GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
RAJYA SABHA
UNSTARRED QUESTION NO. 2370
ANSWERED ON 12/03/2026

ENCOURAGING PRIVATE SECTOR RESEARCH

2370# SHRI DEEPAK PRAKASH:

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether Government has taken special initiatives to encourage private sector research and innovation in energy transition, deep-tech, AI and biotech sectors in mining and industrial States like Jharkhand;

(b) the details of projects approved, technologies developed and financial assistance provided to support technical institutions and startup ecosystem in Jharkhand;

(c) whether the impact of these initiatives has been assessed and whether there are plans to expand them; and

(d) if so, the details thereof?

ANSWER

MINISTER OF STATE (INDEPENDENT CHARGE) FOR THE
MINISTRY OF SCIENCE AND TECHNOLOGY & EARTH SCIENCES
(DR. JITENDRA SINGH)

(a) The Government has taken several initiatives to encourage private sector research and innovation in various domains, including energy transition, deep-tech, artificial intelligence (AI), biotechnology and mining-related technologies. In this regard, the Government has launched the Research, Development and Innovation (RDI) Scheme on 03 November 2025 with a total outlay of ₹1 lakh crore over six years to incentivise private sector participation in R&D.

The scheme targets strategic technology sectors, including energy security and energy transition and climate action; deep technologies such as quantum computing, robotics and space; AI and its applications in agriculture, health and education; biotechnology, biomanufacturing, synthetic biology, pharmaceuticals and medical devices; and the digital economy, including digital agriculture. The scheme also supports technologies whose indigenisation is important for strategic or economic security and for promoting Atmanirbhar Bharat, as well as any other sector or technology considered necessary in the public interest.

The scheme operates at the national level and is implemented through a competitive, proposal-based mechanism as per the approved guidelines. Under this framework, the Technology Development Board (TDB) and the Biotechnology Industry Research Assistance Council (BIRAC) have been designated as Second-Level Fund Managers (SLFMs) and have launched calls for project proposals on 4 February 2026 and 13 February 2026, respectively. The SLFMs will provide funding to eligible technology entities, including start-ups, companies and industry-led R&D projects, developing technologies at TRL 4 and above in strategic and sunrise sectors.

The Department of Science and Technology (DST) is implementing the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)**,** approved by the Union Cabinet with an outlay of ₹3,660 crore**,** under which 25 Technology Innovation Hubs (TIHs) have been established in academic institutions across the country. These hubs support deep-tech start-ups and research in areas such as AI & ML, robotics, IoT, cybersecurity, mining, quantum technologies and fintech. One such hub, Technology Innovation in Exploration & Mining Foundation at IIT (ISM) Dhanbad, focuses on mining technologies from exploration to beneficiation of minerals. Technology Business Incubators (TBIs) supported by DST also promote innovation and entrepreneurship by providing incubation support, mentoring and seed funding to start-ups, including those working in deep-technology areas.

The Anusandhan National Research Foundation (ANRF) has launched several initiatives, including the 2D Innovation Hub, EV Mission, MedTech Mission, Artificial Intelligence for Science & Engineering, and the CRM Research Programme under its Mission for Advancement in High-Impact Areas (MAHA). These initiatives promote industry-academia partnerships, incubation ecosystems and multi-stage engagement models to accelerate the development and commercialisation of research in sectors like energy transition, deep-tech, AI and biotech, with mandatory participation of relevant industries, PSUs and start-ups.

(b) The details of projects approved, technologies developed and financial assistance provided to support technical institutions and the start-up ecosystem in Jharkhand under ANRF and DST initiatives, including NM-ICPS, R&D Infrastructure, NIDHI-iTBI and the Technology Development Programme, are given below:

i. The Anusandhan National Research Foundation (ANRF), being a national funding agency, does not have any state-specific programmes. All its programmes are announced nationally through open calls and are open to eligible institutions and researchers across the country, including those in the State of Jharkhand. The programme-wise details of sanctioned projects during the last three years are given below:

Program Name	**Total projects sanctioned**
Core Research Grant	77
Empowerment and Equity Opportunities for Excellence in Science	7
Inclusivity Research Grant	2
MATRICS	11
National Post-Doctoral Fellowship (N-PDF)	12
Partnerships for Accelerated Innovation and Research (PAIR)	1
Prime Minister Early Career Research Grant	20
Ramanujan Fellowship	1
Scientific and Useful Profound Research Advancement (SUPRA)	1
SERB-POWER Grant	7
Special Call for Proposals	2
Start-up Research Grant	35
State University Research Excellence (SERB SURE)	2
Teachers Associateship For Research Excellence (TARE)	3

ii. The details of projects approved, technologies developed and financial assistance provided by the Technology Innovation Hubs (TIHs) under the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) to support technical institutions and the start-up ecosystem in Jharkhand are as follows:

Institute Name	Details of the Project	Amount (Rs)
Jharkhand Technical University	TEXMiN-JUT Center has been established for putting CPS technologies	50.0 Lakhs
BIT Sindri	TEXMiN-BIT Sindri Center has been established in Sindri Campus	50.0 Lakhs
NIT Jamshedpur	Technology development project has been provided for development of Hand held drone compatible microwave scanner	20.95 Lakhs
CIMFR, Dhanbad	Projects have been provided for development of multispectral based coal	70.0 Lakhs
ISM Dhanbad	Projects have been provided to ISM Dhanbad for various projects in CPS technologies, particularly for mineral exploration and mining.	3+ Crore
PMRC, Dhanbad	Project for development of AI driven CPS systems for treatment of water from Coal bed methane well.	60.0 Lakhs

iii. The R&D Infrastructure Division implements schemes aimed at the establishment and upgradation of research facilities in academic and technical institutions, with a view to strengthening the national research ecosystem. These schemes are implemented through a competitive mechanism across the country. The details of projects approved and financial assistance provided in the State of Jharkhand are given below:

Programme Name	Details	Amount (Rs)
The Fund for Improvement of S&T Infrastructure in Universities and Higher Educational Institutions (FIST)	Over the last five years, 13 STEM departments across 5 Jharkhand institutions (IIT-Dhanbad, BITS-Mesra, Central University of Jharkhand, NIT Jamshedpur, and BIT Sindri) received under FIST	13.55 crore
The Promotion of University Research and Scientific Excellence (PURSE)	The Central University of Jharkhand has been supported under PURSE.	5.26 crore

iv. The details of projects approved and financial assistance provided under the NIDHI-Inclusive Technology Business Incubator (NIDHI-iTBI) programme in Jharkhand are given below:

S. No.	Programme Name	Name of Host Institution	City/State	Sanctioned amount
1	NIDHI Inclusive Technology Business Incubator (NIDHI-iTBI)	National Institute of Technology Jamshedpur	Jamshedpur, Jharkhand	Rs. 3,30,64,600

v. The details of projects approved and financial assistance provided under the Technology Development Programme in Jharkhand are given below:

S.No	Programme Name	Institute Name	Sanctioned Cost (In Rs.)
1	Advanced Manufacturing Technologies (AMT)	CSIR-NML	46,53,674
2		IIT (ISM) - Dhanbad	50,81,546
3		CSIR-NML	6,35,35,040
4	Waste Management Technologies (WMT)	CSIR-NML	65,81,692
5	Technology Development Programme (TDP)	NIT-Jamshedpur	30,06,960
6		NIT-Jamshedpur	12,98,450
7	Biomedical Device and Technology Development (BDTD)	Jagannath Nagar College, Ranchi University	14,00,764
8	NIDHI Inclusive Technology Business Incubator (NIDHI-iTBI)	NIT-Jamshedpur	3,30,64,600

(c) to (d): The Anusandhan National Research Foundation (ANRF), recently operationalised, aims to strengthen the national research and innovation ecosystem by promoting collaboration among academia, industry and government, and by supporting high-impact research and innovation initiatives.

The initiatives of the Department of Science and Technology (DST) are assessed periodically through third-party evaluations and national-level Expert Advisory Committees, and the recommendations arising from such assessments are considered for improving and expanding the programmes, wherever required.

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