

**GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF SCIENCE AND TECHNOLOGY  
LOK SABHA  
UNSTARRED QUESTION NO.4470  
TO BE ANSWERED ON 19/7/2019**

**EMERGING AREAS OF SCIENCE AND TECHNOLOGY**

**4470. SHRI TAPIR GAO:**

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

- (a) whether the Government functioning is focused on Science and Technology (S&T) with emphasis on emerging areas and promotion of science related subjects, their application for the development and support to the weaker sections of the society, if so, the details thereof;
- (b) whether there is a policy in place for development of S&T in North Eastern region with adequate infrastructure, if so, the details thereof; and
- (c) the road map for the promotion of S&T along with the thrust areas identified for its timebound 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) Yes Sir. The Government is focusing on promotion of Research, Development, Demonstration and training in the emerging areas of Science & Technology like Clean Energy, Sustainable Water Technologies, Nano Science and Technology, Interdisciplinary Cyber Physical Systems, Biotechnology, Assistive Technologies etc for development and support to the weaker sections of the society viz. Schedule Caste & Scheduled Tribe Population, Women, Disabled and Elderly communities. Some of them are as follows:
- i. Several assistive devices like Interline Braille Slate, Refreshable Braille Device, Wheel Chairs For Different Built Environments, automatic dispenser systems for oral medication, communication system for comatose and patients with multiple disabilities, bus identification system for visually challenged, Transradial Prosthetic Arm, Functional Electrical Simulation System, low cost teaching aids for children with learning disabilities, sign language convertors were developed under the programme Technology Interventions for Disabled and Elderly.
  - ii. Under the “S&T for Women” programme, a thermal sensor based monitoring system for early detection of breast cancer; a simple wearable device for screening, absolutely painless, portable, quick test time has been developed. Under Women Technology Parks, local women have been trained in emerging technologies like 3D printing of chocolates and renewable energy based fish processing system.
  - iii. Under the Schemes, Scheduled Caste Sub Plan and Tribal Sub Plan, training and capacity building programmes in the emerging areas of Artificial Intelligence (AI), Internet of Things (IoT), Machine Learning (ML), Deep Learning (DL), Big Data Analytics, Robotics, Quantum Computing, Quantum Communication, Quantum encryption (Quantum Key Distribution),

**Data Science & Predictive analytics, Cyber Security for physical infrastructure are being conducted for Scheduled Caste and Scheduled Tribe population.**

**iv. Under the “Empowerment and Equity Opportunities for Excellence in Science” programme of Science and Engineering Research Board (SERB) grant in aid support has been provided to 450 researchers belonging to the Scheduled Caste and Scheduled Tribe for undertaking research in emerging areas of science and engineering during last two years.**

**(b) No Sir, the Ministry of Science and Technology does not have a specific policy for the development of S&T in North Eastern region. However, Department of Biotechnology (DBT) has earmarked 10% of its total annual budget towards biotechnology-based developmental activities in the North Eastern Region (NER) of India.**

**(c) Various steps taken for the promotion of S&T along with the thrust areas identified for time bound development of North Eastern Region are as follows:**

- i. DBT has already initiated several region-specific schemes/programs with the intervention of biotechnology in all eight states of the NER in thrust areas like agriculture, medical and veterinary sciences. The programs are towards human resource development, research infrastructure creation, flagship R&D programs and specific network programs addressing local issues including entrepreneurship development.**
- ii. DST is in the process of setting up Women Technology Parks, Science Technology and Innovation Hubs in the NER region to develop, nurture and ensure the development, improvement and delivery of appropriate and relevant S&T approaches for Creation of Sustainable Livelihoods and enhancing the Quality of Life of the women, Scheduled Caste and Scheduled Tribe population in the North Eastern Region.**
- iii. North East Centre for Technology Application and Reach (NECTAR), an autonomous institute of DST is scouting and demonstrating location specific technologies in the sectors of Agriculture with specific focus on bamboo, food processing, disaster management, telecommunication to generate employment, create sustainable livelihoods and income in North Eastern Region.**
- iv. R&D Infrastructure has been established through Sophisticated Analytical Instrumentation facility programme (SAIF) at North Eastern Hill University (NEHU), Shillong and Guwahati University, Guwahati under Fund for Improvement of Science and Technology Infrastructure (FIST) programme. Under the same programme, 35 Departments of the Universities in North Eastern states have been supported for infrastructure augmentation.**

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