GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
LOK SABHA
UNSTARRED QUESTION No.2644
TO BE ANSWERED ON 6/3/2020

STRENGTHENING OF SCIENTIFIC ACUMEN AMONG STUDENTS

2644. SHRIMATI RAKSHA NIKHIL KHADSE:

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

(a) whether the Government is exhorting scientists to work & concentrate and find solutions on the real time social issues being faced by the country such as malnutrition and work to improve quality of life of the common man;

(b) if so, the details thereof;

(c) whether the Government proposes to set up virtual labs to take science to the reach of students in every corner of the Country to strengthen scientific acumen among them; and

(d) if so, the details thereof?

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) & (b): Yes, Sir. Ministry of Science & Technology (S&T) has taken steps to motivate scientists and researchers for applying knowledge of S&T processes, tools and technologies to find solutions on the real time social issues being faced by the country such as malnutrition and to work to improve quality of life of common man under its programme for societal development. In this direction, the Ministry is operating the following programme/schemes:

1. Science & Technology for Women
2. Technological Advancement for Rural Areas (TARA)
3. Scheduled Caste Sub Plan
4. Tribal Sub Plan
5. Technology Intervention for Disabled and Elderly (TIDE)
6. Biotechnology based program for societal development
7. 'CSIR-800' scheme.

- Besides, State Councils for S&T are also encouraging location specific solutions for the upliftment of weaker section through S&T intervention.
- These schemes/programme of societal relevance are focused on development and improvement of indigenous technologies to benefit rural and weaker communities which include SC/ST, women, *Divyangjan* and other backward communities.
- These schemes/programs aim to promote and support need based S&T interventions for livelihood improvement, self-employment generation, skill development and drudgery reduction among the target population by diffusion of proven and field-tested indigenous and improved technologies at pilot scale.
- The focus areas supported under these schemes/programs include agriculture and animal husbandry, post-harvest processing, integrated farming system, renewable energy application, rural engineering, entrepreneurship development, bio-resource utilization for sustainable development linked to hygiene and nutrition.

Further, following efforts are also being made by Government to encourage scientists & researchers to work on problems of malnutrition being faced by the country to improve the quality of life of common man:

1. The problem of malnutrition is being addressed by involving young researchers under the Scheme for Young Scientists and Technologists (SYST) of Department of Science & Technology (DST) in value addition of underutilized crops such as pearl millet, characterization and standardization of different components such as resistant starch and bio-prospecting of wild edible crops for food security in the Himalayas.
2. Initiatives are being taken under S&T for Women scheme of DST for food-based mitigation of malnutrition in women by improving efficacy of Coarse Cereals and Millets; promotion of sustainable nutrition and empowerment of SC/ST/women through Nutri-Farms &popularization of nutritional crop genotypes for economic and nutritional enhancement of Primitive Tribes (Soliga).
3. Many innovative technologies have been incubated by National Innovation Foundation (NIF), Ahmedabad to improve the quality of life of common man and address the problem of nutritional security. NIF has not only scouted but also performed value addition activities to farmers' crop varieties of cereals, vegetables, and fruits with high nutritious values. More than a hundred varieties have been biochemically profiled, recommended and disseminated to different regions of India i.e. to more than 30 States and Union Territories (>1500 Farmers) so that it can be produced and used by the rural population.
4. Department of Biotechnology is also supporting R&D programs in Public Health and Nutrition with a mandate to foster R & D to provide technological and clinical solutions for malnutrition, anemia, stunting etc.
5. Efforts are also being made by Indian Agricultural Research Institute (IARI), Pusa, Delhi to develop nutrient-dense food crops using conventional and modern scientific tools/approaches.
6. Under the POSHAN Abhiyaan (National Nutrition Mission), a flagship program, launched in March 2018, efforts are being made to improve nutritional status of children up to 6 years, adolescent girls, pregnant women and lactating mothers to achieve specific targets for reduction in low birth weight babies, stunting growth, under-nutrition and prevalence of anemia over next three years. In this initiative, Central Council for Research in Ayurvedic Sciences (CCRAS) has carried out related work through OPDs of its 27 Institutes across the country. Related awareness has also been generated through research-oriented outreach health care programs of the Council viz. Tribal Healthcare Research Program, *Swasthya Rakshan* Program, Ayurveda Mobile health program under SCSP, NPCDCS and North-East Program.
7. The ICMR- National Institute of Nutrition (NIN), Hyderabad works toward promoting public health nutrition and constantly advises government and regulatory bodies on nutrition. These activities are based on research studies on contemporary nutrition and health issues that the country is facing.

(c) & (d): Virtual Labs project is an initiative of Ministry of Human Resource Development (MHRD), Government of India under the aegis of National Mission on Education through Information and Communication Technology (NMEICT).

- This project has been taken up for remote experimentation in a consortia mode of twelve participating institutes(IIT Kharagpur, IIT Roorkee, IIT Guwahati, IIT Bombay, IIT Kanpur, IIT Hyderabad, IIT Chennai, Dayalbagh Educational Institute, Agra, NIT Karnataka, COE, Pune and Amrita Vishwa Vidyapeetham. IIT Delhi is the coordinating institute.
- Virtual labs allow students to practice and better learn the science and engineering behind the experiments that they are required to perform.
- The Virtual Labs project addresses issue of lack of good lab facilities, as well as trained teachers, by making remote experimentation possible. It will also allow sharing of costly equipment across the country. In very rural areas, students will be able to perform experiments that they would not otherwise be able to perform.

More than 100 Virtual Labs have been developed in major domains of Science and Technology. They are being used in more than 850 nodal centers across the country, including some remote areas. All labs can be accessed on the internet from the website www.vlab.co.in".

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