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India's Bioeconomy Crosses \$195 Billion — 18% Growth, 4.8% of GDP

22 March 2026

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22 March 2026 · 3 min read

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WHY IN NEWS

The India BioEconomy Report (IBER) 2026, released by the Department of Biotechnology (DBT), revealed that India's bioeconomy surged 18% to a record \$195.3 billion in 2025, contributing 4.8% to national GDP — the highest share ever recorded.

India's Bioeconomy: A 20-Fold Rise in a Decade

The Numbers

YEAR	BIOECONOMY SIZE	GROWTH RATE	GDP SHARE
2014	\$10 billion	—	~0.5%
2020	\$70.2 billion	~15%	2.7%
2024	\$165.7 billion	~16%	4.2%
2025	\$195.3 billion	18%	4.8%
2030 (Target)	\$300 billion	—	—

The bioeconomy added **\$29.6 billion** in a single year — the largest absolute addition ever. Union Minister of State for Science and Technology **Dr. Jitendra Singh** described the growth as “a validation of India's science-led development model.”

Sector-Wise Breakdown

SECTOR	VALUE (2025)	SHARE	KEY AREAS
BioIndustrial	\$90.2 billion	46.2%	Biofuels, bioplastics, industrial enzymes, bio-based chemicals
BioPharma	\$64.5 billion	33.0%	Vaccines, biosimilars, recombinant drugs, diagnostics
BioServices	\$26.0 billion	13.3%	Contract research, clinical trials, bioinformatics
BioAgri	\$14.6 billion	7.5%	Biopesticides, biofertilizers, transgenic crops, tissue culture

Biotech Startup Ecosystem

India's biotech startup ecosystem continues to strengthen:

- Cumulative biotech startups: **11,855** (2025) — up from 10,075 in 2024
- New startups in 2025: **1,780**
- India is the **3rd largest biotech destination** in Asia-Pacific (after China and South Korea)
- **Biotechnology Industry Research Assistance Council (BIRAC)** has funded over **5,000 startups** since inception

Key Government Enablers

- 1 **National Biotechnology Development Strategy 2021-25:** Roadmap for bioeconomy growth
- 2 **BIRAC (Biotechnology Industry Research Assistance Council):** Under DBT; provides funding, mentorship, and incubation
- 3 **Bio-PRIDE (Promoting Research Innovation Development through Enterprise):** Startup support programme
- 4 **Genome India Project:** Whole genome sequencing of 10,000 Indians for precision medicine
- 5 **BioRRAP (Bio-Risk Regulatory Automation Portal):** Single-window clearance for biotech products

India as "Pharmacy of the World"

India's BioPharma sector (\$64.5 billion) is underpinned by the country's role as the "Pharmacy of the World":

- India supplies **20% of global generic medicines**
- **60% of global vaccines** are produced in India
- **Serum Institute of India:** World's largest vaccine manufacturer by volume
- India produces **~50% of global demand** for various vaccines including DPT, BCG, and measles

UPSC RELEVANCE

Bioeconomy data, BIRAC, DBT, Genome India Project, BioRRAP.

MAINS GS-3:

Biotechnology as an economic driver, India's pharma sector, biotech startups, S&T policy for economic growth.

MAINS GS-2:

Government initiatives for scientific research and innovation.

★ FACTS CORNER — KNOWLEDGEPEDIA

INDIA BIOECONOMY REPORT (IBER) 2026:

Released by: Department of Biotechnology (DBT), Ministry of Science and Technology

India's bioeconomy (2025): \$195.3 billion

Growth: 18% (highest in recent years)

GDP contribution: 4.8%

Target: \$300 billion by 2030

SECTOR BREAKDOWN:

BioIndustrial: \$90.2 billion (46.2%)

BioPharma: \$64.5 billion (33.0%)

BioServices: \$26.0 billion (13.3%)

BioAgri: \$14.6 billion (7.5%)

BIOTECH STARTUPS:

Total registered: 11,855 (2025)

New in 2025: 1,780

India: 3rd largest biotech destination in Asia-Pacific

BIRAC funded: 5,000+ startups

KEY INSTITUTIONS:

DBT (Department of Biotechnology): Est. 1986, under Ministry of S&T

BIRAC: Est. 2012, under DBT; funds biotech startups

NCBS (National Centre for Biological Sciences): Bangalore

CDFD (Centre for DNA Fingerprinting & Diagnostics): Hyderabad

OTHER RELEVANT FACTS:

India: "Pharmacy of the World" — 20% of global generics, 60% of global vaccines

Serum Institute of India (Pune): World's largest vaccine manufacturer by volume

Genome India Project: Sequencing 10,000 Indian genomes

Bioethanol Blending Programme: E20 target (20% ethanol blending by 2025-26)

India's biotech sector FDI: 100% FDI allowed under automatic route

Sources: [Business Standard](#) , [PIB](#) , [IBEF](#) , [InsightsIAS](#)

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