

**GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA**

UNSTARRED QUESTION NO:4236
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INNOVATION ECO SYSTEM
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Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) whether the Government is considering an integrated approach involving all Ministries to develop an innovation eco-system and to strengthen the science education and research;
- (b) if so, the details thereof; and
- (c) the steps taken by the Government to promote innovative research initiative in Government scientific research institutions?

Answer

MINISTER OF SCIENCE AND TECHNOLOGY AND MINISTER OF EARTH SCIENCES (S. JAIPAL REDDY)

(a) & (b): The Government has taken number of steps to promote an Innovation Ecosystem, Science education and research. Different Ministries, departments from Central and State governments have taken up various initiatives to provide an integrated approach for developing an inclusive Innovation ecosystem. In order to synergize science, technology and innovation and to bring fresh perspective to bear on innovation in the Indian context, the Government has recently enunciated Science, Technology and Innovation Policy 2013 (STIP) with focus on promoting the spread of scientific temper amongst all sections of society and creating a robust national innovation system.

The National Innovation Council (NInC) has been set up to provide an integrated approach to evolve an Indian model of innovation and inclusive growth. Initiatives of NInC include formation of State & Sectorial Innovation Councils; Initiatives for MSME Growth; establishment of India Inclusive Innovation Fund with Ministry of Micro, Small and Medium Enterprises; setting up of clusters in partnership with Council of Scientific and Industrial Research (CSIR) and Department of Biotechnology (DBT).

The National Innovation Foundation-India (NIF) has been setup by Department of Science and Technology as an aided institute to support grassroots technological innovations and outstanding traditional knowledge. NIF, in collaboration with over 100 public and private sector R&D institutions and design firms has added value in grassroots innovations and outstanding traditional knowledge. NIF has been organizing 'IGNITE', a national competition of original technological innovations of children in association with Central Board of Secondary Education (CBSE) and various State Education Boards.

The Innovation in Science Pursuit for Inspired Research (INSPIRE) of the Department of Science and Technology (DST) is a planned program to attract talented youth to study science and to pursue careers with research. It has engaged number of talented youth in the country over the age groups of 10 to 32 with attempts to promote a science aware citizenry through an Award scheme, Scholarship scheme, Fellowship scheme and Faculty scheme for providing a research career opportunity.

The Department of Biotechnology (DBT) has initiated several programmes for promoting excellence and innovation in life sciences at individual, institutional and industrial level. For promoting innovation through public private-partnerships several schemes have been launched such as Small Business Innovation Research Initiative (SBIRI) for proof of concept research; Biotechnology Industry Partnership Programme (BIPP) for innovations in high risk futuristic technologies; Ignition Grant Scheme for start-up companies.

(c) The Government has taken a number of steps to promote innovative research in scientific research institutions in the country. The Government has recently created a new structure for basic sciences by establishing a Science and Engineering Research Board (SERB) in the country as an autonomous body through an Act of Parliament. SERB has significantly enhanced the level of basic research funding, innovative research initiatives to capture the best brains of the country through fellowships programmes such as JC Bose and Ramanujan Fellowships etc are helping in promoting innovative research. Launching of Innovation in Science Pursuit for Inspired Research (INSPIRE) demonstrates the innovative ways of attracting talents to careers with research. Other measures to promote innovative research include successive increase in plan allocations for Scientific Departments, setting up of new institutions for science education and research, creation of centres of excellence and facilities in emerging and frontline areas in academic and national institutes, induction of new and attractive fellowships, strengthening infrastructure for Research and Development (R&D).

DBT Centres of Excellence and Innovation scheme has been operational with establishment of 15 centres, 49 sub specific thematic centres and 13 individual projects covering high level innovative research in the areas of system biology, synthetic biology, genomics, proteomics, metabolomics, clinical neurosciences etc.

Council of Scientific and Industrial Research (CSIR), through its different scientific research labs is carrying out cutting edge scientific

and technological research and development with a vision to pursue science which strives for global impact, technology that enables innovation- driven industry and nurture trans-disciplinary leadership for inclusive economic development in the country. CSIR is catalyzing innovative research through its 'New Millennium Indian Technology Leadership Initiative (NMITLI)' programme, a public-private-partnership initiative. It seeks to build, capture and retain for India a leadership position by synergizing the best competencies of public funded R&D institutions, academia and industry.