

2015-16, a total amount of ₹ 14.00 crores was allocated out of which ₹ 5.00 crores have been spent on R&D and applications development in the areas of Hyperspectral Data Analytics, wetland Ecosystem data analytics, Indian Digital Heritage (IDH) data analytics and digital heritage documentations and tools development. Funds have also been spent on 34 number of capacity building and trainings programmes on Big Data Analytics for Graduates, Scholars, Young Academicians and Scientists across the country and also supported 15 national level workshops and conferences on usage of Big Data Analytics in various thematic domains of Science and Technology.

Dearth of science teachers in colleges

1532. SHRI TARUN VIJAY: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) the volume of the dearth of science teachers in various colleges;
- (b) what are Government plans and the budget allocated for it to encourage innovations in the area of science and technology; and
- (c) the details of some of the most remarkable innovations by Indian scientists in last five years?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI Y. S. CHOWDARY): (a) to (c) The information is being collected and will be laid on the Table of the House.

Enhancing research capabilities in universities of Gujarat

1533. SHRI AHMED PATEL: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) the steps taken to enhance capabilities of researches in the universities and R&D institutions based in Gujarat;
- (b) the details of funds allocated and released to various research institutions based in Gujarat in each of past three years; and
- (c) the number of research projects entrusted to the said institutions during the said period, year-wise?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI Y. S. CHOWDARY): (a) Government has taken several steps to enhance capabilities of researches in the universities and R&D institutions in the country including those based in Gujarat. Researchers working in these institutions in Gujarat have been supported through various competitive Schemes like Core Research

Grant (individual centric), Young Scientist Project Scheme and Research Fellowship. In addition, several University Departments in Gujarat have received support through Fund for improvement of S&T infrastructure in universities and higher educational institutions (FIST) to build research infrastructure for enhancing research capabilities. Through the State Science and Technology Programme of the Department of Science and Technology (DST), Gujarat State S&T Council is also supported to equip them with S&T manpower and office infrastructure to address the State level S&T issues.

(b) and (c) Several academic institutions such as The M.S. University of Baroda, Saurashtra University, Central University of Gujarat, Pandit Deendayal Petroleum University, Hemchandracharya North Gujarat University, Gujarat Forensic Science University, Indian Institute of Technology Gandhi Nagar, Sardar Vallabhbhai National Institute of Technology Surat etc. and R&D Institutions such as CSIR- Central Salt Marine Chemicals Research Institute (CSMCRI), Indian Centre for Climate and Societal Impacts Research, Directorate of Medicinal and Aromatic Plants Research, Directorate of Groundnut Research, Physical Research Laboratory, Institute of Seismological Research etc. received project based support from the Government. Most of the Schemes under Ministry of Science and Technology do not have State-wise or Institute-wise allocations and financial assistance is dependent on proposals received and approved. Consequent to this, funds released to various research institutions based in Gujarat by the Ministry of Science and Technology in each of the past three years (2012-15) are ₹ 122.99 crore, ₹ 112.99 crore and ₹ 104.69 crore respectively. The number of research projects entrusted to these institutions during the said period are 55, 67 and 62 respectively. In addition, CSIR-CSMCRI has been entrusted with 24 theme based projects during this period.

Progress in Clean Energy and Water Mission

1534. PROF. M. V. RAJEEVGOWDA: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the progress made in promotion and operationalization of the Technology Mission on Clean Energy and Water, if so, the details thereof; and

(b) whether any fund allocation has been done under this mission in the past one year, if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI Y. S. CHOWDARY): (a) The Technology Mission on Clean Energy was initiated as solar energy research initiative in 2009. In 2015-16, the programme was rechristened as clean energy research initiative and projects on building energy efficiency, smart energy grids and energy storage were also included