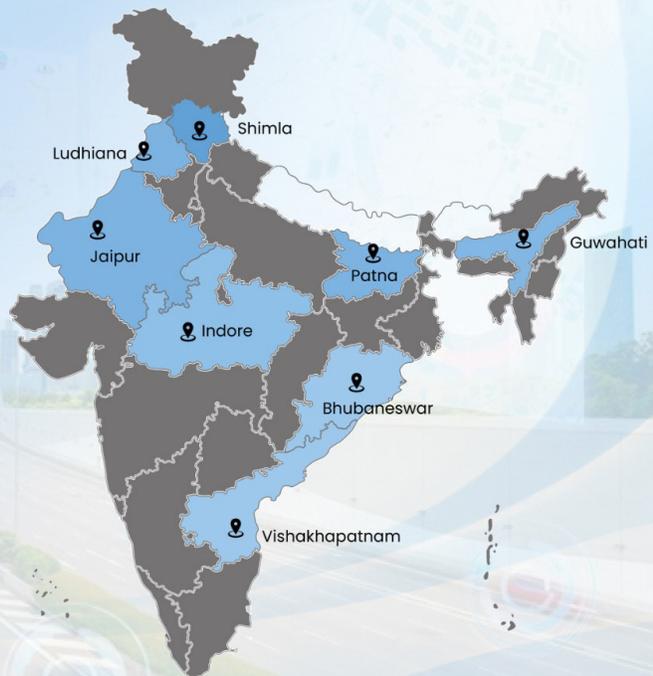
Coastal: Andhra Pradesh, Odisha

Landlocked: Madhya Pradesh

North East: Assam

Border: Rajasthan, Punjab, Bihar

Hilly Terrain: Himachal Pradesh



Source: Ministry of Commerce & Industry

goods, and job creation across the logistics value chain.

Industrial Corridors

Infrastructure development is progressing under the **National Industrial Corridor Development Programme**, which supports the creation of new industrial cities with plug-and-play infrastructure and integrated logistics hubs built around multimodal connectivity. Phase-I cities—including **Dholera**, **Shendra-Bidkin**, **Greater Noida**, and **Vikram Udyogpuri** are now operational. So far, **350 industrial plots have been allotted**, attracting investments worth **₹2.02 lakh crore** across sectors such as electronics, renewable energy, pharmaceuticals, and electric vehicles.

Gati Shakti Vishwavidyalaya (GSV)

The GSV, established as a Central University in 2022, is India's only university dedicated to the transportation and logistics sector. The University covers the entire transport ecosystem, including railways, aviation, highways, ports, maritime and shipping, inland waterways, urban transport, and end-to-end logistics and supply chains. Closely aligned with the objectives of the PM GatiShakti National Master Plan, GSV plays a critical role in developing a skilled workforce to support the creation of smarter, faster, and more efficient logistics and transport infrastructure across the country.

Logistics and Global Competitiveness

The advances in infrastructure and operations are contributing to improved

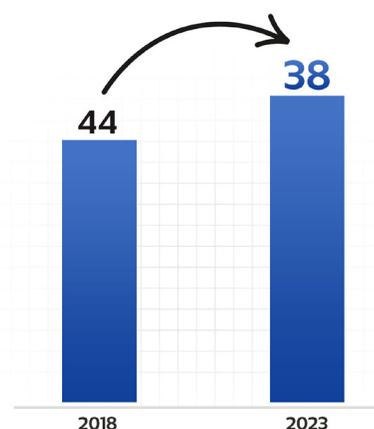
logistics efficiency at the national level. This progress is reflected in India's performance on global benchmarks, with the **World Bank's 2023 Logistics Performance Index ranking India 38th out of 139 nations**, an improvement of six positions compared to 2018. The upward movement in rankings underscores sustained efforts to modernise logistics infrastructure, enhance multimodal connectivity, and improve service quality across supply chains. Together, these developments reinforce the Government's commitment to streamlining logistics systems, reducing operational inefficiencies, and strengthening India's competitiveness within global trade and logistics networks.

Logistics as a Pillar of India's Economic Competitiveness

India's logistics reforms reflect a deliberate and sustained shift towards integrated planning, digital transparency, and multimodal efficiency. The convergence of policy frameworks, digital platforms, and physical infrastructure is gradually transforming logistics from a fragmented support function into a strategic economic capability.

These reforms are contributing to lower logistics costs, improved reliability of freight movement, and greater predictability across supply chains, with benefits extending across industry, trade, and consumers. As

World Bank's Logistics Performance Index (LPI)



Source: World Bank

implementation deepens and coordination across institutions and States continues to strengthen, the consolidation of these initiatives will be critical to enhancing supply-chain resilience and reinforcing India's position within global trade and logistics networks.

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Transport as a Catalyst for Connectivity and Inclusion



Introduction

India's transportation network forms the backbone of its economic growth and connectivity. Indian Railways ranks among the largest railway systems globally. It continues to serve as a core mode of passenger and freight transport, redefining passenger comfort and expanding affordable long-distance connectivity. India also has the second-largest road network in the world, which has undergone transformative progress over the past decade. The national highway network alone has expanded by 61%, growing from 91,287 km in 2014 to 1,46,572 km by December 2025. Urban metro systems are rapidly expanding, while landmark bridges and tunnels are overcoming extreme terrain to strengthen nationwide connectivity.

At the heart of India's rapidly evolving transport landscape lies a decisive push toward advanced technology, shaping a mobility ecosystem that is smarter, safer, and future-ready. From indigenously developed safety systems like KAVACH in railways and driverless metro operations, to regenerative braking, intelligent tunnel management systems, and digital ticketing platforms, technology is redefining how infrastructure is designed, built, and operated.

Together, these innovations are not merely supporting expansion in scale; they are ensuring that India's mobility revolution is future-ready, resilient, and globally competitive.

Metro Rail Revolution

India's metro systems have emerged as lifelines of urban mobility, symbolizing rapid strides in sustainable and inclusive transport. They are reshaping city travel by reducing congestion, cutting emissions, and making public transport accessible to all sections of society.

The metro rail revolution is not just about infrastructure; it represents inclusivity, sustainability, and global leadership in urban mobility. With rapid expansion, strong policy support, green innovations, and international recognition, metros are redefining how India's cities move and grow.

- **Metro Expansion and Policy Framework:** India's metro network has grown rapidly, expanding from 248 km in 2014 to **over 1,095 km** by January 2026 across **26 cities**, making it the **third-largest globally**. Since 2014, 38 projects covering more than 1,000 km have been sanctioned at an estimated cost of **₹3.44 lakh crore**, while nearly 957 km of corridors are under active construction. The Union Budget 2026–27 has further strengthened this momentum with an allocation of **₹28,740 crore**, nearly **five-fold rise** compared to 2013–14. Alongside expansion, over **2,000 metro coaches** have been **manufactured domestically**, reinforcing self-reliance under Make in India. The **Metro Rail Policy 2017** ensures sustainability by requiring Comprehensive Mobility Plans before new projects, encourages Public-Private Partnerships to improve financial viability, and **mandates 75% domestic**

procurement of metro cars, boosting local manufacturing and job creation.

- **Metro Innovations and Inclusive Mobility:** Metro systems have become a symbol of equitable urban

transport, offering affordable, reliable, and safe travel for millions. Universal accessibility features such as **ramps, lifts, tactile paths for the visually impaired, women-only coaches, and digital ticketing** ensure that diverse



Source: Ministry of Housing and Urban Affairs

groups can use the service with ease. By linking peripheral areas with city centers, **metros integrate marginalized communities into mainstream economic and social activity**, while reducing reliance on private vehicles and making urban transport more balanced and environmentally responsible.

- Metro networks also align with India's sustainability goals through solar-powered stations, regenerative braking, and IGBC-certified green buildings. Adoption of driverless trains and QR-based ticketing enhances efficiency and passenger convenience, while the pace of commissioning (about six km per month) places India among the fastest globally. International collaborations, such as JICA's support for Mumbai Metro Line 3, further highlight India's credibility in global infrastructure partnerships.

High-Speed Rail Corridors: Accelerating India's Connectivity

High-speed rail is emerging as a key pillar of India's future transport infrastructure, aimed at drastically reducing travel times between major urban centres while supporting sustainable and efficient mobility. Recognising its strategic importance, the Union Budget 2026–27 reaffirmed the Government's commitment to expanding high-speed rail beyond India's first corridor, positioning these corridors as growth connectors that will integrate regions, bolster economic activity, and

enhance passenger convenience.

Under the Budget's vision, seven new high-speed rail corridors have been announced, spanning nearly 4,000 km and expected to attract investments of around ₹16 lakh crore. These corridors are planned to link key city pairs across northern, eastern, southern, and western India, significantly cutting travel times and enhancing regional connectivity.

At the forefront of India's high-speed rail programme is the Mumbai–Ahmedabad High-Speed Rail (MAHSR) Corridor, the country's first dedicated high-speed passenger rail line. Stretching approximately 508 km between Mumbai (Maharashtra) and Ahmedabad (Gujarat), the corridor is being designed for operations at 320 km/h, with 12 multimodal stations and state-of-the-art infrastructure to ensure safety, reliability, and high passenger comfort. By reducing end-to-end travel time to just over two hours, MAHSR not only exemplifies modern rail technology but also builds institutional and technical capacity for future corridors.

Anchored in long-term planning and robust public investment, India's high-speed rail initiative marks a strategic shift toward faster, cleaner, and more integrated inter-city travel, laying the groundwork for expanded networks that will redefine mobility across regions.

Vande Bharat Trains: Premium Semi-High-Speed Rail

The Vande Bharat Trains represent India's leap into modern, passenger-centric rail mobility. Designed and manufactured indigenously, it combines speed, safety, and comfort, redefining train travel for millions of passengers.

This revolution is not only about rapid transit, but it also shows technological innovation and India's emergence as a global benchmark in semi-high-speed rail. With rapid fleet expansion, advanced safety systems, and enhanced passenger experience, Vande Bharat is setting new standards in public transport.

- **Fleet Expansion with Cutting-Edge Technology:** Since its launch in 2019, Vande Bharat services have grown to 82 routes with 164 train services by January 2026, with plans to scale up to 800 trains by 2030 and 4,500 by 2047. The introduction of the sleeper version in January 2026 has further extended its reach to overnight long-distance travel, making premium rail services more accessible. Equipped with the indigenous KAVACH safety system for collision avoidance, along with regenerative braking, jerk-free couplers, and advanced suspension, the trains combine safety with comfort and efficiency.

- **Vande Bharat - Affordability and Global Standards:** Indian Railways has ensured that Vande Bharat remains accessible by keeping fares below the cost of service, with AC Chair Car journeys priced at about ₹2.19 per passenger kilometre (PKM) which is significantly lower than comparable services in countries like China, Japan, and France where fares range from ₹7 to ₹20 per PKM. This rationalised fare structure has driven strong demand, with occupancy rates near 100% reflecting a clear shift in travel preferences toward modern semi-high-speed rail.

Alongside affordability, passengers benefit from regional cuisines, Divyangjan-friendly facilities, infotainment systems, and faster journeys with travel times reduced by up to 45% on key corridors. The latest



Sources: Ministry of Railways and IBEF

Vande Bharat 3.0 matches international benchmarks, accelerating from 0–100 km/h in 52 seconds, while India's rail manufacturing capabilities are gaining global recognition, reinforcing credibility in infrastructure partnerships.

Amrit Bharat Express: Affordable Long-Distance Rail

The Amrit Bharat Express is designed to strengthen affordable, inclusive connectivity across India. It represents Indian Railways' commitment to providing reliable long-distance travel at low cost, ensuring that public transport remains accessible to all sections of society.

This initiative is not just about affordability but also about accessibility, regional integration, and reinforcing railways as the backbone of mass transport in India.

- **Long-Distance Mobility Made Accessible:** Amrit Bharat Express has been designed to keep long-distance travel accessible for ordinary passengers, with non-AC sleeper fares fixed at around ₹500 per 1,000 km and no dynamic pricing. Since December 2023, 30 trains have been operational, with 9 more added in 2025–26, expanding coverage nationwide. By offering reliable services at low cost, the initiative ensures that lower-income groups can travel with dignity

and convenience, reinforcing railways as the backbone of mass mobility and integrating distant areas with urban centers.

Beyond affordability, the trains strengthen connectivity by linking border areas, pilgrimage centers, and major cities across diverse regions. Passenger-friendly features such as improved seating, LED lighting, CCTV surveillance, fire suppression systems, and Divyangjan-friendly compartments enhance safety and comfort. Together, these measures highlight the inclusivity impact of Amrit Bharat Express, which is not only expanding rail access but also weaving vulnerable sections into the mainstream of social and economic activity.

Landmark Bridges and Tunnels

India's landmark bridges and tunnels showcase engineering excellence, resilience, and accessibility to distant regions. These projects are not only technical marvels but also symbols of national integration, economic growth, and strategic strength.

Together, they demonstrate how India has overcome geographical challenges to connect remote valleys, islands, and border regions, reinforcing both civilian mobility and military logistics.

» **Bridges of India - Architecture Against the Odds:** From high-altitude valleys to turbulent coastal waters, these bridges reflect resilience, innovation, and the ability to overcome formidable challenges.

1. Chenab Bridge - Engineering Challenges and Achievement

The Chenab Bridge stands as the world's highest railway arch bridge, but its construction was far from easy. Engineers and workers had to overcome some of the toughest conditions – rugged Himalayan terrain, extreme weather, and frequent

infrastructure undertakings.

Despite these hurdles, the **1,315-metre-long steel arch** was completed with the capacity to withstand **wind speeds up to 260 kmph** and a **projected lifespan of 120 years**. Built at a cost of **₹1,486 crore**, it is not only a crucial link in the Udhampur–Srinagar–Baramulla Railway project but also a symbol of India's technical excellence and ambition. The bridge now enables faster travel, including Vande Bharat operations, and has emerged as both an infrastructural asset and a landmark showcasing India's ability to deliver world-class projects against formidable odds.



rockfalls made every stage of building exceptionally demanding. Working at an **altitude of 359 metres** above the Chenab River required specialized methods and immense resilience, turning the project into one of India's most challenging

2. New Pamban Bridge - Overcoming Coastal Challenges

The New Pamban Bridge, **India's first vertical lift railway sea bridge**, connects Rameswaram with the mainland through a

2.07 km structure built at a cost of **over ₹700 crore**. Its **standout feature is a 72.5-metre lift span that rises 17 metres** to allow ships to pass without disrupting train movement.



Constructing the bridge was a demanding task, with engineers facing **turbulent waters, strong winds, cyclones, seismic risks, and the difficulty of transporting heavy materials** to a remote site within narrow tidal windows. Despite these challenges, advanced technology and innovative engineering over 1,400 tons of fabrication, lift-span launches, 99 girders, and extensive track and electrification work at sea were completed **with zero injuries**. Designed with **corrosion-resistant materials, protective coatings, and provisions for a future second railway line**, the bridge is built for durability and stands

as a symbol of India's ability to deliver complex infrastructure in harsh coastal conditions.

3. Anji Khad Bridge- Building Through Himalayan Challenges

The Anji Khad Bridge, India's first cable-stayed railway bridge, was constructed under some of the most demanding Himalayan conditions. Rising **331 metres** above the Anji River valley and **stretching 725 metres** across the gorge, the project faced unstable hill-wash debris, cherty limestone formations, and large limestone boulders that made construction highly complex. Engineers also had to ensure slope stabilization to protect the fragile mountain ecology, adding to the difficulty of working in rugged terrain.

Despite these challenges, the bridge was completed in just 11 months, supported by an **inverted Y-shaped pylon and 96 high-tensile cables** reinforced with **over 8,200 metric tonnes of steel** to withstand seismic activity. As part of the Udhampur–Srinagar–Baramulla Rail Line, it will significantly improve connectivity to the Kashmir Valley, reduce travel time, and open new opportunities for regional growth and stands as a symbol of persistence and technical brilliance against formidable natural odds.



» Tunnels of India- Engineering Marvels Beneath the Surface

India's ambitious tunnel projects across the Himalayas and beyond are redefining connectivity, ensuring year-round access, boosting defence logistics, and supporting inclusive growth through engineering feats in some of the world's toughest terrains.

1. Atal Tunnel

Tucked beneath the snow-laden peaks of the Pir Panjal ranges, the Atal Tunnel stretches **9.02 km**, providing a high-altitude passage that bypasses Rohtang Pass. Its completion has transformed connectivity, enabling seamless, year-round travel between Manali and the remote valleys of Lahaul-Spiti. The tunnel's strategic significance also lies in ensuring safe, reliable access for civilians and defence movement alike under challenging mountain conditions. It is officially recognised as the **World's Longest Highway Tunnel above 10,000 feet** in 2022 by the World Book of Records UK. The tunnel

has cut the Manali–Sarchu distance by 46 km and reduced travel time by **four to five hours**. Built in harsh Himalayan conditions where winter temperatures dropped to -25°C and the tunnel interior sometimes reached 45°C , its construction demanded exceptional resilience. Engineers faced



fragile geology, Seri Nala seepage that once flooded the tunnel, heavy overburden, and intense snowfall, all of which were successfully overcome by the Border Roads Organisation's (BRO) dedicated Karmyogis.

2. Z-Morh / Sonamarg Tunnel- Overcoming Himalayan Barriers

The Sonamarg Tunnel, a **12-km project** built at an **altitude of 8,650 feet** and **costing ₹2,700 crore**, ensures all-weather connectivity between Srinagar and Sonamarg, extending further towards Ladakh. It includes a **6.4-km main tunnel**, an egress tunnel, and modern approach roads, designed to keep routes open despite avalanches, landslides, or heavy snowfall.

Constructed using the **New Austrian**



Tunnelling Method (NATM) to tackle complex Himalayan geology, the tunnel integrates advanced systems under the **Integrated Tunnel Management System (ITMS)**— including Public Address System, Electrical Fire Signalling System, Radio Re-Broadcast System (FM), and Dynamic Road Information Panels (DRIP). With a capacity for about 1,000 vehicles per hour, it will reduce the Srinagar–Ladakh journey from **49 km to 43 km** once paired with the upcoming Zojila Tunnel (2028), raising speeds from 30 km/hr to 70 km/hr and boosting defence logistics, tourism, and local livelihoods.

3. Dr Syama Prasad Mookerjee Tunnel

Dr Syama Prasad Mookerjee Tunnel, formerly known as the Chenani–Nashri Tunnel in Jammu & Kashmir is a **9-km-long**, twin-tube, all-weather road tunnel connecting Udhampur and Ramban. Built at an elevation of about **1,200 metres** in difficult Himalayan terrain, it has reduced travel time between Jammu and Srinagar by nearly two hours while bypassing **41 km of road length**. The tunnel features advanced



ventilation, safety, and intelligent traffic systems operated through a fully integrated control mechanism with minimal human intervention, along with enhanced security measures. Developed in line with the **Make in India** and **Skill India** initiatives, the skill sets of local people were improved, and they were engaged for construction of this tunnel. The project generated employment for over **2,000 local workers**, with nearly 94 percent of the workforce drawn from Jammu and Kashmir.

4. Tunnel T50 under USBRL Project

Tunnel T50, a **12.77-km** engineering feat connecting Khari and Sumber in Jammu & Kashmir, stands as one of **India's longest transportation tunnel constructed under the Udhampur-Srinagar- Baramulla Rail Link (USBRL)** project, forming a crucial rail lifeline between the Kashmir Valley and the rest of the country. Constructed using



the **New Austrian Tunnelling Method**, it cuts through challenging geology ranging from quartzite and gneiss to phyllite, with engineers overcoming high-water ingress, landslides, shear zones, and jointed volcanic rock. The tunnel features a main tube paired with a parallel escape tunnel, linked every 375 metres for safety. Enhanced with CCTV cameras placed every 50 metres and monitored from a central control room, T50 is designed for secure, seamless rail operations.

Kolkata's Underwater Metro Tunnel

In 2024, India marked a historic breakthrough with the launch of its **first underwater metro tunnel** in Kolkata, linking Esplanade and Howrah Maidan beneath the Hooghly River. This engineering feat not only showcases the nation's rising technological and infrastructural capabilities but also redefines urban mobility for one of India's busiest metropolitan regions.

UDAN: Democratizing Air Travel for Every Citizen

Launched on 21 October 2016, UDAN (**Ude Desh ka Aam Nagrik**) has transformed India's skies into maps of opportunity. By making air travel affordable and accessible, it has connected faraway places, boosted tourism, and strengthened socio-economic integration.

400 airports by 2047, strengthening connectivity across the country.

- Inclusive and Affordable Aviation:** Affordability remains central to the scheme, with short-haul fares capped to ensure common citizens can fly. Initiatives like the UDAN Yatri Café provide low-cost meals, making air travel more inclusive. Special programs such as Lifeline UDAN ensured



- Expanding Regional Air Connectivity:** UDAN has transformed regional aviation by operationalizing **657 routes and connecting 93 airports, including 2 water aerodromes and 12 heliports.** Since its launch, over 1.56 crore passengers have flown on **3.23 lakh UDAN flights**, supported by **₹4,300 crore in Viability Gap Funding (VGF)** to make regional routes commercially viable. India's airport network has grown from 74 in 2014 to **164 in 2025**, with a long-term vision of 350–

medical cargo supply during COVID 19, while Krishi UDAN supports farmers with faster transport of perishables and a **50% freight subsidy** for tribal and northeastern states. Together, these measures highlight UDAN's role in making aviation accessible, inclusive, and supportive of both social and economic growth.

- Employment and Industrial Growth:** The aviation sector supports **7.7 million jobs**, projected to reach

25 million by 2040, with passenger traffic expected to **grow sixfold** to 1.1 billion annually by 2040. Expansion of Flight Training Organizations (FTOs) will meet demand for 30,000–34,000 pilots in the next 10–15 years. Alongside this, the **Production-Linked Incentive (PLI) Scheme and Make in India** initiatives are boosting domestic manufacturing in aircraft, ground handling, and Maintenance, Repair and Overhaul (MRO) services, positioning aviation as a driver of employment and industrial growth.

Conclusion

India's transport transformation is not only reshaping national mobility but also strengthening its global standing as a leader in sustainable and inclusive infrastructure. Modern highways, metros, railways, waterways, and aviation projects are acting as powerful economic multipliers - reducing costs, boosting trade, and creating jobs across regions. With a clear long-term vision extending to 2047, these investments are laying the foundation for a future-ready economy, where connectivity becomes a driver of growth, resilience, and global competitiveness.

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17

The Bridging Digital Divide



Introduction

India's digital transformation represents one of the largest population-scale expansions of connectivity and technology-enabled public service delivery globally. Anchored in the **Digital India programme**, launched in 2015, the country's strategy has focused on building digital infrastructure as a core utility for every citizen, bridging the digital divide, delivering governance and services on demand, and empowering people through digital access.

A decade ago, the digital divide in India was visible and stark. High-speed internet was largely urban, rural connectivity was limited, and access to online services depended on location, income, and digital literacy. **Over the years, sustained public investment has expanded broadband networks and transitioned toward extensive optical fibre infrastructure**, improving both the reach and quality of connectivity across villages and remote regions.

Today, the divide is rapidly narrowing. Affordable data, assisted digital access points, and interoperable public platforms are enabling citizens to access welfare schemes, make digital payments, pursue online education, and participate in governance. **What began as a connectivity mission has evolved into a broader empowerment journey—bringing more Indians into the digital mainstream with each passing year.**

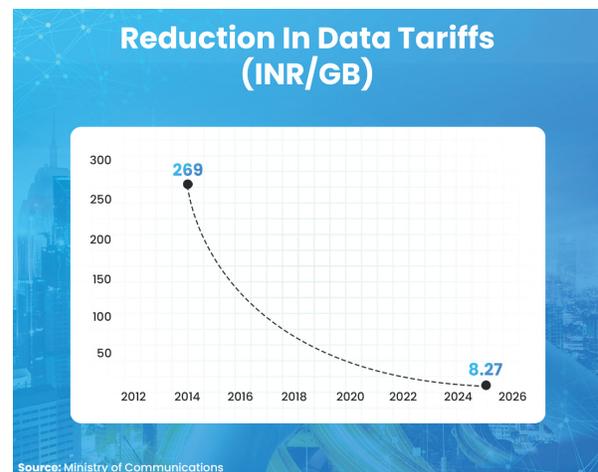
Building India's Digital Backbone

India's digital backbone is the foundation of its effort to bridge the digital divide at population scale. It operates through three interlinked pillars: **Universal connectivity infrastructure, Digital Public Infrastructure (DPI), and Computing capacity.** Together, these pillars ensure that access, services, and technological capability evolve in tandem. This integrated approach enables connectivity to translate into meaningful participation in the digital economy.

Universal Digital Connectivity

Universal Digital Connectivity & Affordable access is the cornerstone of India's digital revolution, powering inclusive growth, better governance, economic opportunities, and social empowerment for every citizen.

At its heart lies massive optical fibre expansion under BharatNet (launched 2011), which extends high-speed internet



to rural India. As of early 2026, over **2.15 lakh Gram Panchayats** are connected, with optical fibre cable deployment extended from **19.35 lakh route km in 2019 to 42.36 lakh route km in 2025** nationwide, building a strong backbone that bridges the urban-rural gap and brings reliable connectivity to remote areas.

Complementing fibre, India's lightning-fast 5G rollout now covers 99.9% of districts with over 5.18 lakh Base Transceiver Stations (as of December 2025), delivering ultra-fast mobile broadband everywhere. Backed by the Telecommunications Act 2023 for faster infrastructure approvals, indigenous 4G/5G tech, and the National Broadband Mission, these efforts turn connectivity from a luxury into an essential right.

Affordability has been a game-changer: data costs have plummeted from **₹269 per GB in 2014 to roughly ₹8-10 per GB (about \$0.10) in 2025-2026**, making India

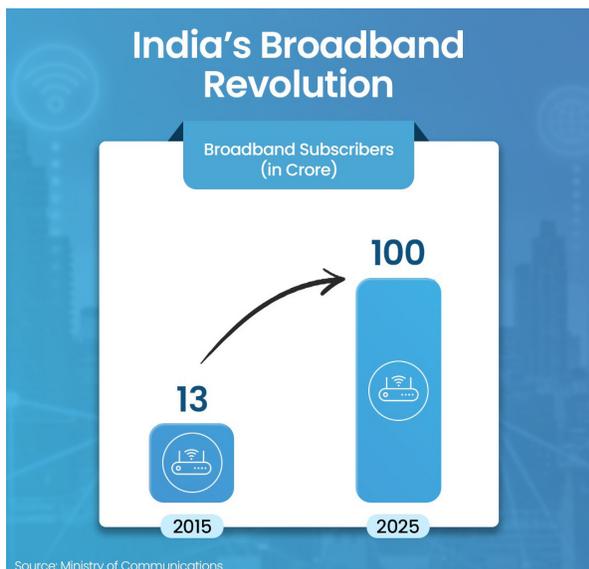
one of the world's cheapest data markets. This drastic reduction has fuelled explosive growth, **broadband subscriptions crossed 1 billion** (over 100 crore) in November 2025, a more than sixfold jump from 13.15 crore a decade earlier.

Altogether such reforms are empowering rural communities, farmers, students, entrepreneurs, and marginalized groups to fully join India's thriving digital economy and systematically narrowing access gaps and integrating rural and marginalized communities into India's digital economy.

Digital Public Infrastructure (DPI)

As digital connectivity reaches population scale, Digital Public Infrastructure (DPI) ensures that internet access translates into reliable, interoperable, and citizen-centric services—turning basic connectivity into real empowerment for governance, finance, and daily life. India's fundamental DPI ecosystem provides foundational layers like universal digital identity, seamless payments, and secure document access, directly bridging the digital divide by making services inclusive for rural, low-income, and marginalized communities.

Aadhaar has issued over 143 crore unique digital IDs (as of February 2026), enabling targeted welfare delivery, direct benefit transfers, and easy access to government and financial services—even for those previously excluded due to lack of formal ID.



Unified Payments Interface (UPI) handles nearly ₹28.33 lakh crore in monthly transactions (January 2026 data, with 21.7 billion transactions), delivering affordable, real-time digital payments nationwide, fuelling financial inclusion across urban-



rural and income divides through zero-cost transfers via mobile phones .

DigiLocker boasts over 62 crore registered users (as of February 2026), offering secure, paperless storage and sharing of official documents in sectors like health, education, agriculture, and welfare—



eliminating paperwork barriers and empowering citizens with instant, trusted access anywhere .

Together, these DPI pillars transform mere internet access into tangible social and economic outcomes ensuring seamless service delivery, deeper financial inclusion, and trusted digital interactions that systematically narrow access gaps and integrate every Indian into the digital economy.

High-Performance Computing (HPC) and Data Centre

High-Performance Computing (HPC) and data centres are key enablers of India’s digital transformation, moving the country from basic connectivity to innovation-led inclusion. Under the

National Supercomputing Mission (NSM)—jointly led by MeitY and the Department of Science & Technology—**38 supercomputers with a combined capacity of 44 Petaflops** have been deployed across institutions nationwide. By extending advanced computing infrastructure beyond metropolitan hubs, HPC ensures equitable access to world-class resources for universities, startups, researchers, and industry, supporting AI, climate modelling, biotechnology, and advanced manufacturing.



Complementing HPC, India’s cloud and data centre ecosystem is also expanding rapidly to support digital governance and AI-ready infrastructure. Through **MeghRaj (GI Cloud)**, over **2,170 Ministries and Departments** are hosting applications on secure, scalable government cloud platforms. With a total **data centre capacity of ~1,280 MW**, it is projected to grow **4–5 times by 2030**. India is aligning its digital infrastructure with global benchmarks, ensuring that high-end computing resources contribute directly to bridging the digital divide and enabling inclusive access to advanced technologies.



India’s investments in digital infrastructure, interoperable platforms, and high-performance computing are creating tangible impact—enhancing service delivery, financial inclusion, research capabilities, and innovation opportunities.

By focusing on measurable outcomes and equitable access, the country is turning connectivity into capability, ensuring that digital growth benefits all citizens, including those in rural and marginalized communities.

Creating an Inclusive Digital Ecosystem for Bharat

India's digital transformation is not only about expanding connectivity, but about ensuring that every citizen can participate meaningfully in the digital economy. Building an inclusive digital ecosystem requires more than infrastructure. It calls for local service access points, widespread digital literacy, affordable internet, advanced skilling, and opportunities for innovation and entrepreneurship.

By combining last-mile delivery with capability building and market linkages, these initiatives are turning digital access into real social and economic empowerment across rural and urban India.

Digital Literacy: Building Skills and Opportunities

India has positioned itself as a global leader in leveraging digital technologies for inclusive governance and citizen empowerment. Recognizing digital literacy as essential for equitable growth, the Government has focused on rural populations. Early efforts through the

National Digital Literacy Mission (NDLM) or Digital



Saksharta Abhiyan (DISHA) (2014–2016) trained 53.67 lakh beneficiaries against a 52.50 lakh target, with nearly 42% from rural areas. Building on this success, the **Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA)**, approved in 2017 aimed to digitally empower 6 crore rural households (one person per household). As of March 2024, it achieved a remarkable 6.39 crore trained individuals, creating one of the world's largest rural digital literacy programmes and expanding access to online services and financial inclusion.

This foundation has been strengthened at the institutional level through, the **National Mission on Education through ICT (NMEICT)** launched 2009 has bridged gaps in higher education by expanding broadband connectivity, virtual labs, and digital resources ensuring even remote campuses match premier institutions in quality and access. **The National Education Policy (NEP) 2020** is further accelerating this progress by mainstreaming digital literacy across school and higher education, integrating blended learning, digital libraries, AI-enabled tools, and teacher training to create a truly equitable and future-ready education system.

Under the **NEP**, national platforms like **DIKSHA** (Digital Infrastructure for Knowledge Sharing) and **SWAYAM** (Study Webs of Active-Learning for

Young Aspiring Minds) are democratising access to quality education across school and higher education through large-scale digital courses and certifications. Extending this inclusion from access to opportunity, the **Innovation in Science Pursuit for Inspired Research (INSPIRE) Awards - Million Minds Augmenting National Aspirations and Knowledge (MANAK)** programme nurtures grassroots STEM innovation among Classes 6–10, with strong participation from girls and students belonging to SC, ST and OBC communities. Together, these initiatives move beyond connectivity to capability—ensuring that digital learning translates into equitable representation, innovation, and future-ready skills.

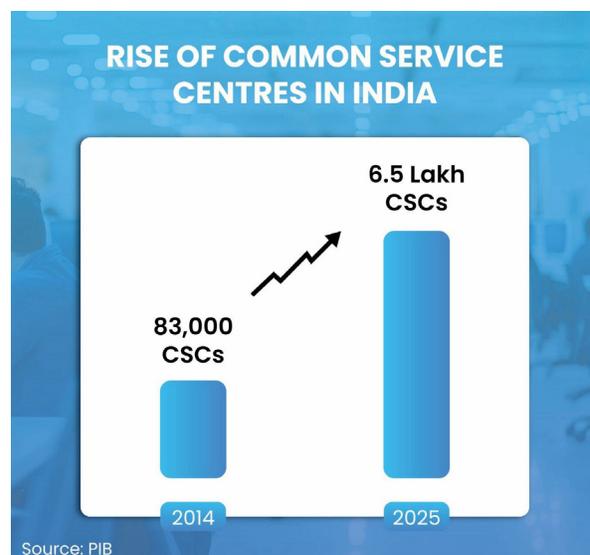
Additionally, India's digital transformation is also rights-based and accessible. **The Rights of Persons with Disabilities Act, 2016** mandates ICT accessibility, while the **Unique Disability ID (UDID)** scheme has generated 1,34,73,833 digital disability cards (8,906,328 male; 4,565,166 females; 2,338 others), streamlining access to welfare benefits nationwide. Complementing this, the Indian Sign Language Research and Training Centre has developed the **world's largest Indian Sign Language digital repository** with 3,189 e-content videos, including 100 STEM terms and 18 National Book Trust titles in ISL format expanding accessible education and ensuring digital inclusion remains rights-based and data-driven .

Inclusive Digital Learning: Schools to Higher Education

- » DIKSHA for school education and teacher training, hosts over 19,698 courses, with 182.3 million enrolments and 145.7 million completions (2025–26). It provides multilingual, interactive content, including NCERT textbooks and AI-enabled resources.
- » SWAYAM supports higher education, offering 18,500+ courses from leading institutions. It has recorded over 6.1 crore enrolments, awarded 53.7 lakh certifications, and continues to see strong uptake, including nearly 50 lakh enrolments in January 2026.
- » INSPIRE- MANAK launched in 2008, selects one lakh student ideas annually, providing ₹10,000 prototype grants along with mentoring at the district, state, and national levels. In 2025–26, it mobilised 11.47 lakh ideas, with 52% from girls and 84% from rural schools. Cumulatively, it has supported 1,40,316 students, with strong representation from Scheduled Caste, Scheduled Tribe, and Other Backward Caste communities.

India's comprehensive digital literacy ecosystem from PMGDISHA, DIKSHA & SWAYAM to INSPIRE-MANAK's grassroots STEM empowerment and rights-based accessibility for persons with disabilities has transformed connectivity into real capability, opportunity, and inclusion. By prioritizing rural areas, girls, marginalized communities, and underserved groups, these initiatives are effectively bridging the digital divide and equipping every Indian with the skills, access, and confidence to thrive in a digital-first economy. This people-centric approach positions Bharat as a global model of equitable, inclusive digital transformation where no one is left behind.

Common Service Centres (CSCs): Last-Mile Digital Access



Under the Digital India programme, CSCs function as assisted digital access points that bridge the digital divide in rural and remote areas by delivering public services at the last mile. Operated by over 6.5 lakh Village Level Entrepreneurs (VLEs), CSCs serve as

Digital Inclusion Enabling Rural Economic Integration

- » 1.79 crore farmers and 1,522 mandis across 23 States and 4 Union Territories are digitally connected under the **National Agriculture Market (e-NAM)**, which recorded traded volumes of over 2.04 crore metric tonnes in 2024-25, enhancing price discovery and market access.
- » 1.49 lakh Banking Correspondent (BC) Sakhis under **Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM)** and 99% electronic wage payments under **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** ensure direct income flows.
- » Programs like **Pradhan Mantri Awaas Yojana-Gramin (PMAY-G)** and **National Social Assistance Programme (NSAP)** leverage digital platforms for transparent, timely benefit delivery.

a vital physical–digital interface for citizens who lack devices, reliable connectivity, or adequate digital literacy, enabling inclusive access to essential online services. By embedding digital platforms within village-level institutions—including cooperative societies—CSCs systematically reduce access barriers, deepen financial inclusion, and generate digitally enabled livelihoods, thereby converting connectivity into tangible socio-economic empowerment at the grassroots level.

PM-WANI: Affordable Wi-Fi for India

PM-WANI (Prime Minister Wi-Fi Access Network Interface) was launched in December 2020 to provide affordable, high-speed public internet connectivity, particularly in rural and remote areas. The scheme promotes a decentralised, licence-free public Wi-Fi model through Public Data Offices (PDOs), encouraging local entrepreneurship while widening broadband reach. As of February 2026, **4,09,111 Wi-Fi hotspots** have been deployed nationwide, supported by **207 PDO Aggregators** and **113 App Providers**. By enabling low-cost internet access through locally operated Wi-Fi Access Points, PM-WANI plays a vital role in bridging the digital divide and ensuring inclusive participation in India's digital economy. Integrating last-mile



access, literacy programs, and affordable internet with platforms

connecting markets and social schemes strengthens rural livelihoods, ensures timely benefit delivery, and fosters inclusive participation in India's digital economy.

Digital Skilling for Future-Ready Bharat

The Government of India is transforming digital inclusion from mere access to advanced capability building, ensuring equitable opportunities for all citizens. Through integrated skilling, innovation, and entrepreneurship initiatives, India is empowering its youth to innovate, create jobs, and drive economic growth across urban and rural India.



The **Atal Innovation Mission (AIM)** has established over **10,000 Atal Tinkering**

Labs (ATLs) across **722 districts**, engaging **1.1 crore students**, with an additional **50,000 ATLs planned as of December 2025**. Students have developed **16 lakh+ innovation projects**, gaining hands-on experience in **robotics, AI, and IoT**, laying the foundation for a tech-savvy generation .

FutureSkills Prime, led by MeitY and NASSCOM, has **registered 29 lakh candidates**, with **17.9 lakh enrolments** and **over 7 lakh unique badge holders**, including **41% women**. Ranked **3rd globally** in the **European Commission's Pact for Skills Report 2024**, the programme equips learners with industry-relevant skills in AI,

cloud computing, cybersecurity, and data analytics.

The **IndiaAI Mission**, with an outlay of **₹10,300 crore**, has operationalised **38,000**



GPUs (with **20,000 more planned**) and offers subsidised compute at **₹65 per hour**. The **IndiaAI Kosh** hosts **9,500+ datasets** and **273 AI models** across **20 sectors**, supporting startups, researchers, and innovators nationwide.

Under **Startup India**, recognised startups have grown from **400 in 2016 to over 2 lakh in 2025**, generating **21 lakh jobs**. **50% of startups now operate in Tier-II and Tier-III cities**, decentralising innovation and enabling local economic growth. The **NIDHI programme** and **Atal Incubation Centres (AICs)** further support early-stage ventures and inclusive entrepreneurship. Recent expansions include **8 new Inclusive TBIs (iTBLs)** and **10 Entrepreneur-in-Residence Centres**, while **72 AICs** have nurtured **3,500+ startups**, created **32,000+ jobs**, and supported **1,000+ women-led ventures**, backed by **6,200+ Mentors of Change**.



Collectively, these powerhouse initiatives prove that India's digital inclusion extends far beyond devices and data—it's about forging capabilities, sparking opportunities, and delivering growth to every village

and town. By weaving connectivity with skilling, platforms, and startup support, India is crafting an unbreakable, inclusive digital ecosystem that propels broad-based progress and positions the nation as a global beacon of equitable innovation.

Conclusion

India's decade-long digital transformation has fundamentally reshaped access to technology, governance, education, and economic opportunities. Through a combination of universal connectivity, robust digital public infrastructure, and advanced computing capacity, citizens across urban, rural, and remote areas are now better positioned to participate in the country's digital economy. Programs such as CSCs, PMGDISHA, PM-WANI, and targeted interventions for SC/ST communities and women in STEM have translated connectivity into tangible socio-economic outcomes, empowering individuals and strengthening local innovation ecosystems.

Equally significant is the focus on youth, startups, and deep-tech sectors, which ensures that digital inclusion goes beyond access to create pathways for skills, entrepreneurship, and high-value employment. By integrating education, skilling, innovation, and entrepreneurship across diverse geographies, India is not only bridging the digital divide but also fostering inclusive growth, equitable opportunities, and a resilient knowledge economy. This

multi-layered approach sets the foundation for sustained empowerment in the digital age, leaving no citizen behind.

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India's Core DPI & Its Global Adoption



Introduction

Digital Public Infrastructure (DPI) is reshaping how nations govern, transact and deliver services. In this transformation, India has moved from being a large user of digital systems to a builder of population scale digital architecture. What distinguishes India's approach is scale, openness and integration. Identity, payments and data exchange have been connected through interoperable public rails that support welfare delivery, economic activity and state capacity.

As countries around the world search for trusted and inclusive digital pathways, India's experience is drawing sustained attention. The model demonstrates that digital infrastructure can be designed as a public good rather than a closed platform. It shows that inclusion and efficiency can advance together. In doing so, India is steadily shaping the global conversation on how digital systems should be built and governed in the twenty first century.

The Global Digital Moment: Why DPI Matters

Infrastructure today is no longer limited to roads, ports and power grids. It is digital. The United Nations defines Digital Public Infrastructure as a set of foundational digital systems that form the backbone of modern societies. These systems enable secure and seamless interaction between people, businesses and governments. From verifying identity and opening bank accounts to enabling instant digital payments and safe data exchange, DPI shapes everyday life. Like railways once connected regions to opportunity, digital infrastructure now determines who can access services, markets and rights in the modern economy.

For digital infrastructure to deliver public value, it must be inclusive, interoperable and governed in the public interest. A well designed digital identification system can support subsidy delivery, voter registration and secure banking. When linked with

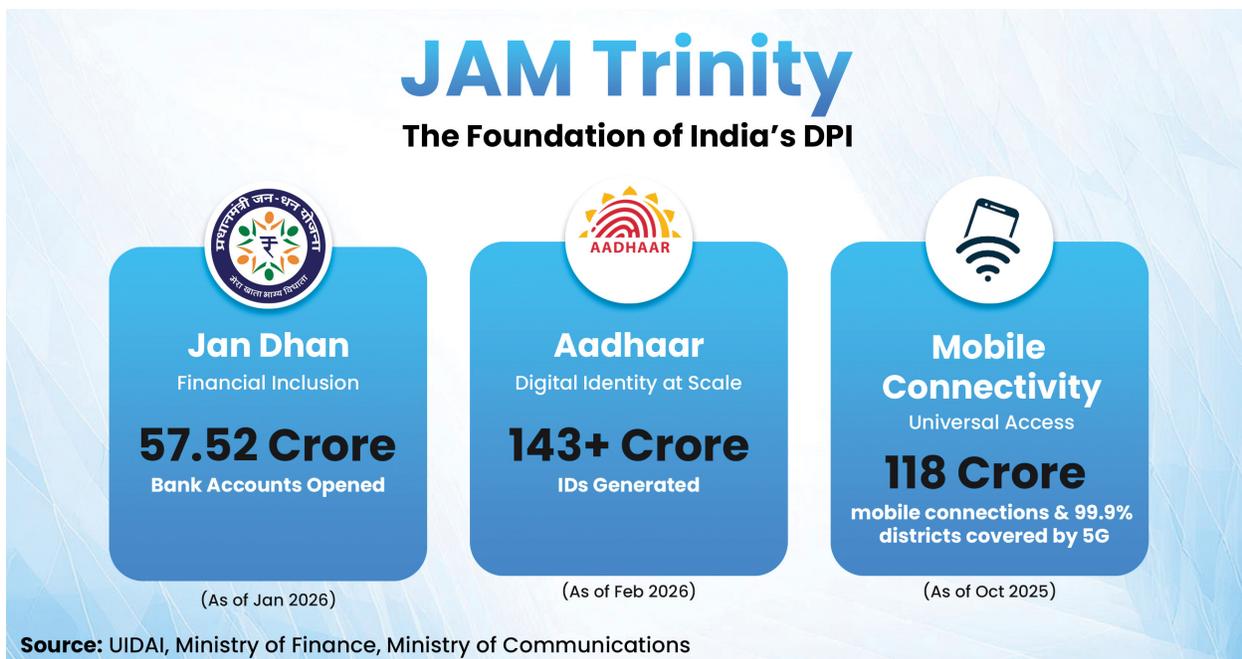
- » India has signed DPI cooperation agreements with **24 countries**.
- » UPI is now operational in **8 countries** enabling cross border payments.
- » **India Stack Global** facilitates DPI adoption by partner nations.
- » India contributed **highest solutions** to the Global DPI Repository.

payments and data exchange frameworks, it creates a unified architecture that strengthens state capacity and widens opportunity.

Against this backdrop, India’s experience offers a working demonstration of what population scale digital public infrastructure can achieve. India has built digital public infrastructure for over 1.4 billion people at very low cost. It is an open and accessible network, backed by regulation and a wide range of applications that modernise the economy, reform governance and transform lives. In India’s case, the principles of inclusion, innovation and trust are operational realities of its DPI ecosystem. At population scale, and with measurable impact, India has demonstrated that digital systems can deepen democracy while accelerating development.

Foundations of India’s DPI: The JAM Trinity

India’s digital public infrastructure did not emerge overnight. It was seeded through a deliberate convergence of identity, banking and connectivity. This convergence took shape as the JAM trinity. Jan Dhan bank accounts, Aadhaar enrolment and widespread mobile phone penetration created the base layer for India’s digital transformation. Together, they connected individuals to the state in a direct and verifiable manner. Through JAM, welfare benefits began to move straight into bank accounts. Intermediaries were reduced. Delays narrowed. Leakage declined. The scale of this integration laid the foundation for what would later evolve into a comprehensive DPI ecosystem.



Aadhaar

Aadhaar introduced a biometric based digital identity platform for residents across the country. It enabled unique identification and secure authentication for efficient service delivery. As of February 2026, more than **143 crore Aadhaar numbers** had been generated. Usage reflects deep integration into everyday systems. In 2024-25 alone, over **2,707 crore** authentication transactions were carried out. Identity became portable. Verification became near instant. Access to services became more reliable and transparent.

Jan Dhan Yojana

The Pradhan Mantri Jan Dhan Yojana, launched as the National Mission for Financial Inclusion, set out to give every unbanked adult in India a bank account, a financial identity and access to essential services such as credit, insurance and pensions. Launched in August 2014, it evolved into one of the largest financial inclusion initiatives in the world. The number of accounts grew from 14.72 crore in 2015 to **57.52 crore** as of January 2026. Deposits increased from ₹15,670 crore in March 2015 to **₹2.88 lakh crore** by January 2026. A total of **39.81 crore** RuPay debit cards were issued to beneficiaries. Financial participation widened. Savings entered the formal system strengthening economic agency.

Mobile Phones and Connectivity

Connectivity completed the triangle. With **85.5 percent** of Indian households owning at least one smartphone, the mobile phone became a bank, a classroom and a gateway to public services. The number of wireless telephone subscribers reached **125.87 crore** at the end of December 2025. Fifth generation (5G) mobile services are now available in 99.9 percent of districts, covering 85 percent of the population. As of December 2025, **5.18 lakh** 5G base transceiver stations had been installed nationwide. This extensive digital reach ensured that identity and banking were not confined to urban centres. They became accessible across rural and urban India alike.

The JAM trinity created the foundational rails on which India's broader DPI ecosystem was built, linking identity, finance and connectivity at unprecedented scale.

The Rise of India's DPI Stack

India's DPI Stack grew from a few foundational digital systems into a connected national framework built on open APIs (Application Programming Interface) and public digital goods. Known as India Stack, it unlocks the core building blocks of identity, data and payments at population scale. What began with digital identity and financial inclusion gradually

India's DPI in Numbers



Source: NPCI, Ministry of Finance, MEITY, MoE

expanded into payments, welfare delivery, health, education, skilling and governance platforms. These systems are designed to work together through interoperable digital rails. The result is not a collection of standalone portals, but an integrated digital backbone that supports economic activity and public service delivery. While developed in India's context, the model is modular and adaptable, making it relevant beyond national boundaries.

This is how the stack evolved across key sectors:

Digital Economic Infrastructure

1. Unified Payments Interface (UPI):

UPI has transformed retail payments into a seamless digital experience. It enables instant, interoperable and secure



transactions between individuals and merchants in real time. In January 2026, it processed **21.70 billion** transactions worth over **₹28.33 lakh crore**, reflecting its deep integration into everyday commerce. A total of **691 banks** are live on the UPI platform, underscoring its broad institutional adoption. The International Monetary Fund, in its June 2025 report on growing retail digital payments, recognised UPI as the world's largest retail fast payment system by transaction volume. The 2024 ACI Worldwide report titled Prime Time for Real Time noted that UPI accounts for around **49 percent** of global real time payment transaction volume. Within India, **81 percent** by volume of total retail payment transactions are processed

on UPI rails, making it the preferred mode for person to person as well as person to merchant payments.

2. Public Financial Management System (PFMS):

PFMS has strengthened transparency and control in public expenditure. It is a web based online transaction system that enables end to end monitoring of government funds and electronic payments to implementing agencies and beneficiaries. In December 2014, it was mandated for payment, accounting and reporting under Direct Benefit Transfer. This reform helped remove duplicate and fake beneficiaries and reduce leakages. As a result, the government saved more than ₹4.31 lakh crore between 2015 and March 2024. As of January 2026, the cumulative amount transferred through Direct Benefit



Transfer has crossed ₹49.09 lakh crore, signalling a shift towards targeted and accountable welfare delivery.

3. Open Network for Digital Commerce (ONDC):

Launched in 2022, ONDC is an open network designed to democratise digital commerce by connecting buyers and sellers through interoperable platforms rather than a single marketplace. It expands market access, reduces entry barriers and enables wider participation, particularly for small businesses. As of



December 2025, there are a total of **1.16 lakh+** retail sellers live on ONDC from over **630+ cities** and towns across India.

4. Government eMarketplace:

The Government eMarketplace has digitised public procurement and widened participation in government contracting. It provides an online platform for transparent and efficient procurement of goods and services by government entities. As of November 2025, nearly **3.27 crore** orders had been processed with a cumulative Gross Merchandise Value exceeding **₹16.41 lakh crore**, including **₹7.94 lakh crore** in services and **₹8.47 lakh crore** in products. The platform supports over 10,894 product categories and 348 service categories, with more than 1.67 lakh buyer organisations onboard. Over **24 lakh** sellers and service providers have completed their profiles, including more than **11 lakh Micro and Small Enterprises**, which contribute **44.8 percent** of the cumulative order value and have received orders worth over **₹7.35 lakh crore**.



Efficient • Transparent • Inclusive

Citizen Service Delivery Platforms

1. DigiLocker:

Launched in 2015, DigiLocker introduced a secure digital document wallet for citizens. It allows individuals to store, access and share authenticated electronic documents with consent-based access. The platform ensures authenticity and reduces the use of fake documents. Citizens can retrieve critical lifelong records anytime and from anywhere. As of 12 February 2026, DigiLocker had **65.94 crore** users. By January 2026, over **950 crore documents** had been issued through the platform, reflecting its growing role in public administration.



2. UMANG:

Launched in 2017, UMANG, or the Unified Mobile Application for New age Governance, was designed to advance mobile governance in India. It provides a single window mobile and web platform to access services from central, state and local government bodies. Citizens can use UMANG to access services such as EPFO balance and claims, PAN and Aadhaar services, DigiLocker access, utility bill payments, pension services, scholarship applications, passport related services, driving licence services, exam results, etc. As of January 2026, it recorded



10.27 crore user registrations and **730.12 crore transactions**. More than **2,400 government services** are available on the portal, making it a key interface between citizens and the state.

3. e-Courts:

The e-Courts project is a pan India Mission Mode initiative under the Department of Justice, Ministry of Law and Justice. It seeks



to make judicial processes more efficient, transparent and accessible through the use of Information and Communication Technology (ICT). Phase I from 2011 to 2015 focused on basic computerisation and internal connectivity. As a result, **14,249 courts** were computerised and Local Area Networks were installed in **13,683 courts**. Phase II from 2015 to 2023 shifted towards ICT enabled service delivery for citizens. It introduced Wide Area Network connectivity, stakeholder training, eSewa Kendras, and computerisation of District Legal Services Authorities and Taluka Legal Committees. Advanced Case Information System software, the National Judicial Data Grid and systems for digital filing and online payments transformed public access to judicial services.

In September 2023, the Union Cabinet approved Phase III for the period 2023 to 2027 with an outlay of **₹7,210 crore**. This phase advances digital and paperless courts and comprehensive digitisation of legacy records and pending cases. It expands video conferencing facilities across courts, jails and hospitals and widens the scope of online courts beyond traffic violations. The integration of emerging technologies such as Artificial Intelligence and Optical Character Recognition supports case pendency analysis and forecasting of litigation trends. The initiative marks a structural shift towards data enabled judicial administration.

Health & Nutrition Ecosystem

1. CoWIN:

On 16 January 2021, CoWIN was launched as the digital backbone of India's COVID 19 vaccination programme. It connected vaccine manufacturers, administrators, healthcare workers and beneficiaries across public and private sectors on a single platform. Managing over **220 crore doses**, CoWIN brought transparency and efficiency to one of the world's largest vaccination drives. Real time data tracking improved coordination and public trust. Its design and execution have drawn international interest, with several countries examining it as a model for digital public health systems.



2. eSanjeevani:

Launched in November 2019, eSanjeevani expanded access to healthcare through telemedicine. It enables remote doctor to patient consultations, particularly in rural and underserved regions. The platform reduces travel costs and waiting time while extending specialist advice to distant communities. As of 12 February 2026, it has served **44.94 crore patients** and onboarded **2.29 lakh** healthcare providers. Teleconsultation has moved from pilot to mainstream public health service.



3. eHospital and ORS:

As part of the Digital India initiative, the National Informatics Centre developed eHospital, e-BloodBank and the Online Registration System. The ORS portal was launched on 1 July 2015 to provide online access to hospital services. The eHospital application functions as a Hospital Management Information System that digitises internal workflows, appointments, diagnostics and billing. It is available to central, state, autonomous and cooperative hospitals through a cloud-based service model. The e-BloodBank



application supports end to end blood bank management. Together, these systems connect patients, hospitals and doctors on a unified digital platform and integrate services with the Ayushman Bharat Health Account.

4. Aarogya Setu:

On 2 April 2020, Aarogya Setu was launched to support efforts to limit the spread of COVID 19. It enabled Bluetooth based contact tracing, hotspot mapping and dissemination of health advisories. The application has since evolved into a National Health App powered by the Ayushman Bharat Digital Mission. Users can register for an Ayushman Bharat Health Account and access digital lab reports, prescriptions and diagnoses from verified providers. It also allows scheduling of online doctor consultations through the eSanjeevani OPD service, strengthening continuity of care.



5. National Non Communicable Diseases Platform (NCD):

The National Non-Communicable Diseases Platform supports screening, diagnosis and management of major lifestyle diseases. Developed in collaboration with the Ministry of Health and Family Welfare and Tata Trusts, it facilitates population based screening and long-term disease management. As of December 2025, **74.97 crore** beneficiaries had been enrolled on the system. Over **8.64 crore patients**

are under treatment for hypertension and diabetes. The platform is operational across 31 states and union territories, enabling systematic tracking of high-risk populations.



6. POSHAN Tracker:

The Poshan Tracker, rolled out on 1 March 2021 by the Ministry of Women and Child Development through the National e Governance Division, serves as a governance tool for nutrition monitoring. It leverages technology for dynamic identification of stunting, wasting and underweight prevalence among children. It also enables last mile tracking of nutrition service delivery. As of January 2026, **14.03 lakh** Anganwadi Centres were onboard and 8.90 crore eligible beneficiaries were registered on the system, strengthening data driven nutrition interventions.



Education and Skilling

1. DIKSHA:

Launched in 2017, DIKSHA is the national platform for school education. It is an initiative of the National Council for Educational Research and Training under the Ministry of Education. The platform has been adopted by almost all States and Union Territories, along with central autonomous bodies and boards including CBSE. DIKSHA aims to build a learning

ecosystem that responds to the needs of the twenty first century. Education is designed to be accessible, engaging and tailored to individual learners. It extends beyond classrooms and supports teachers, students and administrators alike. As of 12 February 2026, **566 crore** learning sessions had been delivered through the platform. It has 2.10 crore registered users. Course enrolments stand at **18.49 crore**, with **14.69 crore** completions and **12.67 crore** certificates issued.



2. Skill India Digital Hub:

Launched in 2023, the Skill India Digital Hub was created to support skilling, reskilling and upskilling through a comprehensive digital platform. It combines online training with trusted skill credentials delivered through APIs, alongside payment and job discovery layers. The upgraded platform integrates Udyam, e Shram, National Career Service and ASEEM portals to enable government to citizen, business to citizen and business to business services. It connects learners with employers and helps align training with industry demand. Educational institutions can adapt curricula based on emerging workforce needs. The platform acts as a bridge between skill development and



employment, strengthening India's human capital ecosystem.

Digital Systems for Governance Capacity & Coordination

1. e-Office:

e-Office has enabled paperless functioning across government departments. It supports electronic file management and digital decision making. The platform aims to create a simplified, responsive and transparent administrative system. Built on open architecture, it is designed for replication across central, state and district levels. It integrates independent functions within a unified digital framework, improving efficiency and reducing procedural delays.



2. API Setu:

MeitY initiated API Setu, also known as the Open API Platform project, in March 2020. It enables secure and standardised sharing of government data and services through application programming interfaces. The platform manages the full API lifecycle from publishing to consumption and supports both public and private ecosystems. As of February 2026, the platform currently hosts **7,987 APIs**, with **6,446 consumers**, **2,521 publishers** and **10,344 organisations onboard**. By facilitating structured and



secure data exchange, API Setu strengthens interoperability and innovation across India's digital governance landscape.

3. PM GatiShakti:

Launched on 13 October 2021, the PM GatiShakti National Master Plan provides a GIS based digital platform for integrated planning and coordinated implementation of infrastructure projects. It aims to enable multimodal connectivity across economic zones and improve synchronisation among ministries and agencies. The Network Planning Group, constituted under this framework, evaluates critical infrastructure proposals at the planning stage to ensure multimodality, inter modality, last mile connectivity and data driven decision making. As of February 10, 2025, **352 infrastructure projects** with a total estimated cost of **₹16.10 lakh crore** have been evaluated through this mechanism. Of these, **201 projects** have been sanctioned and **167** are under implementation. The platform brings coherence and transparency to large scale infrastructure governance.



Together, these interconnected platforms illustrate how India's DPI Stack has evolved into a comprehensive digital backbone powering governance, economic growth and citizen empowerment at scale.

India's DPI Diplomacy

India's engagement on DPI draws from a deeper civilisational ethos. Vasudhaiva Kutumbakam means the world is one family. It reflects an outlook that encourages shared progress beyond borders, languages and ideologies. In the digital age, this philosophy has found new expression through India's engagement on DPI. Technology is viewed not as a closed asset, but as a public good that can support inclusive development. India is not only sharing technology but also assisting other nations in developing and adapting it to their own contexts. As countries search for trusted digital pathways, India's experience has steadily entered global policy conversations.

The following initiatives show how this approach is being operationalised internationally:

Strategic Partnerships on Digital Infrastructure

As of February 2026, Government of India has signed Memoranda of Understanding (MoU) and agreements with **24 countries** for cooperation on India Stack and Digital Public Infrastructure. These partnerships focus on sharing technical knowledge and supporting replication of digital governance platforms. Areas of cooperation include digital identity, digital payments, data exchange frameworks and service delivery systems. The objective is not export of a

product, but collaboration on architecture and design principles. This engagement has positioned India as a practical partner for countries seeking to build population scale digital systems.

Cross Border Expansion of UPI

India's payment infrastructure has crossed national boundaries. UPI is now live in **8 countries** including the United Arab

| S. No. | Countries with MoUs on India Stack / Digital Public Infrastructure |
|--------|--|
| 1 | Republic of Armenia |
| 2 | Republic of Sierra Leone |
| 3 | Republic of Suriname |
| 4 | Antigua and Barbuda |
| 5 | Papua New Guinea |
| 6 | Republic of Trinidad and Tobago |
| 7 | United Republic of Tanzania |
| 8 | Republic of Kenya |
| 9 | Republic of Cuba |
| 10 | Republic of Colombia |
| 11 | Lao People's Democratic Republic |
| 12 | Saint Kitts and Nevis |
| 13 | Ethiopia |
| 14 | Jamaica |
| 15 | Gambia |
| 16 | Fiji |
| 17 | Guyana |
| 18 | Venezuela |
| 19 | Sri Lanka |
| 20 | Brazil |
| 21 | Lesotho |
| 22 | Maldives |
| 23 | Mongolia |
| 24 | Malaysia |

Emirates, Singapore, Bhutan, Nepal, Sri Lanka, France, Mauritius and Qatar. Its international adoption is easing remittances, improving payment efficiency and expanding financial inclusion. By enabling seamless cross border transactions, UPI has strengthened India's presence in the global fintech landscape. The scale and reliability of the system have drawn attention from policymakers and regulators worldwide.



India Stack Global

To facilitate structured cooperation, India Stack Global was established as a dedicated platform to showcase India's DPI solutions and support adoption by partner countries. The portal provides access to key digital platforms and technical resources. It serves as a bridge between India's experience and the requirements of friendly nations. Through this initiative, digital public goods are presented as adaptable building blocks rather than fixed templates.

G20 Declaration and the Global DPI Repository

During its G20 Presidency in 2023, India placed Digital Public Infrastructure at the centre of the development agenda. The G20 New Delhi Leaders' Declaration explicitly recognised DPI as a development accelerator. India articulated the idea that DPI is not proprietary technology, but digital rails for inclusive growth, particularly for the Global South. The Global Digital Public Infrastructure Repository was launched under the Indian Presidency as a knowledge platform to share lessons and practices. It is designed to bridge information gaps around designing and deploying population scale DPI. India contributed the highest number of DPI solutions to the repository, reinforcing its role in shaping the discourse.

CoWIN as an Open Digital Public Good

India extended its digital health platform beyond national borders by offering CoWIN as open-source software to the world at no cost. The platform's success in managing over 220 crore vaccine doses demonstrated the ability to coordinate complex public health logistics at scale. By making the technology freely available, India signalled that its digital experience is meant to be shared. Its use of technology and policy for public good, inclusive development and social empowerment offers practical lessons for developing nations seeking resilient digital systems.

MOSIP and Sovereign Digital Identity

The Modular Open-Source Identity

Platform (MOSIP), developed in India, represents another important example. MOSIP provides a configurable and open-source framework for countries seeking to build sovereign digital identity systems. More than 25 nations are adopting or exploring the platform for their national identity programmes.

Collectively, these initiatives reflect a diplomacy anchored in shared capability, where India is helping shape a more inclusive and interoperable global digital architecture.

Conclusion

India's journey with Digital Public Infrastructure reflects a broader shift in how development and governance are conceived in the digital age. What began as an effort to expand financial inclusion and identity access has matured into a comprehensive, interoperable architecture that underpins economic activity, public service delivery and institutional capacity. The model demonstrates that scale need not compromise trust, and that openness can coexist with security and regulation. By linking technology with public purpose, India has shown that digital systems can strengthen democracy while accelerating growth. As more nations look to build resilient and inclusive digital foundations,

India's experience stands not merely as a case study, but as a reference point for the future of public digital infrastructure.

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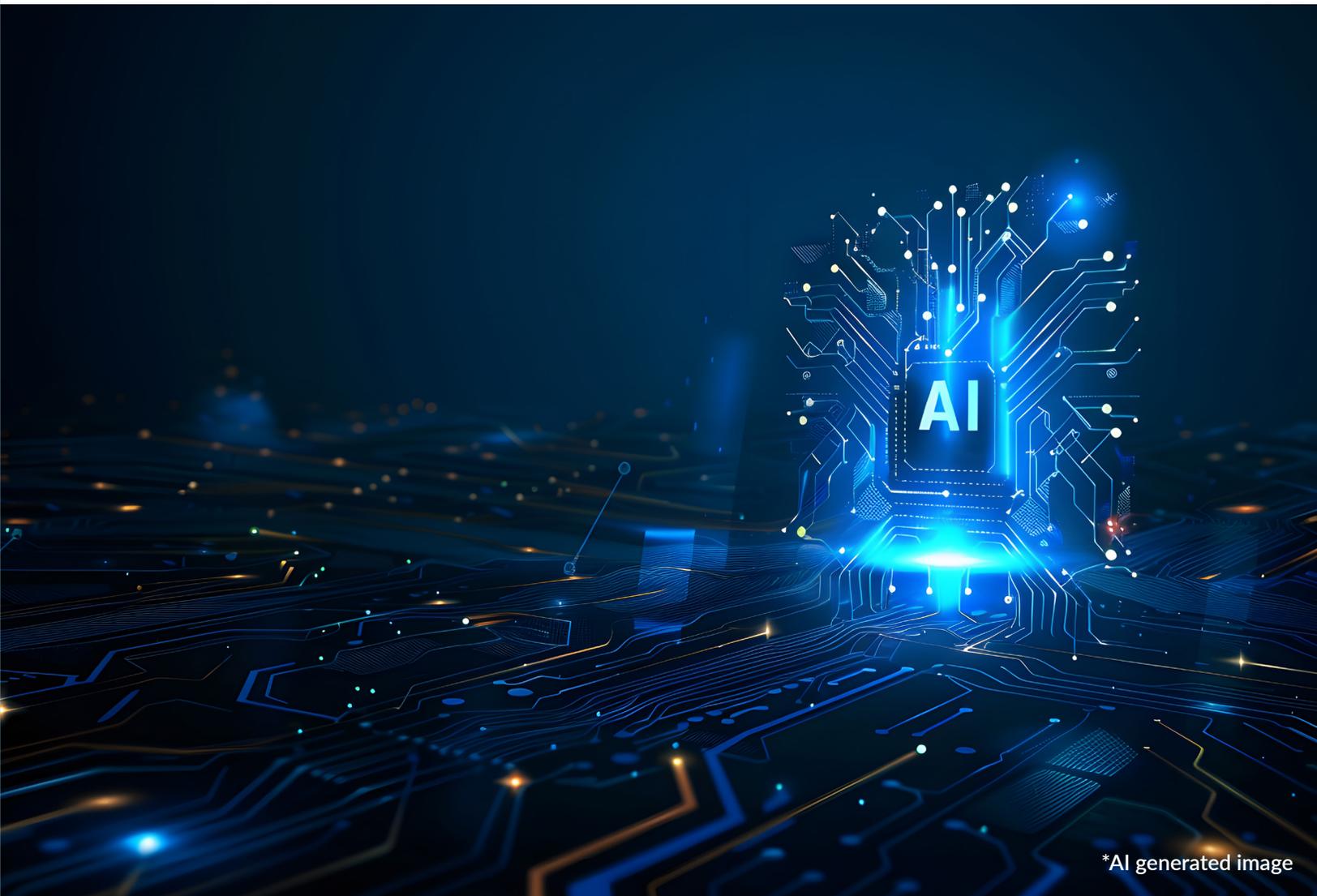
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India AI Stack: Powering the Next Frontier of Digital Revolution



Evolution of AI Ecosystem in India

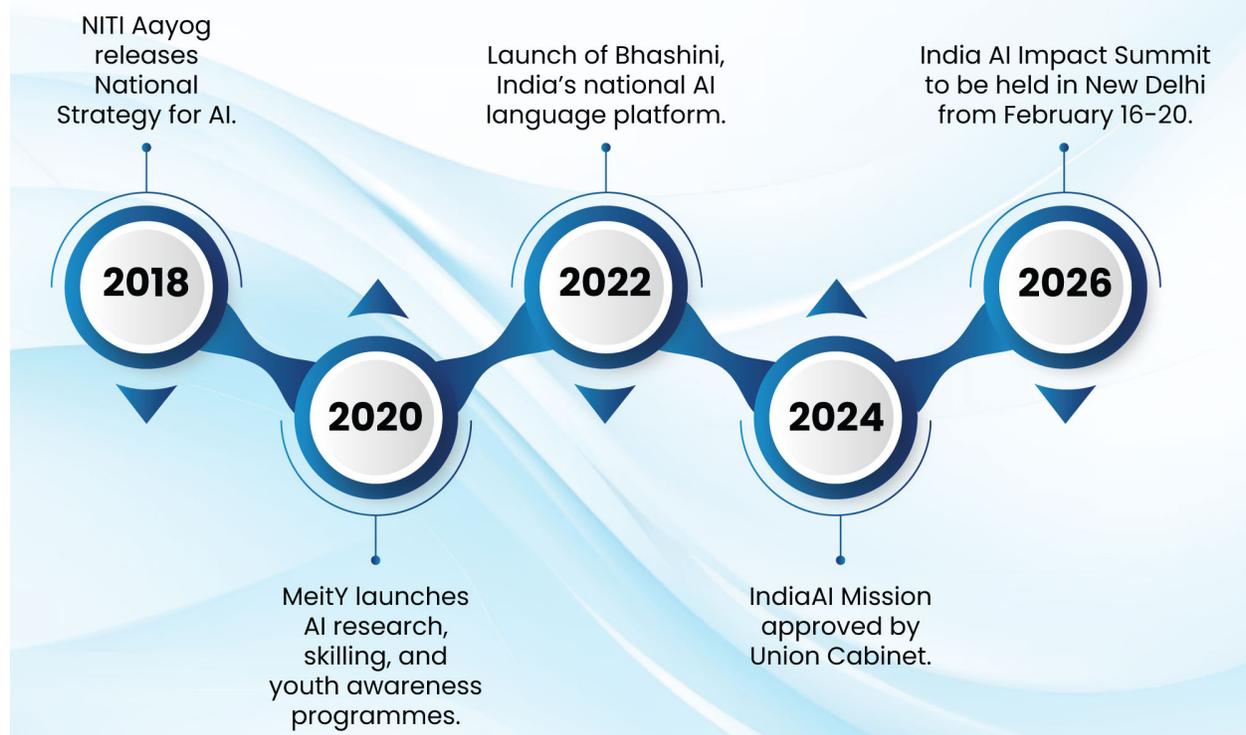
Artificial Intelligence (AI) has emerged globally as a general-purpose technology with transformative implications for economic productivity, governance, and public service delivery. In India, however, its evolution has followed a uniquely structured pathway – shaped not merely by technological ambition, but by developmental priorities and the creation of population-scale digital public infrastructure.

The foundational shift began in 2015 with the launch of the **Digital India** programme, which established core digital public

infrastructure such as **Aadhaar** and **UPI**. These platforms enabled trusted digital identity, interoperable payments, and real-time data generation at an unprecedented scale. Unlike many countries where AI development preceded digital inclusion, India's trajectory ensured that data, identity, and financial access frameworks were already embedded at scale – creating fertile ground for AI deployment across sectors.

A strategic articulation followed in 2018, when NITI Aayog released the **National Strategy for Artificial Intelligence (#AIforAll)**. The strategy positioned AI as an instrument for inclusive growth and identified priority sectors including

AI EVOLUTION IN INDIA – TIMELINE



healthcare, agriculture, education, smart cities, infrastructure, and mobility. From 2020 onwards, the ecosystem matured through governance and capability-building initiatives: MeitY's work on responsible AI frameworks, the integration of digital and AI competencies under the National Education Policy 2020, and the launch of BHASHINI under the National Language Translation Mission to address linguistic inclusion.

The institutionalisation of AI efforts reached a new milestone with the approval of the **IndiaAI Mission in 2024**, backed by an outlay of of **₹10,300 crore over five years**. The Mission established a comprehensive framework spanning compute capacity, datasets and models, innovation centres, startup support, skilling, and safe & trusted AI. By 2025, key pillars were operational including the **IndiaAI Compute Portal** offering subsidised GPU/TPU access, **IndiaAIKosh** hosting thousands of datasets and models, the development of indigenous large language models under **BharatGen**, and the continued expansion of **BHASHINI**. AI in India thus transitioned from policy vision to operational ecosystem.

The **Union Budget 2026-27** further reinforced this trajectory by strengthening domestic AI capabilities and infrastructure. Measures such as long-term incentives for AI data-centre investments, support for semiconductor design and manufacturing under India Semiconductor Mission 2.0, expansion of electronics manufacturing,

sectoral AI tools like Bharat-VISTAAR integrating AgriStack and ICAR, and investments in skilling through AVGC Content Creator Labs reflect a clear shift toward application-led, infrastructure-backed AI growth. Together, these interventions signal India's commitment to building sovereign, scalable, and socially anchored AI capabilities.

Toward Democratised, Population-Scale AI

India's AI journey is underpinned by a central philosophy: **the democratisation of AI**. Artificial Intelligence must not remain concentrated within a limited set of firms or geographies; it must be accessible, inclusive, and oriented toward public welfare. The vision of "AI for Humanity" places citizens at the centre of technological progress, ensuring that innovation strengthens social equity, economic opportunity, and collective well-being.

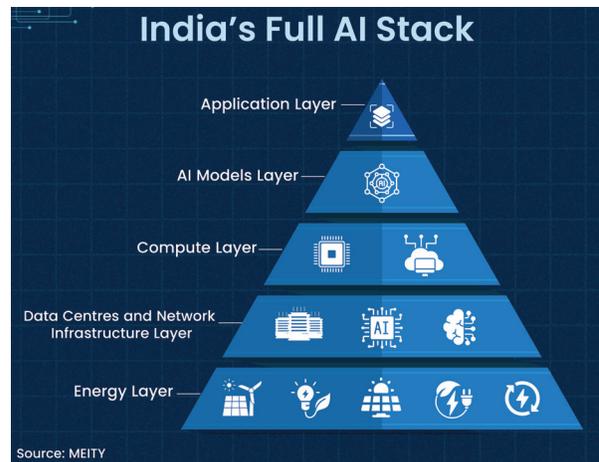
Realising this vision requires AI systems that can function reliably at population scale – across healthcare, education, agriculture, finance, and public administration. Such scale demands more than isolated projects; it requires an integrated and layered technical foundation. This need has led to the development of what may be understood as the **India AI Stack** – a structured framework aligning compute infrastructure, trusted datasets, interoperable platforms, governance mechanisms, and application layers.

It is within this layered architecture that AI moves from experimentation to deployment, from pilots to nationwide adoption – enabling secure, scalable, and sovereign AI systems capable of delivering impact at the scale of India.

AI Stack: Layers Enabling Deployment and Scale

An AI stack is the complete set of tools and systems that work together to build and run AI applications. These applications range from everyday tools such as virtual assistants like Siri and Alexa, and personalized recommendations on platforms like Netflix and Spotify, to advanced systems used in healthcare diagnostics, financial fraud detection, and transportation. The AI stack brings together hardware, software, and platforms that help collect data, train AI models, and use them in real life, ensuring AI works smoothly from start to finish.

The AI stack is made up of **five layers**, each playing a critical role. The AI stack makes



artificial intelligence work in the real world, from the apps people use every day to the data, computing power, networks, and energy that run behind the scenes. Together, these layers ensure AI solutions are scalable, reliable, and capable of delivering impact at population scale.

1. Application Layer

The application layer represents the user-facing component of the AI stack. It includes AI-powered apps and services such as health diagnostic tools, farming advisory platforms, chatbots, and language

AI Adoption in India through High-Impact Applications

- » Indian startups are developing AI applications tailored to local languages, contexts, and sector-specific needs, accelerating adoption across the economy.
- » **In agriculture**, AI-powered advisory tools are improving sowing decisions,

crop yields, and input efficiency, with select state-level deployments such as Andhra Pradesh and Maharashtra, reporting productivity gains of up to 30–50%.

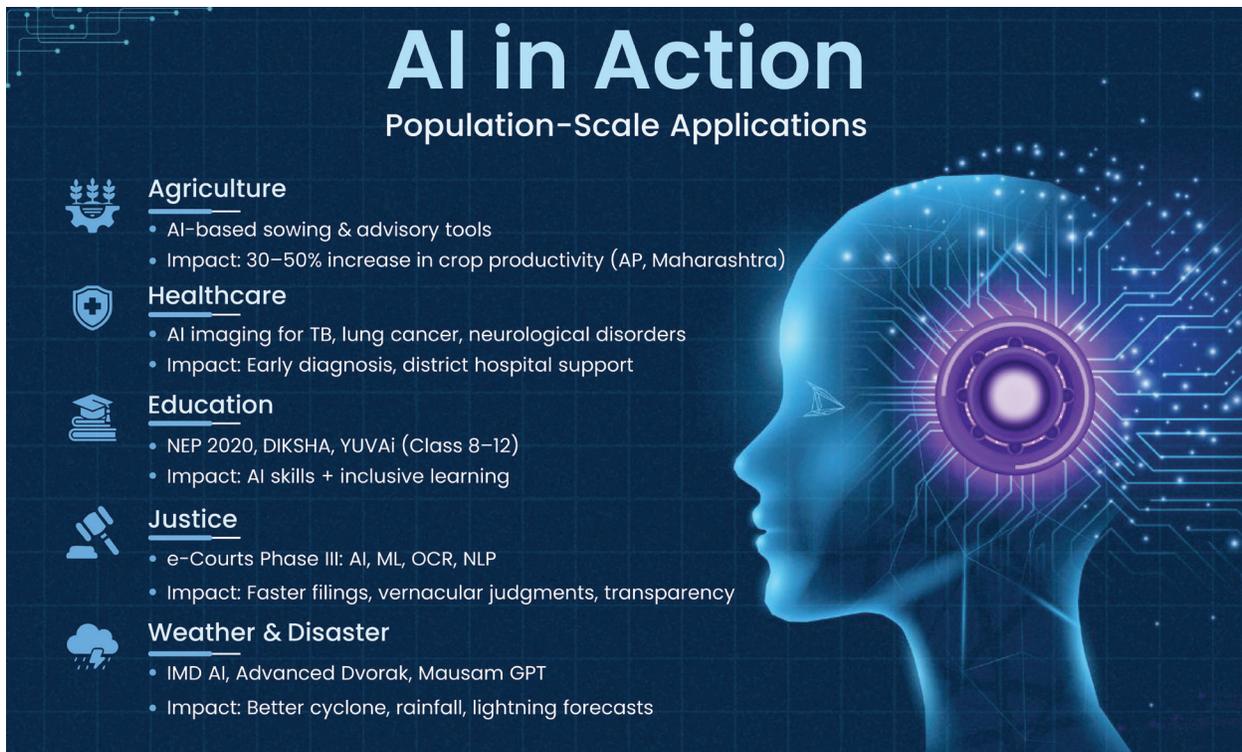
- » **In healthcare**, AI applications are enabling early detection of tuberculosis, cancer, neurological disorders, and other conditions, strengthening preventive and diagnostic care.
- » **In education**, National Education Policy 2020 integrates AI learning through CBSE curricula, DIKSHA platforms, and initiatives such as YUVAi, equipping students with practical AI skills.
- » **In justice delivery**, e-Courts Phase III deploys AI and ML for translation, case management, scheduling, and citizen-facing services, improving efficiency and transparency through vernacular access.
- » **In weather and disaster management**, IMD uses AI for advanced forecasting of rainfall, cyclones, fog, lightning, and fires, with tools such as Mausam GPT supporting farmers and disaster response.

translation applications. This layer turns complex AI processes into simple, user-friendly services that people can easily use.

In essence, the application layer is where AI delivers real value by translating advanced capabilities into accessible, user-centric services. When deployed at scale across priority sectors, it enables AI to move beyond experimentation and become embedded in everyday decision-making and service delivery. This widespread adoption is what ultimately determines the social and economic impact of AI.

General Trend in AI Application Adoption

AI delivers transformative impact when applications are adopted at scale, much like the internet and mobile technologies. AI applications are increasingly deployed across sectors including agriculture, healthcare, education, manufacturing, transport, governance, and climate action. **India is pursuing an “AI diffusion” strategy**, leveraging AI across sectors at population scale. Across the country, AI-enabled applications are helping farmers make



informed decisions, supporting clinicians in early diagnosis, and enhancing the efficiency of public service delivery. Further, by prioritising real-world use cases and large-scale adoption, the application layer ensures that AI delivers tangible benefits and directly improves citizens' lives.

2. AI model layer

It acts as the brain of AI systems. AI models are trained on data to recognize patterns, make predictions, and take decisions. For example, they help detect diseases from X-rays, predict crop yields,

Development of AI Model Layer in India

- » Under the **IndiaAI Mission**, **12 indigenous AI models** are being developed to address India-specific use cases.
- » To support sovereign model development, startups receive **subsidised compute access**, with up to **25% of compute costs** supported through a mix of grants and equity, lowering entry barriers and accelerating domestic innovation.

- » **BharatGen** is developing India-centric foundation and multimodal models, ranging from **billions to trillions of parameters**, to support research, startups, and public-sector applications.
- » **IndiaAIKosh** serves as a national repository for datasets, models, and tools; as of **December 2025**, it hosts 9,500+ datasets and 273 sectoral models, with contributions from **54 entities across 20 sectors**.
- » Indian startups are building **full-stack and domain-specific AI models** aligned with Indian languages, healthcare needs, and public service delivery, for example
- » **Sarvam AI** is developing large language and speech models for Indian languages to support voice interfaces, document processing, and citizen services.
- » **Bhashini**, under the National Language Translation Mission, hosts **350+ AI models** covering speech recognition, machine translation, text-to-speech, OCR, and language detection, strengthening multilingual access to digital services.

translate languages, or answer questions through chatbots. These models provide intelligence to the applications, enabling them to deliver meaningful AI-powered results to users.

The AI model layer is the core intelligence that determines how effectively applications can understand, predict, and respond to real-world needs. By developing sovereign, India-centric models and shared repositories, this layer ensures that AI capabilities are relevant, trustworthy, and aligned with local languages and priorities. Strengthening this foundation enables scalable innovation

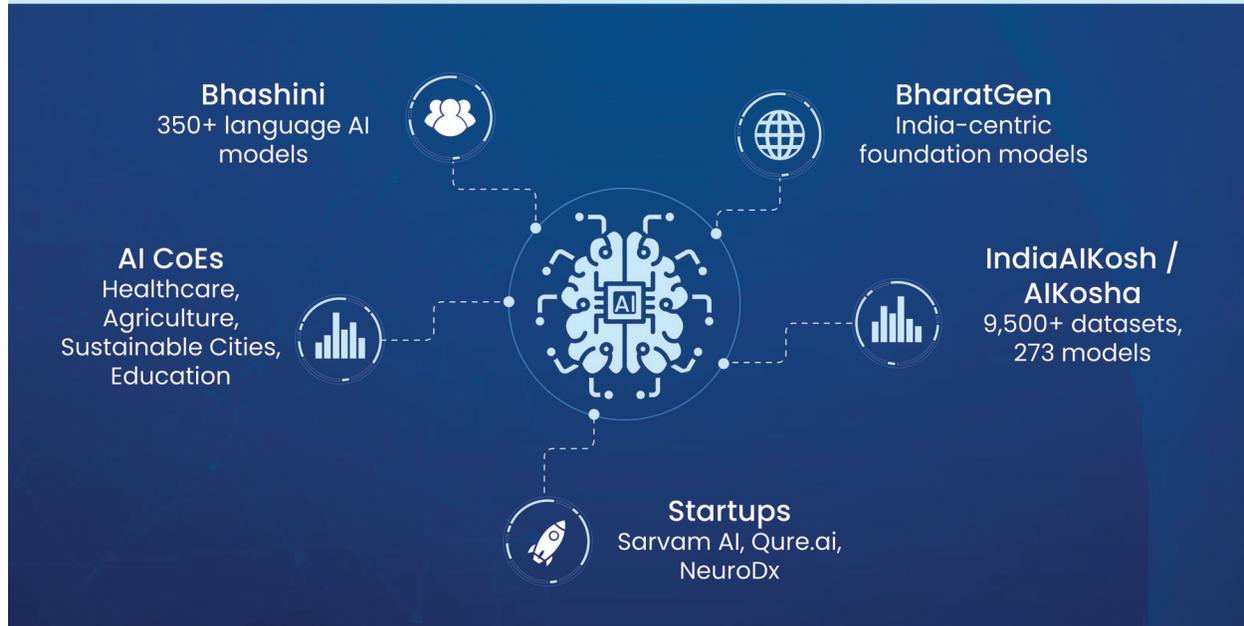
while reducing dependence on external model ecosystems.

General Trend in AI Model Adoption

Early advances in AI models were driven by a few technology leaders with access to large-scale compute, but the emergence of open-source models has lowered entry barriers, reduced costs, improved transparency, and enabled localisation across languages and contexts. Building on this shift, **India is developing a sovereign, inclusive, and application-oriented AI**

India's Sovereign AI Model Ecosystem

India is building sovereign, inclusive, and application-oriented AI models aligned with national priorities.



model ecosystem focused on national priorities and population-scale needs, particularly in public services, healthcare, agriculture, and governance, while aligning with local languages, regulatory frameworks, and cultural diversity, thereby strengthening technological self-reliance and delivering real-world impact across sectors.

3. Compute layer

The muscle of AI; it provides the computing power required to train and run AI models. During training, compute processes vast amounts of data so the model can learn and improve. Today, this power comes from advanced processing chips such as NVIDIA's Blackwell Graphics Processing

Unit (GPU), Google's Tensor Processing Units (TPUs), and Neural Processing Units (NPU), which allow AI systems to operate efficiently and at scale.

The compute layer is the critical enabler that determines the scale, speed, and sophistication of AI innovation. By expanding shared, affordable access to high-performance computing and simultaneously strengthening domestic chip and supercomputing capabilities, India is reducing structural barriers to AI development. This approach ensures that compute power supports broad-based innovation across research, startups, and public institutions, rather than remaining concentrated in a few hands.

Compute Capacity and AI Infrastructure in India

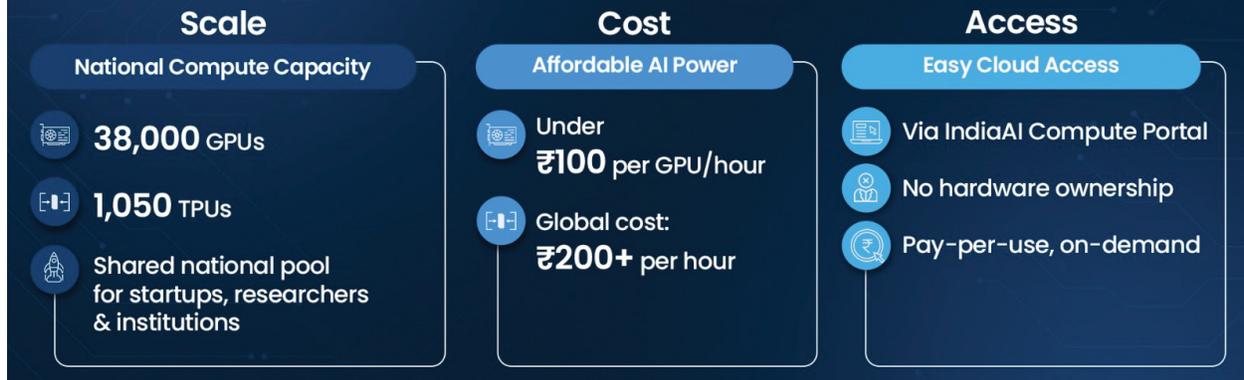
- » **₹10,300+** crore allocated over five years for IndiaAI Mission.
- » The **IndiaAI Compute Portal** provides access to over 38,000 GPUs, with over 20,000 more planned and 1,050 TPUs at subsidised rates.
- » A secure national GPU cluster with **3,000 next-generation GPUs** is being set up for sovereign and strategic AI applications.
- » **The India Semiconductor Mission**, with an outlay of ₹76,000 crore, has approved 10 semiconductor projects, including chip fabrication and packaging units.
- » Indigenous chip design initiatives such as **SHAKTI and VEGA** processors are strengthening India's domestic capabilities in AI hardware.
- » India is also developing custom AI chips and strengthening its semiconductor ecosystem, with **10 approved semiconductor projects**, including fabs and ATMP units.
- » The National Supercomputing Mission has deployed over **44 petaflops** of computing capacity across IITs, IISERs, and national research institutions.
- » Flagship systems such as **PARAM Siddhi-AI and AIRAWAT** provide AI-optimised supercomputing for applications including natural language processing, weather prediction, and drug discovery.

General Trend in AI Compute Adoption

Access to high-end AI compute has largely been shaped by high costs and the concentration of advanced hardware among a few technology firms and countries, limiting participation by smaller players. In contrast, **India is expanding**

affordable and shared access to compute through government-supported cloud infrastructure under the IndiaAI Mission. The IndiaAI Compute Portal provides access to over 38,000 GPUs, with over 20,000 more planned and 1,050 TPUs at subsidised rates of under ₹100 per hour, compared to global rates exceeding ₹200 per hour. By combining cloud-based platforms, national missions, and public

IndiaAI Compute: Scale, Access, Affordability



infrastructure with efforts to build domestic chip design, semiconductor manufacturing, and supercomputing capabilities, India is reducing entry barriers, strengthening long-term self-reliance, and ensuring that AI innovation can scale across sectors without being constrained by compute availability.

4. Data Centres and Network Infrastructure Layer

This layer forms the home and highways of AI. Data centres are where AI systems are

stored and operated, while networks like the internet, broadband, and 5G move data between users, computers, and AI models. Together, they ensure AI works reliably, quickly, and reaches users wherever they are. Without strong networks and data centres, AI applications would not function or scale effectively.

The data centres and network infrastructure layer provides the foundational backbone that enables AI systems to operate at scale and in real time. By strengthening connectivity and expanding domestic data

Data Centres and Network Infrastructure in India

- » A nationwide **optical fibre network** supports high-speed data movement for cloud and AI services.
- » **5G services** have been rolled out in all States/ UTs across the country and are available in 99.9% of the districts in the country with a population coverage of 85%.

- » India's installed data centre capacity stands at approximately 1,280 MW and is projected to grow four to five times by 2030, driven by expanding AI and cloud workloads.
- » **Mumbai-Navi Mumbai** is the largest data centre hub, accounting for **over 25% of India's total capacity**. Other key Data Centre hubs include **Bengaluru, Hyderabad, Chennai, Delhi NCR, Pune, and Kolkata**.
- » Global tech giants are investing in India to accelerate AI and digital infrastructure, marking a major boost for the nation's technological landscape. Key commitments include **Microsoft's ₹1.5 lakh crore** for data centres and AI training, **Amazon's ₹2.9 lakh crore** for cloud infrastructure and AI-driven digitization by 2030, and **Google's ₹1.25 lakh crore** for a **1 GW AI** hub in Vizag.

centre capacity, India is ensuring that AI services remain reliable, responsive, and widely accessible. This integrated approach supports secure, scalable AI deployment across sectors while anchoring digital capabilities firmly within the national ecosystem.

General Trend in AI Infrastructure Development

The infrastructure layer is the backbone of AI deployment, with major technology companies investing heavily in high-capacity data centres and high-speed networks. **India is strengthening this foundation through wide-scale development of digital connectivity and domestic data centre infrastructure.** Investments by both global

and Indian technology companies are helping ensure that AI models, data, and innovation ecosystems are hosted within the country. By improving connectivity, expanding data centre capacity, and keeping digital infrastructure within national jurisdiction, India is creating a resilient and scalable environment for AI adoption across sectors.

5. Energy Layer

This layer keeps the entire AI stack running. AI data centres consume large amounts of electricity because powerful computers are needed to train and operate AI systems. Even as technology becomes more efficient, AI still requires a steady and reliable power supply. Clean and affordable energy is therefore essential to support the sustainable growth of AI infrastructure.

Affordable, Secure and Clean Energy in India

- » India met a **record peak power demand of 242.49 GW** in FY 2025–26, with **national energy shortages reduced to just 0.03%**, ensuring uninterrupted electricity for AI data centres, and high-performance computing facilities.
- » **Total installed power capacity** reached to **509.7 GW**, providing the scale required to support energy-intensive AI workloads. (As of **Nov 2025**)
- » **Share of Non-fossil fuel sources stands at 256.09 GW – over 51 % of the total installed capacity**, aligning AI infrastructure growth with sustainability and lowering the carbon footprint of data centres.
- » India Plans to achieve **57 GW of Pumped Storage Projects** by 2031–32 and **43,220 MWh of Battery Energy Storage Systems**. It will further enhance grid stability and support AI data centres operating alongside variable renewable energy.
- » Additionally, the **Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Act** positions nuclear power as a stable, round-the-clock source of clean energy for AI and data centres. The Act enables private sector participation and accelerates the deployment of Small Modular Reactors (SMRs) and micro-reactors.

The energy layer underpins the reliability and sustainability of the entire AI ecosystem. By ensuring adequate, affordable, and increasingly clean power supply, India is enabling energy-intensive AI infrastructure to scale without compromising grid stability. This transition towards a resilient and low-carbon energy mix supports long-term AI growth while aligning technological advancement with national climate and sustainability goals.

General Trend in AI and Energy Demand

The rapid expansion of AI and data centres is driving a substantial increase in electricity demand globally, with global data centre power consumption projected to more than double by 2030—reaching around **945 TWh** annually as AI-driven workloads grow rapidly. In India, this trend comes as the power sector undergoes historic transformation. The country's total installed electricity capacity has surpassed 500 GW, with non-fossil fuel sources accounting for over 51 % of that capacity—achieving a major clean energy milestone ahead of the 2030 target. This expansion

of clean, affordable, and secure energy strengthens the power system's ability to support energy-intensive, continuously operating AI and data-centre workloads, aligning AI infrastructure growth with sustainable and resilient energy supply.

The Way Forward

India's AI strategy will follow a calibrated and phased approach—pilot deployment, targeted scaling, and progressive regulatory consolidation. A coordinated institutional framework will align technical standards, risk management, and transparency norms with labour-market preparedness to ensure that AI adoption strengthens, rather than disrupts, India's demographic dividend.

Immediate priorities include operationalising the IndiaAI Mission through expanded compute access, strengthened IndiaAIKosh datasets, and development of sector-specific and indigenous AI models. Parallel investments in skilling—ranging from advanced research talent to foundational digital competencies under NEP 2020—will ensure a future-ready workforce.

Over the medium term, risk-based data governance, trusted AI safety mechanisms, and innovation-linked incentives will promote responsible development while safeguarding sovereignty and competitiveness. This integrated approach will convert India's digital

public infrastructure, data diversity, and institutional coordination into sustainable AI capability at scale.

Conclusion

India's AI ecosystem has evolved from foundational digital public infrastructure to a mission-driven, application-led framework anchored in the IndiaAI Mission and a layered AI Stack. By strengthening compute capacity, indigenous models, trusted datasets, and sectoral applications, India is enabling safe and scalable AI deployment across agriculture, healthcare, education, governance, and industry.

Guided by the principle of democratised and responsible AI, India's approach ensures that technology advances public welfare, economic productivity, and inclusive growth. Through coordinated policy, infrastructure, and human capital development, India is building a secure, sovereign, and population-scale AI ecosystem for the digital era.

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India's Green Pathway



Introduction

In the twenty-first century, the relationship between development and the environment has moved from the margins of policy debate to the centre of national decision-making. For India, the task is especially complex, balancing rapid economic growth with biodiversity protection and climate action.

Key to India's green pathway is the understanding that environmental protection and economic development are mutually reinforcing pillars of national progress. This vision also takes into account the current reality of climate change. As the impacts of climate change become increasingly evident across regions and sectors, the country has recognised it not as a distant risk but as a present developmental reality requiring both preparedness and proactive mitigation. Accordingly, India has adopted a calibrated approach that simultaneously strengthens biodiversity conservation, builds climate resilience and advances sustainable growth.

At the global stage, India has emerged as a credible voice for climate justice, equity and sustainable development. Its approach demonstrates that conservation and climate action are mutually reinforcing pillars of growth, and that prosperity for people and the protection of the planet can advance together.

Biodiversity Conservation, Ecosystem Restoration

India is one of the world's 17 mega-biodiverse countries. Despite occupying just 2.4% of the global land area, it accounts for nearly approximately 8% of all recorded species worldwide. The country is home to over 96,000 animal species and 47,000 plant species, including almost half of the world's aquatic plant species. This extraordinary natural heritage makes conservation not merely an environmental concern, but a national imperative.

The country's biodiversity governance framework is anchored in the Biological Diversity Act, 2002, supported by the National Biodiversity Action Plan and aligned with the Convention on Biological Diversity (CBD). India became a signatory of CBD in 1992.

In 2024, at COP16 of the Convention on Biological Diversity (CBD) in Cali, Colombia, India launched its updated National Biodiversity Strategy and Action Plan (NBSAP). The roadmap aims to halt and reverse biodiversity loss by 2030, with a long-term vision of living in harmony with nature by 2050. Prepared through a whole-of-government and whole-of-society approach involving 23 central ministries and multiple stakeholders, the plan aligns with the Kunming-Montreal Global Biodiversity Framework and focuses on ecosystem restoration, species recovery, wetland and coastal conservation, and

Legal and Policy Framework

Core Environmental Laws

- » **Wildlife (Protection) Act, 1972** – Protection of wild animals, birds and plants; creation of protected areas.
- » **Water (Prevention and Control of Pollution) Act, 1974** – Prevention and control of water pollution.
- » **Forest (Conservation) Act, 1980** – Regulation of diversion of forest land for non-forest use.
- » **Air (Prevention and Control of Pollution) Act, 1981** – Control and abatement of air pollution.
- » **Environment (Protection) Act, 1986** – Umbrella legislation empowering the Central Government to protect and improve the environment.
- » **Biological Diversity Act, 2002** – Conservation of biodiversity, sustainable use and access-benefit sharing.

Together, these legislations establish a comprehensive regulatory framework ensuring ecological balance, sustainable resource management, pollution control, and long-term environmental security.

strengthened biodiversity governance through institutions such as the National Biodiversity Authority and Biodiversity Management Committees.

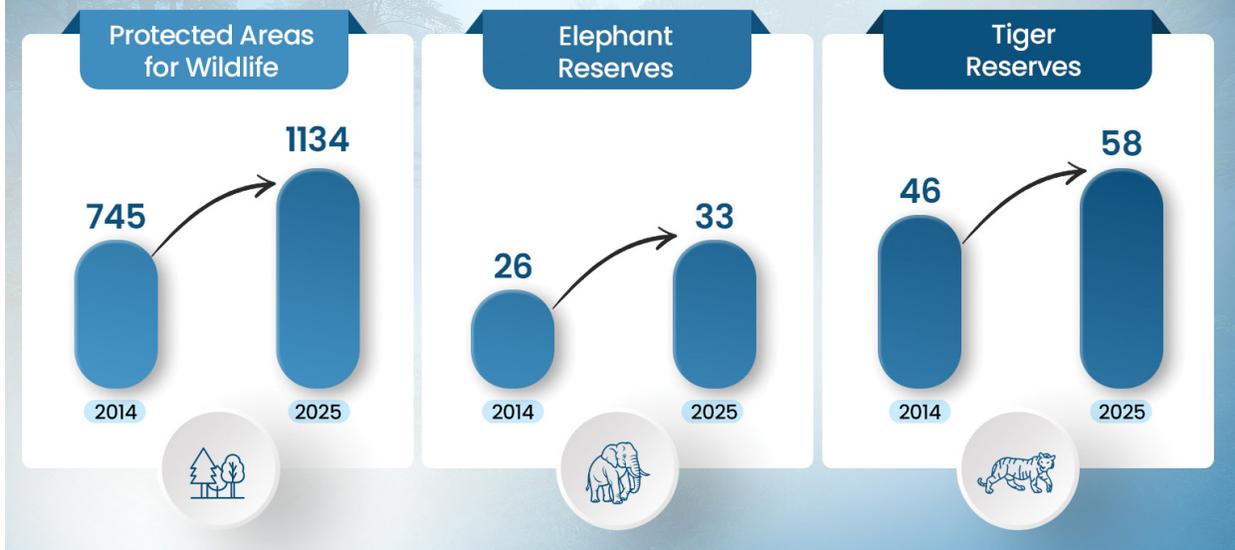
Protected Areas and Wildlife Conservation Programmes

India has implemented the following key

programmes to conserve wildlife and protect endangered species.

Protected Areas: The Protected Areas network expanded from 745 in 2014 to 1,134 in 2025. Wildlife corridors have been identified to connect habitats and ensure safe animal movement.

India's Conservation Push: More Protected Areas, Tigers & Elephants



Project Tiger: Tiger Reserves increased from 46 in 2014 to 58 in 2025, covering approximately 85,000 square kilometres. The newest addition is Madhav Tiger Reserve in Madhya Pradesh. The sixth cycle of All India Tiger Estimation has commenced, building on the previous assessment that recorded 3,167 tigers in 2022. India also secures habitat connectivity through 32 identified tiger corridors across key landscapes, strengthening long-term conservation planning and genetic dispersal.

Project Elephant: Elephant Reserves increased from 26 in 2014 to 33 in 2025, bringing an additional 8,610 square kilometres under protection. There are 150 elephant corridors across 15 states.

Project Cheetah: Project Cheetah entered an expansion phase in 2025. Cheetahs were introduced into Gandhisagar Wildlife Sanctuary. Planned expansion includes Noradehi and Banni Grasslands. As of December 2025, the total cheetah population reached 30, including 19 cubs born in India.

Project Snow Leopard: India completed its first nationwide Snow Leopard Population Assessment between 2019 and 2023. The estimated population stands at 718 snow leopards. Ladakh recorded 477 and Uttarakhand 124. Snow Leopard Population Assessment India 2.0 (SPA I 2.0) been launched, in Wildlife Week 2025, to strengthen conservation.

Project Dolphin: Under Project Dolphin, the nationwide survey from 2021 to 2023 estimated 6,327 riverine dolphins. The second range-wide estimation launched in January 2026, from Bijnor covers Ganga River, Indus River, Brahmaputra, Sundarbans and Odisha. It will assess Ganges River Dolphin, Indus River Dolphin and Irrawaddy Dolphin.

International Big Cat Alliance: India leads the International Big Cat Alliance, launched in April 2023 to conserve 7 big cat species globally. The Framework Agreement entered into force on 23 January 2025, with membership expanding to 18 countries.

Five National Level Projects for Species Conservation which includes Project Dolphin Phase 11, Project Sloth Bear, Project Gharial, as well as, four National-level Action Plans & Field Guides for Species Population Assessments and Monitoring Programmes covering River Dolphins, Tigers, Snow Leopard and Bustards were launched during the Wildlife Week 2025 (October 2-8).

These species-focused conservation initiatives are supported by a broader landscape-level strategy that strengthens forest cover, ecosystem restoration and habitat resilience. Protecting wildlife and expanding green cover are pursued together to ensure long-term ecological stability and sustainable resource management across the country.

Ecosystem Restoration

India's diverse ecosystems face growing pressures from climate change, forest fires, habitat degradation, coastal erosion and unplanned land use. Recognising that ecological degradation can directly affect water security, livelihoods and disaster resilience, the Government of India has adopted a multi-layered strategy focused on protection, restoration and climate-proofing of critical ecosystems. This approach combines landscape-level conservation, technology-enabled monitoring and targeted habitat recovery across terrestrial, coastal and wetland ecosystems.



Forest and Biosphere Ecosystems

India's terrestrial conservation efforts are anchored in a strong biosphere reserve network. The country currently has 18 notified Biosphere Reserves covering 91,425 square kilometres, of which 13 are recognised under UNESCO's World Network of Biosphere Reserves (WNBR). The inclusion of the Cold Desert Biosphere Reserve in Himachal Pradesh in September 2025 further strengthened India's global conservation footprint.

To safeguard forest ecosystems from climate-induced risks, India has established a comprehensive forest fire prevention and control system. The Forest Survey of India operates a satellite-based real-time fire monitoring mechanism, with alerts issued through SMS and email and supported by a 24x7 national control room that tracks incidents across the country.

Wetlands and Coastal Ecosystems

Beyond forests and mangroves, India's conservation strategy extends to wetlands and coastal regions, which play a critical role in biodiversity conservation, water security and climate adaptation.

Recognising the role of mangroves as natural buffers against cyclones, storm surges and coastal erosion, India is implementing the Mangrove Initiative for Shoreline Habitats and Tangible Incomes (MISHTI). In 2025, the initiative restored 4,536 hectares of mangroves and identified 22,560 hectares (across 13 States/UTs) of degraded mangrove areas for future plantation and restoration.

India has made significant progress in wetland conservation. In 2025, 11 new Ramsar Sites were declared, taking the total to 98 sites as of 31 January 2026, compared to 26 in 2014, now the highest in Asia and the third largest globally

Ek Ped Maa Ke Naam Campaign

- » Launched as a nation-wide people's participation campaign, Ek Ped Maa Ke Naam, "One Tree in Mother's Name" encourages citizens to plant a tree as a tribute to their mothers while contributing to environmental protection.
- » The Ek Ped Maa Ke Naam campaign has become one of the largest people-centric environmental movements. A total of 262.4 crore saplings were planted till 24 December 2025.

by number of sites. Among the recent additions are Patna Bird Sanctuary (Uttar Pradesh) and Chhari-Dhand (Gujarat). Further strengthening urban wetland governance, Udaipur and Indore became India's first Ramsar-accredited Wetland Cities.

Coastal ecosystem resilience is being reinforced through the National Coastal Mission, which has been extended for 2025–31 with an allocation of ₹767 crore. The mission implemented as part of the National Action Plan on Climate Change aims to enhance the climate resilience of India's coastline through integrated coastal zone management, ecosystem restoration and community-based adaptation. It focuses on conserving mangroves, coral reefs and other coastal ecosystems as natural buffers, addressing coastal erosion and sea-level rise, strengthening scientific planning and monitoring, and promoting sustainable livelihoods to ensure balanced coastal development.

Blue Flag beaches are coastal sites certified for maintaining international standards of cleanliness, water quality, safety and sustainable management. The certification is awarded by the Foundation for Environmental Education and implemented in India by the Ministry of Environment, Forest and Climate Change (MoEFCC) under the Integrated Coastal Zone Management programme. India achieved Blue Flag Certification for 18 beaches. These beaches are spread across

7 coastal states and 4 Union Territories. This certification was achieved by the 2025 -26 season.



Human-Wildlife Conflict Management

To ensure harmonious coexistence between humans and wildlife, the Ministry issued advisories to states on managing human-wildlife conflict under the Wildlife Protection Act. The advisories recommend coordinated action, identification of conflict hotspots and establishment of rapid response teams. State and District level committees review ex-gratia relief, and the Government ensures relief payment within 24 hours in cases of death and injury.

A Centre of Excellence for Human-Wildlife Conflict Management, and a Project on “Tigers Outside Tiger Reserve” were launched during the Wildlife Week 2025 (October 2-8).

These efforts demonstrate that environmental protection is not pursued in isolation but is closely linked with inclusive development and social equity. By integrating climate action, community participation and coexistence strategies within a broader development framework, India aligns environmental stewardship with the objectives of sustainable and equitable growth.

Even as India scales up biodiversity conservation and ecosystem restoration, climate change continues to pose the most profound and cross-cutting threat to ecological stability and developmental gains. Rising temperatures, increasing frequency of extreme weather events, changing rainfall patterns and sea-level rise are already exerting pressure on forests, wetlands, coasts and communities. It is recognised that conservation efforts alone, while essential, are not sufficient unless supported by deeper structural transitions in energy and towards green development pathways.

India's focused climate action combines preparedness for climate risks with proactive mitigation through clean energy expansion, low-carbon technologies and policy reforms.

Climate & Strategic Policy Frameworks

» **National Action Plan on Climate Change (NAPCC)** and its nine National Missions: The NAPCC provides the

overarching framework for India's climate strategy. Its missions, covering solar energy, energy efficiency, sustainable habitat, water, Himalayan ecosystems, Green India, sustainable agriculture, strategic knowledge, and later additional missions, integrate adaptation and mitigation into sectoral planning.

» **Long-Term Low Emissions Development Strategy (LT-LEDS):** Submitted to the UNFCCC in 2022, India's LT-LEDS outlines pathways toward net-zero emissions by 2070.

» **National Green Hydrogen Mission and renewable energy expansion targets:** Launched in 2023, the National Green Hydrogen Mission aims to make India a global hub for production, usage and export of green hydrogen, targeting 5 million metric tonnes of annual production by 2030. This is supported by accelerated renewable energy deployment, with India targeting 500 GW of non-fossil fuel capacity by 2030.

» **Nationally Determined Contribution (NDC) under the Paris Agreement:** In its updated NDC (2022), India committed to reducing the emissions intensity of Gross Domestic Product (GDP) by 45% from 2005 levels by 2030 and achieving about 50% cumulative electric power installed capacity from non-fossil fuel sources by 2030. By June 2025, India has already reduced emissions intensity

India's Nationally Determined Contribution (NDC)

Under the Paris Agreement

5 Key Climate Target



by around 36% between 2005 and 2020 and crossed 50% non-fossil installed capacity ahead of schedule.

Together, these instruments anchor India's pathway from conservation to climate action, aligning ecological protection with sustainable development.

Mission LiFE

Climate change poses serious risks to water security, livelihoods and economic stability. Without timely action, nearly three billion people could face water shortages, and the global economy could shrink by up to 18 percent of GDP by 2050. Behavioural change at scale can make a significant difference. If one billion people adopt sustainable lifestyles, global carbon emissions could fall by approximately 20 percent.

The Mission LiFE (Lifestyle for Environment), launched by the Government of India, promotes climate-conscious individual and community action. **Under Mission LiFE, more than six crore people have participated in over 34 lakh events and 4.96 crore pledges have been taken as of December 2025.** In 2024–25, India generated over 340 million tonnes of fly ash, of which 332.63 million tonnes was gainfully used.

Of the total fly ash generated:

- » 32% was used in construction of roads and flyovers,
- » 27% in the cement industry, and
- » 14% in manufacturing bricks and tiles.

International Climate Commitments and Multilateral Engagement

India's domestic progress is supported by consistent international engagement.

To operationalise international carbon market mechanisms under Article 6, India has designated the National Designated Agency for Implementation of Article 6 of the Paris Agreement as the national authority.

At UNFCCC COP30 held in Belém, Brazil in November 2025, India highlighted its climate leadership and underscored the need to move from commitments to implementation. India emphasised enhanced climate finance and technology

transfer for developing countries. India also welcomed Brazil's initiative to launch the Tropical Forests Forever Facility (TFFF) and joined it as an Observer.

India continues to lead global solar cooperation through the International Solar Alliance (ISA) under the vision "One World, One Sun, One Grid." The Eighth ISA Assembly, held at Bharat Mandapam, New Delhi in October 2025, saw participation from over 550 delegates and 30 ministerial representatives, reinforcing global commitment to clean energy transition.

Under the Montreal Protocol, India has demonstrated strong progress by phasing out major ozone-depleting substances ahead of mandated timelines. Following ratification of the Kigali Amendment in 2021, India is advancing the phase-

down of hydrofluorocarbons. By 2025, India achieved a 67.5 percent reduction in production and consumption of hydrochlorofluorocarbons (HFC).

India's international climate commitments are reinforced by measurable domestic action. Multilateral engagement provides direction and cooperation, while implementation at home translates pledges into structural transformation. This alignment between global responsibility and national execution is most visible in India's accelerated clean energy expansion.

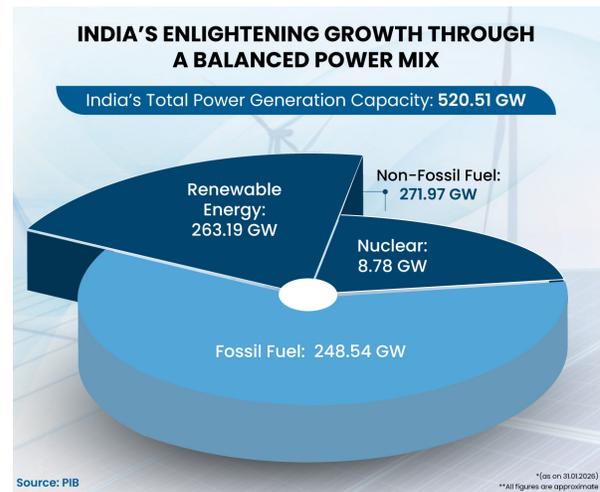
Clean Energy Expansion and Structural Energy Transition

India's clean energy expansion marks a decisive structural shift from fossil-fuel dependence to diversified, low-carbon sources. Guided by commitments under the United Nations Framework Convention on Climate Change and domestic reforms, the transition aims to enhance energy security, sustainability, and long-term economic resilience.

In 2025, India achieved over 50 percent cumulative installed electricity capacity from non-fossil fuel sources, five years ahead of its 2030 target.

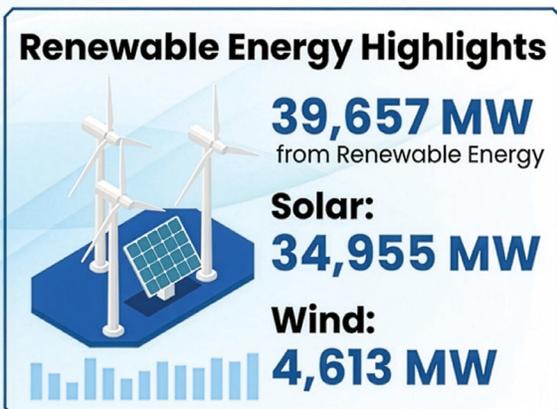
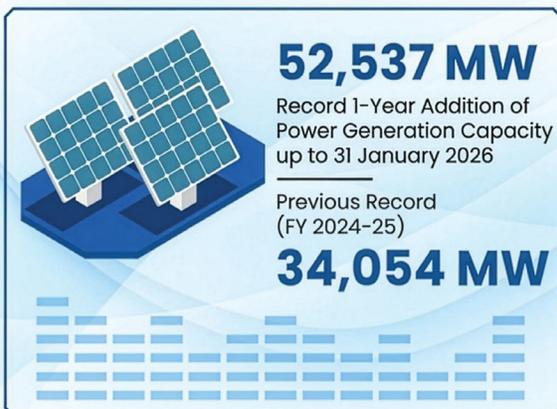
As of 31 January 2026, India's total installed power capacity stands at 520,510.95 MW. This comprises 248,541.62 MW from

fossil fuels and 271,969.33 MW from non-fossil sources. The non-fossil component includes 8,780 MW of nuclear energy and 263,189.33 MW of renewable energy.



As per International Renewable Energy Agency (IRENA) Renewable Energy (RE) Statistics 2025, (with data as on December 2024), globally, India stands 3rd in Solar Power installed capacity, 4th in Wind Power capacity and 4th in total Renewable Energy capacity. The transition is visible across scales. On 09 October 2022, Modhera in Gujarat became India's first 24x7 solar-powered village, demonstrating round-the-clock clean energy supply through integrated solar systems. The Omkareshwar Floating Solar Park in Madhya Pradesh is India's largest (as on 04th January 2025) and one of Asia's largest floating solar parks. Such projects optimise resource use and expand renewable energy capacity in innovative ways.

INDIA'S RECORD POWER CAPACITY

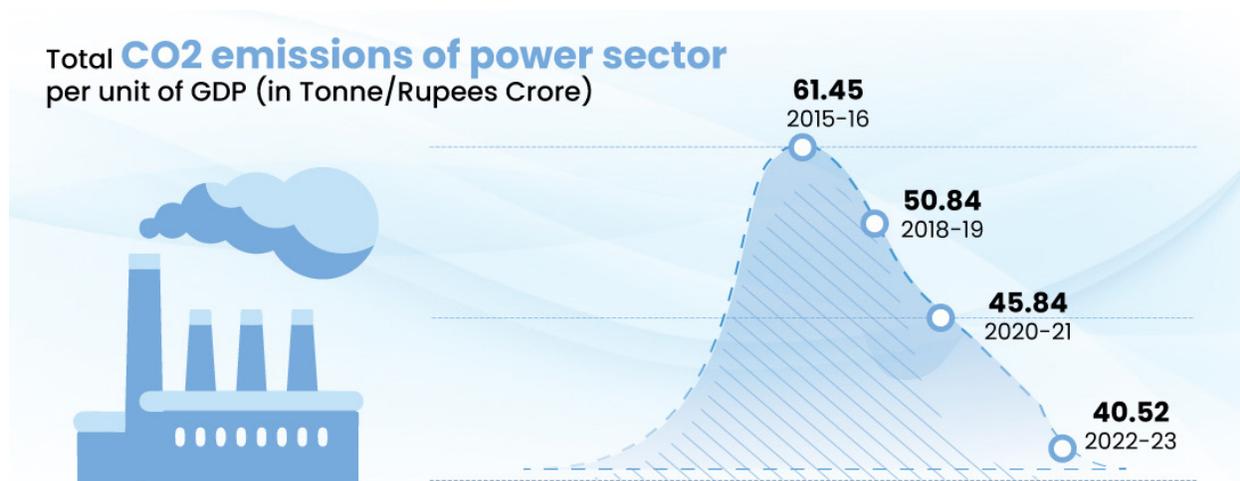


**Over 11% Increase
in Total Installed Capacity Within FY 2025-26**

Energy efficiency improvements complement capacity expansion. The CO₂ emissions intensity of the power sector per unit of GDP declined from 61.45 tonnes per ₹ crore in 2015-16 to 40.52 tonnes per ₹ crore in 2022-23, reflecting cleaner growth pathways and technological improvements.

These gains in efficiency are supported by policy instruments that reinforce long-term emission reductions across sectors. To sustain this momentum, India's climate strategy combines regulatory frameworks with market-based mechanisms and technological innovation, strengthening accountability and accelerating the transition to a low-carbon economy.

Total CO₂ emissions of power sector per unit of GDP (in Tonne/Rupees Crore)



Source: Ministry of Statistics and Programme Implementation

Carbon Markets, Industrial Transition and Climate Finance Mechanisms

India's climate strategy integrates regulation, market mechanisms and technological advancement. The operationalisation of the Carbon Credit Trading Scheme marks a major step in strengthening India's domestic carbon market under the Indian Carbon Market framework. The scheme establishes compliance and offset mechanisms aligned with global practices and supports measurable emission reductions.

In January 2026, the Government notified Greenhouse Gas Emission Intensity targets for additional sectors. With this expansion, 490 obligated entities across major emission-intensive industries are now covered. This enhances transparency, accountability and sectoral decarbonisation.

Carbon Capture, Utilisation and Storage (CCUS) has emerged as a key low-carbon technology for reducing industrial emissions by capturing and reusing or safely storing carbon dioxide. The Union Budget 2026-27 allocated ₹20,000 crore over five years to support CCUS development across emission-intensive sectors including chemicals and heavy industries. This allocation promotes research, demonstration and deployment of carbon management solutions.

While carbon markets and industrial

decarbonisation mechanisms address long-term emission reduction, environmental governance must also confront immediate pollution challenges. Market-based climate instruments operate alongside regulatory safeguards that control air, water and waste pollution at source. Together, they ensure that decarbonisation does not occur in isolation, but as part of a broader environmental management framework that delivers tangible public health and ecological benefits.

From Pollution Control to Sustainable Development

India's environmental management is supported by a strong legal framework.

The Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 address pollution control. The Commission for Air Quality Management in NCR and Adjoining Areas Act, 2021 strengthens coordination for air quality governance.

Implementation is carried out in coordination with State Governments and local bodies. Enforcement is ensured by the Central Pollution Control Board and State Pollution Control Boards or Pollution Control Committees. The legal and institutional framework provides the foundation for translating environmental principles into measurable outcomes. These laws are operationalised through targeted

national programmes that address priority pollution challenges in a coordinated and time-bound manner.

Clean Air Programme and Pollution Reduction

The National Clean Air Programme, launched in January 2019 by the MoEFCC, aims to improve air quality across 130 cities.

Cities implement targeted clean air action plans addressing road dust, vehicular emissions, waste burning and industrial

pollution. Based on comparison with 2017–18 baseline levels, 103 out of 130 cities showed improvement in PM10 concentrations in 2024–25. Sixty-four cities recorded 20% reduction and 25 cities achieved 40% reduction.

Alongside targeted air quality interventions, attention has also been directed towards improving industrial by-product management to prevent secondary environmental impacts. Strengthening scientific utilisation of fly ash forms an important part of this integrated pollution control strategy.

Fly Ash Management and Utilisation

Unscientific disposal of fly ash can lead to land degradation, health concerns, and ecological risks due to respirable particulate matter and the presence of trace toxic elements.

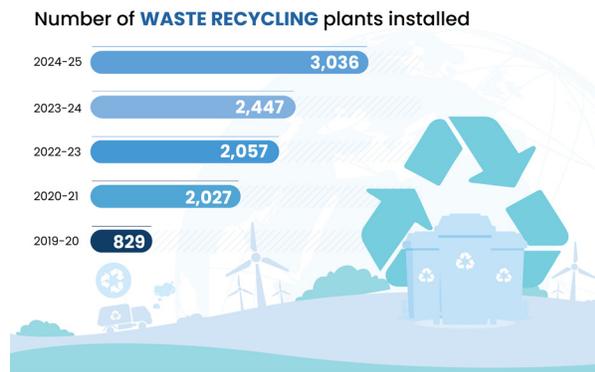
The MoEF&CC mandates coal- and lignite-based thermal power plants to achieve 100% fly ash utilisation within prescribed timelines, promoting environmentally sound end-use applications.

In 2024–25, India generated over 340 million tonnes of fly ash, of which 332.63 million tonnes was gainfully used.

Of the total fly ash generated:

- » 32% was used in construction of roads and flyovers,
- » 27% in the cement industry, and
- » 14% in manufacturing bricks and tiles.

Waste Recycling Expansion



sustainable development. Clean air, safe water and scientific waste processing directly influence public health, productivity and quality of life. By strengthening regulatory enforcement and expanding recycling and resource efficiency, India links environmental protection with economic opportunity, job creation and social well-being, reinforcing that sustainability is integral to inclusive growth.

Extended Producer Responsibility (EPR)

The Ministry of Environment, Forest and Climate Change has notified EPR frameworks for plastic packaging, e-waste, tyres, and batteries. These frameworks strengthen the circular economy and promote scientific waste management.

As of December 2025, 71,401 producers and 4,447 recyclers are registered. They have facilitated recycling of 375.11 lakh tonnes of waste. EPR certificates generation of 339.51 lakh tonnes, out of which 237.85 tonnes have been transferred to producers.

India has strengthened waste management infrastructure significantly. The number of waste recycling plants increased from 829 in 2019-20 to 3,036 in 2024-25, reflecting expanded recycling capacity and supporting Sustainable Development Goal 12.

Effective pollution control and waste management form the foundation of

Sustainable Development and Inclusive Growth

India is a key driver of the Sustainable Development Goals (SDGs), with NITI Aayog serving as the nodal agency to coordinate progress at national and state levels. NITI Aayog monitors performance across all 17 Goals, fostering competitive and cooperative federalism among States

and Union Territories. According to the SDG India Index 2023–24, India's composite score improved to 71, rising steadily from 66 in 2020–21 and 57 in 2018, reflecting sustained national progress.

India has made particularly notable progress in advancing SDG 7 (Affordable and Clean Energy). The share of renewable energy in total installed electricity capacity has reached 51.55% (as of November 2025), marking a major structural shift toward non-fossil fuel energy sources. This reinforces India's broader commitment to climate action and sustainable development under the SDG framework.

Conclusion

India's agricultural transformation reflects a balanced approach that combines strong production growth, expanding global market presence, and targeted policy interventions across the farm-to-market value chain. Record foodgrain and horticulture output, growing exports, and diversified commodity leadership demonstrate the sector's sustainability and adaptability to changing economic and climatic conditions. Mission-driven support through inputs, income protection, market infrastructure, and digital food systems has strengthened productivity, improved farmer welfare, and enhanced food security outcomes. As resilient production systems continue to evolve, the expanding role of agriculture provides a strong foundation for deeper integration with allied activities,

further supporting rural livelihoods, value addition, and long-term economic stability.

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India's Expanding Space Leadership



Introduction: From Capability to Confidence

India's space sector is undergoing rapid expansion, emerging as a key driver of economic growth, technological innovation and strategic capability. Anchored in four pillars-policy reforms, technological advancement, economic growth and strategic development the sector is central to advancing Aatmanirbhar Bharat and strengthening India's global competitiveness and national security. Comprehensive reforms initiated in 2020 marked a decisive shift from a predominantly government-led model to structured private-sector participation. A clear institutional framework was established under Indian Space Policy 2023, with ISRO leading research and advanced missions, Indian National Space Promotion and Authorisation Centre (IN-SPACe) serving as the regulatory and facilitation body, and NewSpace India Limited (NSIL) driving commercial engagement.

Flagship achievements such as Chandrayaan-3's historic lunar south pole landing, the Mars Orbiter Mission's first-attempt success, and progress towards human spaceflight under Gaganyaan reflect India's growing technological maturity. To accelerate ecosystem growth, the Government introduced a ₹1,000 crore venture capital fund in 2024-25. With Government supporting the startup ecosystem in the country by providing support, funding and easier regulatory

frameworks, space startups have grown from one in 2014 to over 400 by early 2026, attracting approximately \$150 million in 2025 alone, and achieving the launch of seven satellites, 20 payloads and two sub-orbital vehicles. India's space ecosystem has rapidly transformed into a strategic pillar of national development and global cooperation.

Policy Reset: Opening the Space Ecosystem

The Government of India has undertaken several strategic and transformative initiatives to progressively open up, liberalize, and democratize the Indian space ecosystem. Recognizing space as a critical driver of economic growth, technological innovation, national security, and global positioning, the government has systematically formalized a comprehensive policy framework aimed at strengthening the country's space sector, fostering private enterprise, attracting substantial investments, and enabling India to emerge as a leading player in the global space economy.

Indian Space Policy 2023

India's space policy envisions strengthening national space capabilities, fostering a vibrant commercial ecosystem, driving technological innovation and allied benefits, enhancing international cooperation. The vision is supported by the strategy to promote private sector involvement

across the space value chain, including in the creation of space and ground-based assets. The policy focuses on advancing cutting-edge R&D, delivering public goods/services for national priorities, and establishing a stable, predictable regulatory framework to ensure fair competition for non-government entities (NGEs).

To streamline operations and create an efficient, transparent ecosystem, the government has clearly delineated responsibilities among key institutions under the Indian Space Policy-2023:

The Indian National Space Promotion and Authorisation Centre (IN-SPACe) acts as a promoter, authorizer, and single-window agency; IN-SPACe periodically issue guidelines and procedures that would among other things promote ease of doing business, provide level playing field for private entities

The Indian Space Research Organisation (ISRO) focuses on advanced research and development (R&D) of newer systems so as to maintain India's edge in the sector in the areas of space infrastructure, space transportation, space applications, capacity building and human spaceflight

New Space India Limited (NSIL), a Public Sector Undertakings (PSU) under the Department of Space and a commercial arm of ISRO handles commercialization of space technologies and platforms created through public expenditure. It is also a

nodal agency for carrying out Polar Satellite Launch Vehicle (PSLV) production through Indian industry under consortium route. As of March 2025, NSIL has launched 135 International and 3 Indian customer satellites on-board PSLV, LVM3 and SSLV.

The Department of Space (DoS) oversees the space sector as a nodal department for implementation of the Indian Space Policy-2023 through detailed policy directives.

Liberalizing FDI in Space Sector

In February 2024, the Government liberalised the FDI policy, allowing up to 100% FDI in the space sector, with differentiated entry routes for specific activities.

- **Up to 74% FDI (Automatic Route):** Allowed in satellite manufacturing and operations, satellite data products, and ground/user segment services. Any investment beyond 74% requires Government approval.
- **Up to 49% FDI (Automatic Route):** Permitted in launch vehicles, related systems/subsystems, and creation of spaceports. Investments exceeding 49% will need Government approval.
- **Up to 100% FDI (Automatic Route):** Allowed for manufacturing components, systems, and subsystems for satellites, ground segment, and user segment.

Framework for Authorization of Space Activities

In May 2024, IN-SPACe laid down the **Norms, Guidelines and Procedures (NGP) 2024** for authorization of space activities. The detailed framework includes the list of space activities which need authorization from IN-SPACe, criteria for granting the authorization and necessary conditions/guidelines to be adhered. This has enabled

Catalysing Innovation and Technological Advancement

Under the 2023 Indian Space Policy, Indian Space Research Organisation has strengthened indigenous space technologies to support human spaceflight and low-cost access to space. The creation of a dedicated Space Science & Astronomy vertical in 2025 and new telescope funding



the clarity and transparency to the private companies seeking authorization for undertaking space activities. These policy shifts have not only opened the sector but also catalysed a new wave of missions and milestones achieved in the Indian space sector.

in the 2026–27 Budget will boost both research and practical space applications.

Indigenous Electronics and On-board Systems

ISRO developed VIKRAM3201, India's first fully indigenous 32-bit space microprocessor, along with KALPANA32

for high-reliability space missions. This reduces dependence on foreign components and improves mission safety.

Advances in Propulsion Technologies

India successfully tested advanced electric propulsion and achieved key cryogenic engine milestones, including engine re-ignition in space. These improvements allow satellites and rockets to operate longer and perform more complex missions.

Reusable Launch Vehicle Programme

ISRO's Reusable Launch Vehicle programme has completed three successful autonomous runway landings and is developing vertical landing booster recovery. These steps aim to make future launches more affordable by reusing rocket parts.

Space Docking Experiment (SPADEX)

The achievement in SPADEX mission made India the fourth nation to demonstrate docking in space. In 2024, ISRO successfully demonstrated autonomous docking and undocking, along with power transfer between satellites a major step towards in-orbit servicing capabilities and docking operations on space stations.

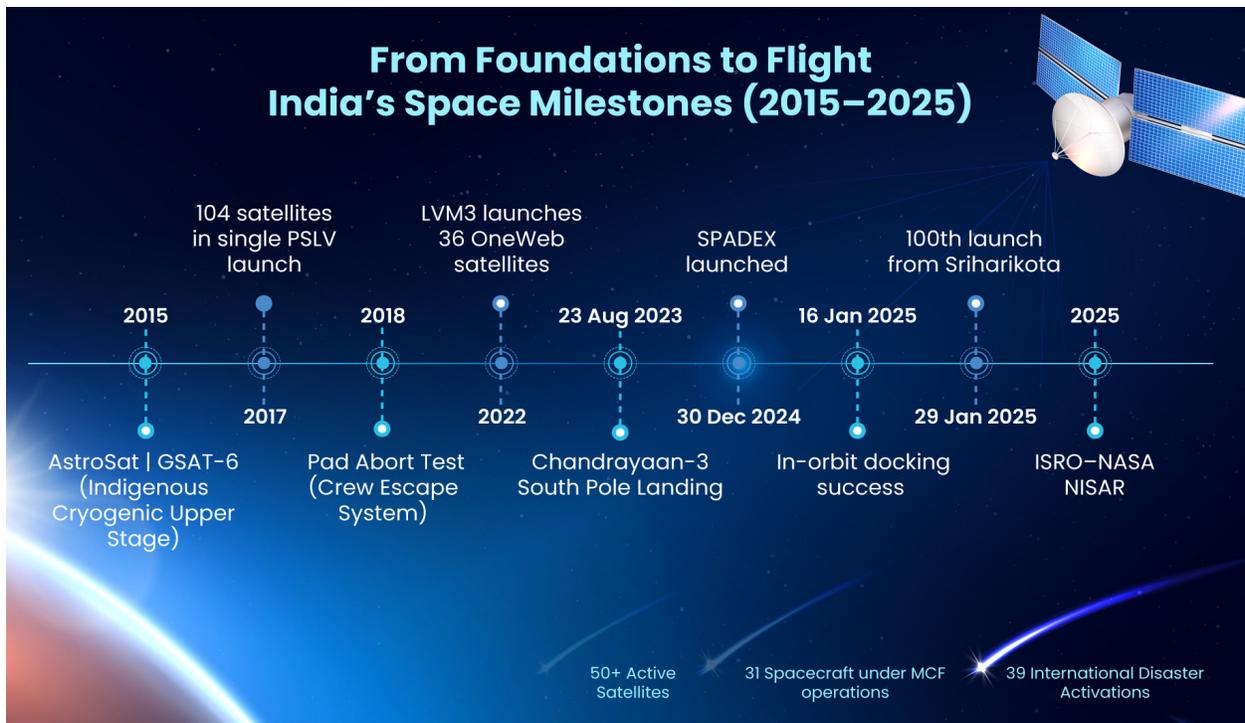
Missions: Expanding the Frontiers of Science & Human Spaceflight

India's space programme, led by ISRO, has advanced scientific exploration and human spaceflight programme marking a shift to deep-space capabilities and global partnerships.

Lunar Exploration (Chandrayaan Series)

India's Chandrayaan programme reflects the country's growing leadership in lunar exploration, with Chandrayaan-1 (2008) discovering evidence of water molecules on the Moon, Chandrayaan-2 (2019) continuing to supply high-resolution orbital data on lunar geology, and Chandrayaan-3 (2023) achieving the historic first soft landing near the Moon's south pole and conducting in-situ elemental analysis confirming sulphur.

Building on these successes, Indian Space Research Organisation is preparing Chandrayaan-4 as an advanced sample-return mission targeting water-ice-rich permanently shadowed regions, while the planned Chandrayaan-5 collaboration



with Japan Aerospace Exploration Agency (JAXA) underscores India's expanding international partnerships and commitment to advancing planetary science through indigenous innovation.

Planetary Exploration Missions

Aditya-L1 (2023) is India's first space-based mission dedicated to studying the Sun, successfully positioned in a halo orbit around the Sun-Earth L1 point (1.5 million km from Earth), where a key milestone was achieved with the deployment of its magnetometer boom on January 25, 2024. Earlier, the Mars Orbiter Mission (Mangalyaan, 2013) marked India's maiden interplanetary endeavour, entering Martian orbit on September 24, 2014, and making ISRO the fourth space agency to reach Mars - and the first to do so on its initial

attempt. Initially, designed for six months, the mission operated for over seven years, yielding valuable insights into Mars' atmosphere and surface.

Human Spaceflight

Gaganyaan programme envisages demonstration of human spaceflight capability by launching crew of 3 members to an orbit of 400 km for a 3-day mission and bring them back safely to earth, by landing in Indian sea waters. Under the Gaganyaan programme, the first Test Vehicle mission and Integrated Airdrop Tests were successfully completed, leading to key design refinements, including enhanced crew module uprighting systems and additional verification steps in parachute assembly.

Led by ISRO, India's space programme has progressed from foundational capabilities to advanced scientific exploration and human spaceflight, marking a shift toward



deep-space missions and stronger global partnerships; with 105 launch missions and 134 spacecraft missions, it reflects expanding launch capacity and a diversified mission portfolio.

Space as National Infrastructure for Governance, Growth and Resilience

India's space technology has evolved into vital national infrastructure, driving governance, economic growth, and resilience across key sectors. This expanding role is reflected in the sharp growth of space-based applications, with the National Remote Sensing Centre reporting an increase in microwave satellite

data products from 95,421 (2023-24) to 2,13,705 (2024-25) and global satellite data deliveries from 1,21,563 to 7,43,614 - underscoring India's rising stature as a dependable global launch and data services partner.

In **agriculture**, the FASAL programme uses satellite optical and microwave data to deliver timely District-to-National crop forecasts for rice, wheat, mustard, and sugarcane, supplemented by KrishiMapper App ground-truth surveys (over 90,000 in Kharif 2024-25 and 1,00,000+ in Rabi).

For **disaster management**, Indian satellites provide real-time monitoring of glacial lakes, floods (Brahmaputra, Godavari, Tapi basins), cyclones, landslides, droughts, forest fires, and lightning, with early warnings via Navigation with Indian Constellation (NavIC) messaging to boats and search-and-rescue through COSPAS-SARSAT. The Bhuvan portal and National Database for Emergency Management offer GIS-based tools and international support.

For **Climate monitoring**, the Geospatial Artificial Intelligence framework supports weather forecasting, programme evaluation, and air quality tracking across the country. This includes greenhouse gas estimates from land use change and atmospheric carbon dioxide analysis over the Indian Monsoon Region using satellite and ground data.

Geospatial technology aids **societal welfare** by tracking rural employment, watershed projects, housing under Pradhan Mantri Awas Yojana - Urban (PMAY-U), rural roads under Pradhan Mantri Gram Sadak Yojana (PMGSY), and agricultural asset creation under Rashtriya Krishi Vikas Yojana (RKVY).

The Rise of India's Space Economy

India's space economy is currently valued at \$8.4 billion and is projected to grow to \$44 billion by 2033. The government aims to achieve the target with enhanced participation of private sector in space domain. Pioneers such as Skyroot Aerospace, which launched India's first

privately developed rocket, Vikram-S, in 2022, and **Agnikul Cosmos**, working on a semi-cryogenic launch vehicle, exemplify this transformation.

Commercialization of India's Space Sector

India's space sector has evolved into a rapidly expanding and increasingly commercial arm of the services economy. Reflecting strong global demand, India's commercial launch services facilitated 399 foreign satellites after 2014, out of a total of 434 foreign satellites launched by ISRO, generating nearly \$233 million and €323 million in revenue. Of the projected \$44 billion Indian space economy by 2033, the launch segment alone is expected

Breakthrough Outcomes

Private NGEs Driving India's Space Economy

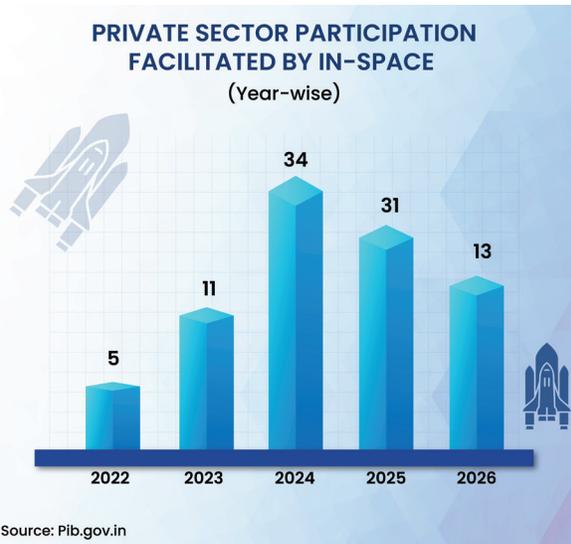
- 🚀 The total investment in space start-ups crossed more than \$500 million.
- 🚀 A total of 25 payloads from Non-Governmental Entities (NGEs) have flown or are scheduled to fly on ISRO's PSLV Orbital Experimental Module (POEM) to demonstrate space flightworthiness.
- 🚀 6 Indian NGEs have launched 18 satellites into orbit.
- 🚀 25 companies are already testing satellites/subsystems in real space environments using POEM platforms.
- 🚀 Indian space companies are progressively integrating into global aerospace and space supply chains.

Source: Pib.gov.in



to contribute approximately \$3.5 billion. This highlights the growing importance of launch services within the overall space sector growth trajectory.

According to the Economic Survey 2025-26, commercialization of India's space



sector has been significantly strengthened through NewSpace India Limited (NSIL), with revenues rising from ₹322 crore in FY20 to ₹2,940 crore in FY23 and to ₹3,246.09 crore in FY25.

IN-SPACe has facilitated 71 ISRO technology transfers to industry and startups, as of January 31, 2026, thus enabling smooth commercialization of India's space. In coordination with ISRO and DoS, IN-SPACe has established mechanisms to provide Indian private entities with access to ISRO test facilities, technologies, and technical support, strengthening space manufacturing and innovation. These initiatives have resulted

in a significant rise in the number of authorized Non-Governmental Entities (NGEs), increasing from 5 in 2022 to 31 in 2025, with 13 approvals already granted in 2026.

Moreover, satellite-enabled services are also expanding rapidly, with India's satellite data services market valued at USD 495 million in 2024, supported by applications in defence, climate services, logistics, and urban planning.

Space as a Strategic Domain

Space has become the core of India's modern C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) architecture, acting as a protective layer that strengthens national security across all domains. As geopolitical competition extends into the space domain, India is positioning its space assets as a critical pillar of deterrence, preparedness, and technological sovereignty.

India's space-based infrastructure comprises key satellites that support both civilian and strategic applications, including:

- **NavIC** - It is India's independent regional navigation satellite system designed to provide accurate Position, Velocity and Timing (PVT) service to users in India as well as the region extending about 1500

km beyond the Indian landmass, which is its primary service area. NavIC offers two services: Standard Position Service (SPS) for civilian users and Restricted Service (RS) for strategic users.

- **RISAT (Radar Imaging Satellites):** Provide all-weather, day-night radar imaging, and use in defence.
- **GSAT Series:** Encrypted communication satellites like GSAT-7R (CMS-03) for Navy, GSAT7A to provide communication services to the users in Ku-band over the Indian region.

Mission Shakti demonstrated India's indigenous ASAT capability, placing it alongside the United States, Russia, and China. Beyond its strategic signalling, the test underscored India's resolve to safeguard its expanding space-based assets - communication satellites like GSAT, navigation services under NavIC, and Radar Imaging satellite such as RISAT. As these systems increasingly support national security, disaster management, and economic activity, Mission Shakti reinforces India's capability to deter threats and protect the resilience and integrity of its critical space infrastructure.

Global Partnerships and Collaborative Leadership

India has formal space cooperation arrangements with over 60 countries and five multilateral bodies, spanning remote

sensing, navigation, communication, space science, planetary exploration, and capacity building.

Key collaborations include:

NISAR mission with NASA (USA) to study land and ice deformation, ecosystems, and ocean regions;

- TRISHNA with CNES (France) for monitoring terrestrial water stress and coastal and inland water dynamics; and
- Lunar Polar Exploration Mission (LUPEX)/Chandrayan-5 with JAXA (Japan) to explore the Moon's polar region.
- Technical exchanges with Roscosmos (Russia): The agreement outline multiple avenues for cooperation in human spaceflight, including joint development of technologies, shared research, and use of facilities.
- Recently, India has also expanded dialogue between ISRO and Germany's DLR to deepen bilateral space cooperation.
- Growing engagement with Italian Space Agency (ASI): Joint work on projects of common interest in Earth observation, heliophysics and space exploration with emphasis on lunar science; Research and development in peaceful and sustained use of outer Space.

- Collaboration with European Space Agency (ESA): ISRO and ESA, on December 21, 2024, entered into an agreement to cooperate on activities related to Astronaut Training, Mission Implementation and Research Experiments.

Also, formal cooperative instruments have been signed with other multilateral bodies like European Centre for Medium Range Weather Forecasts (ECMWF), European Commission, European Organization for the Exploitation of Meteorological Satellites (EUMETSAT), and South Asian Association for Regional Cooperation (SAARC).

Conclusion: Towards a Responsible Space Power

India's space programme is advancing rapidly, driven by policy reforms, expanding capabilities and growing private-sector participation. India is evolving from a cost-efficient launch provider into a comprehensive space power across manufacturing, launch services and downstream applications. Guided by Vasudhaiva Kutumbakam, it advances lunar and planetary exploration while promoting peaceful use, global cooperation and shared technological progress.

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