

**GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF SCIENCE AND TECHNOLOGY  
LOK SABHA  
STARRED QUESTION No.254  
TO BE ANSWERED ON 12/3/2021**

**DEVELOPMENT OF S&T TO SUPPORT WEAKER SECTIONS**

**\*254. SHRI HEMANT TUKARAM GODSE:**

**Will the Minister of SCIENCE AND TECHNOLOGY विज्ञान और प्रौद्योगिकी मंत्री be pleased to state:**

- (a) whether the Government aims to promote Science and Technology (S&T) with emphasis on emerging areas and their application for the development and support to the weaker sections of the society and if so, the details thereof;**
- (b) whether there is a policy in place for development of S&T in the country with adequate infrastructure and if so, the details thereof; and**
- (c) the road map drawn for the promotion of S&T along with the thrust areas identified for its time-bound development?**

**ANSWER**

**MINISTER OF HEALTH AND FAMILY WELFARE; MINISTER OF SCIENCE AND TECHNOLOGY; AND MINISTER OF EARTH SCIENCES  
(DR. HARSH VARDHAN)**

स्वास्थ्य और परिवार कल्याण मंत्री, विज्ञान और प्रौद्योगिकी मंत्री और पृथ्वी विज्ञान मंत्री  
डॉ. हर्ष वर्धन

**(a) to (c): A statement is laid on the Table of the House.**

**STATEMENT AS REFERRED TO IN REPLY TO PARTS (a) TO (c) OF LOK SABHA STARRED QUESTION NO. 254 FOR 12/03/2021 REGARDING “DEVELOPMENT OF S&T TO SUPPORT WEAKER SECTIONS”.**

**(a) Yes Sir, the Government is already promoting Science and Technology (S&T) with emphasis on emerging areas and their application for the development and support to the weaker sections of the society through various Schemes and Programmes implemented by different Ministries and Departments as detailed below:**

**Department of Science and Technology:**

- i. **Innovation Technology Development and Deployment:** This Scheme Promotes research, development, transfer, dissemination and adoption of emerging technologies to solve the problems of economically weaker Scheduled Caste (SC)/ Scheduled Tribe (ST) communities, especially in rural areas. Some of the initiatives under the Scheme are given below
  - **15 projects supported under the Scheduled Caste Sub Plan and Tribal Sub Plan having interventions on emerging areas of Science and Technology like Artificial Intelligence (AI), Machine Learning (ML) and Internet of Things (IoT) etc. for better management of irrigation facilities, prediction and detection of pests/crop diseases, increased productivity etc.**
  - **10 Science Technology and Innovations Hubs were established for developing emerging and efficient technologies for improvement of livelihood system and social enterprise development**
  - **Machine Learning Techniques and Internet of Things are also being used extensively in the 15 projects supported for development of assistive technologies, tools and techniques for the benefit of persons with disabilities and elderly population. Monitoring of health parameters, prediction of falls, development of several software and applications is being done using AI, ML, IoT etc. under 5 projects supported under the programme Technology Interventions for Disabled and Elderly (TIDE). 3D Printing and Nano Technology is being extensively used in 3 projects under TIDE for development of prosthetics /artificial limbs**
  - **A programme was initiated in 2018-2019 to train 34,50,000 ST students in 115 aspirational districts of India in advanced technologies like Artificial Intelligence, Sensors, Data Science, Computer Networks, Cyber Security and Block Chain Technologies. Training on Inter Cyber Physical System (ICPS) technology is being imparted at School level (class 6 to 8) in 11,500 schools covering 115 aspirational districts across the country.**
- ii. **Science and Technology Institutional and Human Capacity Building:** The objective is augmentation of S&T human resources by creating a pool of talented students in Sciences for future research activities in the country through various fellowships and creation of sophisticated R&D infrastructure in knowledge institutions for enhancing research capabilities in emerging technologies.
  - **1000 fellowships were provided to women students with a break in career under DISHA Programme for Women in Science**

- **32,310 students from SC/ST Category at School Level, Under Graduate Post Graduate and Ph. D Level were offered research fellowships under Innovation of Science Pursuit for Inspire Research (INSPIRE) Programme to work in emerging areas of S&T.**
- **Around 40 Women Technology Parks were fully functional for building capacity of women in emerging areas of S&T for livelihood system improvement.**
- iii. ***Science and Engineering Research Board (SERB):* The Empowerment and Equity Opportunities for Excellence in Science (EMEQ) scheme implemented by SERB is aimed at providing research support to researchers belonging to the Scheduled Caste and Scheduled Tribe in undertaking research in frontier areas of science and engineering.**
  - **During the last 5 years more than 500 research projects were awarded to faculty belonging to SC and ST Communities**

**Department of Biotechnology: To facilitate biotech-based development in the North Eastern Region (NER) of India through conceptualization, implementation, mentoring and monitoring of biotechnology intervened programs for holistic development, the Department has earmarked 10% of its annual budget every year for promoting and strengthening biotechnology related activities in the region. These region-specific programmes focus on developing local capacities to address regional challenges and harness endemic bioresources for economic development of the region through frontier research in the area of Biotechnology.**

- **To effectively manage the programme, NER Biotechnology Management Cell (NER BPMC) has been set up by DBT-Institute of Life Sciences (DBT-ILS), Bhubaneswar.**
- **About 670 Twinning projects have been supported since inception of the scheme in 2010, addressing issues in emerging areas of Biotechnology with specific relevance to developmental needs of the region.**
- **Nearly 250 research papers have been published in peer-reviewed journals.**
- **More than 2000 young researchers/students of NER have been trained in advanced biotechnology. These projects have been supported in 70 Institutes across NER.**
- **During the last three years, several projects were supported which had benefitted 3000 women in projects on emerging technologies for livelihood development.**

**Council for Scientific and Industrial Research (CSIR): CSIR through its constituent laboratories is actively working to promote advanced Scientific & Technological interventions for the development and support to the weaker sections of the society. Some of the significant initiatives taken by CSIR for the benefit of people especially from weaker section are given below**

- **CSIR Aroma Mission for Catalysing Rural Empowerment through Cultivation, Processing, Value Addition and Marketing of Aromatic Plants.**
- **CSIR Floriculture Mission for Enhancing farmers' income and entrepreneurship development through high value floriculture utilizing CSIR technologies.**
- **CSIR proposal on Gaon Ka Pani Gaon Me – Har Ghar Ko Nal Se Saph Jal under Jal Jeevan Mission of Ministry of Jal Shakti aims at customized development and deployment of innovative technologies for drinking water and wastewater treatment in rural India to fulfill the objectives of Jal Jeevan Mission of**

**providing safe water supply to households and safely manage grey water/wastewater.**

**Indian Council of Agricultural Research (ICAR): To support resource poor small and marginal farmers of the country, ICAR is conducting research in farmers' participatory mode for developing location specific, cost effective, eco-friendly, socially acceptable scientific farming practices. Low-cost technologies are being developed and promoted for the farming community including weaker sections.**

- **The important thrust areas include development of high yielding, disease, insect pest and climate resilient crop varieties and technologies, soil health management, agricultural water management, watershed management, enhancement of nutrient and water use efficiency, resource conservation, crop diversification, integrated weed management, conservation agriculture**
- **Development of Integrated Farming System integrating dairy, goat and sheep farming, piggery, apiary, fisheries, agro-forestry with the traditional crop farming keeping in view the farmers' resource availability, traditional know-how and grassroots farm innovations coupled with emerging innovations and technologies.**
- **Benefits of successful research are being popularized among the farmers throughout the country through training and Front-Line Demonstrations (FLDs) through Krishi Vigyan Kendra's (KVKs) and Institute Extension System.**

**Indian Agricultural Research Institute (IARI): To address the issues of malnutrition among weaker sections, initiatives taken by IARI are given below**

- **Classification of nine nutrition rich millets as 'Nutri-cereals' and help promote their consumption along with better returns to the farmers.**
- **Development of Bio-fortified crops with improved nutrition is also being taken up and seventeen such crops were dedicated to nation by honorable PM, on world food day 2020.**

**(b) Yes Sir, the Government has brought out the Science, Technology & Innovation (STI) Policy 2013 with the guiding vision of aspiring Indian STI enterprise to accelerate the pace of discovery and delivery of science-led solutions for faster, sustainable and inclusive growth. A plethora of programmes have been implemented by the Government to support and stimulate the S&T development in the country and there has been a notable rise in the S&T activities.**

**(c) The new challenges of today necessitate a different policy making approach and the current pandemic has catalyzed the need for a new policy instrument that amalgamated profound and incremental approaches. The Government has initiated formulation of a new Science, Technology & Innovation Policy (STIP) and has come up with a draft policy document. The draft policy aims to prioritize and strategize across the Science Technology and Innovation (STI) landscape in alignment with United Nations – Sustainable Development Goals (UN-SDGs) through a balance of short-term mission-mode projects along with long-term ones. The draft Policy aims to emphasize 11 components viz. Open Science, Capacity Development, Financing STI Research, Innovation and Entrepreneurship, Technology Development and Indigenisation, Equity and Inclusion, Science Communication and Public Engagement, International STI Engagement, STI Governance and STI Policy Governance for the promotion of S&T.**

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