GOVERNMENT OF INDIA

MINISTRY OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF SCIENCE AND TECHNOLOGY

RAJYA SABHA

UNSTARRED QUESTION No. 2202

ANSWERED ON 07/08/2025

PPP UNDER THE RDI SCHEME

2202 SHRI SATNAM SINGH SANDHU:

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

(a) the extent of collaboration envisaged between public sector research institutions and private companies under the Research, Development and Innovation (RDI) scheme and the types of support being provided to these institutions;

(b) the initiatives taken to promote a robust innovation ecosystem, including capacity building, regulatory reforms and incentives for research in emerging technologies; and

(c) the measures adopted to ensure that R&D benefits are equitably distributed across various States, regions and socio-economic groups?

ANSWER

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

(DR. JITENDRA SINGH)

(a) to (b): A new Research, Development and Innovation (RDI) scheme with a total outlay of ₹1 lakh crore over a period of 6 years has been approved by Union Cabinet on July 1, 2025. Strategic technology areas such as energy security, climate action, and deep technologies like quantum computing, artificial intelligence, biotechnology, and the digital economy have been identified under the RDI Scheme. Moreover, the scheme also includes sectors important for strategic and economic security and has the scope to add more sectors subject to the approval of the Empowered Group of Secretaries (EGOs). Financing under the scheme is long term loans at no/low interest, equity and contribution to the Deep-Tech Funds. Short-term loans and grant financing are not contemplated under the scheme.

The scheme is proposed to fund Research, Development and Innovation related projects with transformative potential at TRLs 4 and higher and enable the acquisition of key technologies of strategic importance whereas the Ausandhan National Research Foundation (ANRF) serve significant roles in India' R&D landscape by investing in early and mid-stage research (TRL 1–4) in institutions and public

research labs. ANRF offers competitive, peer-reviewed grants to foster long- term research excellence in academia, enhance international collaborations, and build research capacity in universities. While programs like DST's National Initiative for Developing and Harnessing Innovations (NIDHI) and MeitY's (Technology Incubation and Development of Entrepreneurs) assist early-stage star-ups; but their small scale and grant-based nature are not effective for high-risk deep tech development. The RDI scheme aims to bridge their gap between prototype development and commercial-scale products. Additionally, DST's mission-mode initiatives like the National Mission on Interdisciplinary Cyber Physical System (NM-ICPS) and the National Quantum Mission (NQM) concentrate on institutional capacity building, early-stage prototype development, and strategic areas of national priorities.

(c) Although all R&D schemes are competitive in nature, various proactive measures have been adopted to ensure that the benefits of research and development are equitably distributed across different states, regions, and socio-economic groups. In addition to these broad efforts, specific programs have been implemented to strengthen the R&D capacity in states, universities, particularly in underrepresented or less-developed regions**.** Institutions from more advanced regions are encouraged to collaborate with and mentor those in underrepresented areas, facilitating knowledge transfer and capacity building. Special arrangements have also been made to facilitate the involvements of marginalized communities such as SC/ST and women scientist through targeted fellowships, mentoring, and relaxed eligibility norms in some schemes.

Some of the key programmes in this context are; 1) Partnerships for Accelerated Innovation and Research (PAIR) Program to boost the research capability of those institutions where research is at a nascent stage but which have the potential to perform well, in a mentorship mode by pairing them with well-established top-tier research institutions in a hub and spoke framework, 2) Inclusivity Research Grant (IRG) to facilitate equal participation of researchers from all sectors of society, 3) Empowerment and Equity Opportunities for Excellence in Science (EMEQ) scheme was aimed to provide research support to researchers belonging to the Scheduled Caste and Scheduled Tribe in undertaking research in frontier areas of science and engineering, and 4) Promotion of University Research and Scientific Excellence (PURSE) to strengthen the research capacity of performing Indian Universities and provide support for nurturing the research ecosystem and strengthening the R&D base of the Universities in the country have been implemented.

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