

6. Capacity Building & Human Resource Development – S & T

Cabinet approves DSIR Scheme “Capacity Building and Human Resource Development” with an outlay of Rs.2277.397 crore. The Union Cabinet approved the ₹2,277 crore CBHRD scheme, managed by CSIR, to consolidate fellowships and build a skilled research workforce in India. This initiative aims to boost India's global innovation ranking and R&D ecosystem while addressing challenges like brain drain and funding gaps.

About the CBHRD Scheme

This scheme is designed to create a robust pipeline of skilled researchers and foster a vibrant research and development (R&D) ecosystem in India.

Implementation – Managed by the Council of Scientific and Industrial Research (CSIR), the scheme will be implemented across all major R&D institutions, national laboratories, Institutes of National Importance, and universities.

Objective – To provide a structured platform for young researchers to build successful careers in academia, industry, and national laboratories.

Focus Areas – The initiative will target growth across Science, Technology, Engineering, Medical, and Mathematical Sciences (STEMM).

Consolidated Sub-schemes – The CBHRD scheme integrates four existing programs into a unified framework –

1. **Doctoral and Postdoctoral Fellowships** – To support young researchers pursuing advanced studies and research.
2. **Extramural Research and Mentorship Schemes** – Including the Extramural Research Scheme, Emeritus Scientist Scheme, and Bhatnagar Fellowship Programme to encourage research excellence.
3. **Award Schemes** – To promote and recognize outstanding contributions in science and technology.
4. **Knowledge Sharing Schemes** – Including travel and symposia grants to facilitate global exposure and collaboration for researchers.

India's Progress in Research and Innovation

India has made significant strides in strengthening its research and innovation landscape over the past decade.

Global Standing – India secured the 39th position among 133 economies in the Global Innovation Index 2024, a major leap from its 81st rank in 2015. It is now among the top three countries globally in terms of the volume of scientific paper publications.

Startup Ecosystem – India has become the third-largest startup ecosystem in the world, growing from just 500 startups in 2014 to over 1.92 lakh today.

Challenges in the R&D Sector

Despite progress, India faces several challenges in becoming a global innovation powerhouse.

Funding Constraints – Private sector investment in R&D remains low compared to global benchmarks, which limits the scale and ambition of research projects.

Talent Retention – The “brain drain” continues to be a challenge, as skilled researchers are often attracted to better infrastructure, funding, and career opportunities abroad.

Global Competitiveness – India needs to accelerate its capabilities in frontier technologies like quantum computing, artificial intelligence (AI), deep-tech, and biotechnology to stay competitive.

Other Government Initiatives to Promote Innovation

The CBHRD scheme is part of a broader government strategy to boost innovation.

Initiative	Nodal Body	Objective
Atal Innovation Mission (AIM)	NITI Aayog	To promote a culture of innovation and entrepreneurship through programs like Atal Tinkering Labs and Atal Incubation Centers.
Anusandhan National Research Foundation	–	To create a unified research ecosystem that bridges science, humanities, and social sciences with a focus on

Initiative (ANRF)	Nodal Body	Objective
VigyanDhara Scheme	-	funding high-impact research. To strengthen the Science, Technology, and Innovation (STI) ecosystem by enhancing R&D infrastructure and promoting research in critical sectors.
Research Parks	Various IITs	To create an interface between academia and industry, allowing companies to set up R&D units in collaboration with students and faculty.

About the Council of Scientific and Industrial Research (CSIR)

Establishment - CSIR was established as an autonomous body in 1942 and is headquartered in New Delhi.

Network - It has a pan-India presence with a dynamic network of 37 national laboratories, 39 outreach centers, and 1 Innovation Complex.

Scope - It is a premier R&D organization known for its cutting-edge research across diverse scientific and technological fields, from genomics and geology to food and fuel.

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