

## **Department of Science & Technology**

### **Monthly Report**

**December, 2018**

#### **1. Important policy decisions taken and major achievements during the month:**

- i.** Seven India-ASEAN projects were awarded grants under ASEAN-India Science and Technology Development Fund (AISTDF) for period of 2 years starting from 1<sup>st</sup> December 2018. The R&D projects cover the areas of Physics, Material Sciences, Biotechnology and Electronics with a total funding support of about Rs. 1.5 Crore.
- ii.** Thirty one ASEAN School Children and Teachers participated in the 26<sup>th</sup> National Children Science Congress (NCSC) -2018 which was held at Bhubaneswar, Odisha during 27-31 December 2018.
- iii.** The Meeting of the BRICS Young Scientist (YS) Conclave Alumni was organized at National Institute of Advanced Studies (NIAS), Bangalore during 2-3 December 2018. About 30 BRICS YS Conclave Alumni attended the conference. The participants presented their research work in the areas of Water, Energy and Health. The main objectives of organizing this Meeting were to network the BRICS Young Scientists for sharing their research work for evolving R&D projects among BRICS nations.
- iv.** As a part of Indo-German S&T cooperation, DST and Federal Ministry of Education and Research, Germany sanctioned three integrated joint projects with multi-institutional participation from India and Germany, viz., Sense4Metro, FloodEvac and Involve. These projects are basically to address issues pertaining to installing sensor in and around metro for monitoring of disasters, Disaster mitigation during floods including evacuation of people and Involving local people to volunteer during the disasters.
- v.** A comprehensive review workshop was organized at IIT Delhi on 6<sup>th</sup> Dec 2018 with participants from India and Germany. During the meeting, the status of the present progress of three projects was assessed.
- vi.** The 1<sup>2th</sup> Nobel Memorial CEO Round Table was organized to create a platform for enhancing dialogue between Indian and Swedish Industrial leaders on vision and best practices in corporate-startup collaborations on 14<sup>th</sup> Dec 2018 at New Delhi. The industrial leaders from both sides shared their experiences on joint innovative challenges and issues and how to address them with Intervention

from both the governments. Prof. Ashutosh Sharma, Secretary DST participated in the Round Table.

- vii.** A 10-member US India Business Council delegation called on Secretary DST on 12th December 2018 to discuss collaboration in the area of clean energy. Secretary DST informed about the various initiatives taken by DST in the area of clean energy. He informed about the opportunity to showcase new technology products at the new under construction premises of DST.
- viii.** India-Canada Science & Technology Innovation Summit was held at Indian Institute of Technology, Delhi on December 12, 2018. The objective of this summit was to develop a road map and intensify the India-Canada research exchanges, build capacity, and help communities with research outcomes. During the summit, Prof Ashutosh Sharma, Secretary, Department of Science and Technology (Ministry of Science of Technology, Government of India) and Dr. Nem kumar Banthia, Chief Executive Officer, IC-IMPACTS (Networks of Centres of Excellence, Canada) announced the four research teams as winners of their joint call for proposals on “*Improving Occupant Survivability in Buildings During Fires*”.
- ix.** A Programme of Cooperation in the area of science & technology between India and Myanmar was signed by Sh. Vikram Misri, Ambassador of the Republic of India to the Republic of the Union of Myanmar and Dr. Myo Thein Gyi, Union Minister of Education, Republic of Myanmar. President of India Shri Ram Nath Kovind and President of Myanmar Mr. U Win Myint witnessed the signing of POC in S & T. This POC will provide future directions to ongoing cooperation with Myanmar in Science and Technology.
- x.** DST-Intel had launched Joint Research Projects on “Collaborative Research on River Water and Air Quality Monitoring” in Public Private Partnership (PPP) mode in 2017. Four projects were supported for River water and Air quality monitoring. Consequently, in order to evaluate and analyse the work done, DST-Intel conducted Review Meeting to review 8 Consortia supported under this Public Private Partnership (PPP) on 7<sup>th</sup> December 2018 at IUSSTF, New Delhi.
- xi.** DST and the University of Nebraska, Lincoln, USA under the Indo-US Science & Technology Forum had launched programme WARI phase –I in year of 2015 which has completed its duration and objectives successfully. In view of positive outcomes so far and also in order to build capacity of Indian researchers for addressing water related issues, the experts strongly recommended the WARI

Phase II. Consequently, on 18<sup>th</sup> Dec 2018, as being part of this bilateral programme DST- IUSSTF conducted Screening meeting against the intern and fellow applications received against the Call for the WARI-Phase II programme 2018 at IUSSTF, New Delhi.

- xii.** In 2017 eight Indo-UK consortia on Water Quality Research programme were supported by DST-NERC-EPSRC which were collectively supported by both the sides with matching contributions. The **first Review meeting for Indo-UK WQRP projects** was held on 19<sup>th</sup> December 2018 at INSA, New Delhi to review the progress and achievements achieved so far.



- xiii.** A Water Innovation Centre has been established under WTI for **“Water Innovation Center: Technology, Research & Education (WICTRE)”**. The lead organisation is Indian Institute of Technology Bombay and has three partnering institutions namely National Chemical Laboratory Pune, IIT Hyderabad and PDPU Gujarat in the networking virtual Water Innovation Centre that aims to create awareness about water contamination/purification along with work on mapping of water stressed areas which are ecologically diverse, development of economical sensors for various chemical, physical and biological contaminants and understanding the microbial diversity and structure of the impacted waters. Prototype development of sensors and filters capable of sensing the quality of water and understanding the effect of biofilms on the fate and transport of nanoparticles in the subsurface, separating salt/contaminants and oil from water are also one of the main objectives of this proposed centre.

- xiv.** An expert panel meeting for consideration of proposals under Research Stream Hydrogen Fuel Cell (HFC) 2018 & Materials for Energy Storage (MES) 2018 was held on 04<sup>th</sup>-05<sup>th</sup> and 20<sup>th</sup> -21<sup>st</sup> December, 2018 at TERI School of Advanced Studies and Manav Rachna University, 89 Principal Investigators presented their proposed work under HFC and MES 2018. Out of 89 presented proposals, 51 have been recommended for support under the calls.

- xv.** Two regional events were held on December 11, 2018 in Mumbai and December 13, 2018 in Chennai to create awareness on the Global Cooling Prize, the technical criteria for the prize and evaluation process of the prize.
- xvi.** A review meeting was held on 14th December, 2018 at DST, New Delhi on Technology Solutions for Mitigating Air Pollution to review the ongoing projects supported by DST.
- xvii.** To finalize Indian smart grids experts from Academia, Industry, Utility, Start-ups, and other key organizations, an interaction meeting on Smart Grids was organized on 28th December 2018.



- xviii.** Group Monitoring Workshop (GMW) of Technology Intervention for Mountain Ecosystem: Livelihood Enhancement through Action Research Networking (TIME-LEARN) Program was held on 3-4 December 2018 at Central Potato Research Institute (CPRI), Shimla. 20 ongoing projects being implemented in North-Western Himalayas were evaluated and various technologies specific to space and water heating systems in mountain, improved rope-way system, establishment of virus free elite mother block of apple in the tribal areas and so on were displayed by participating institutions. A panel discussion on technology connect for green growth in mountain areas, and for up-scaling TIME initiatives was also conducted involving different stakeholders.
- xix.** An Expert Committee (EC) meeting was held on 05<sup>th</sup> and 06<sup>th</sup> December 2018 at IIT Mandi, Mandi Himachal Pradesh to review the progress of projects and onsite evaluation of project activities of CSTRI Centre at IIT Mandi, established under CSRTRI initiative of DST
- xx.** Meeting of scheme for Technological Intervention for Addressing Societal Needs (TIASN) was held on 13-15 December 2018 at SKAUST, Jammu. Thirty new proposals were evaluated technically for budgetary support and five ongoing projects were evaluated for annual progress.
- xxi.** A review meeting of '*Pt Deen Dayal Upadhyay Vigyan Gram Sankul Pariyojana*' was held at IIT-Delhi on 21-22 December 2018.

- xxii.** The 26th National Children's Science Congress (NCSC) was held in Siksha O Anusandhan (Deemed to be University), Bhubaneswar during 27-31 December, 2018. During these five days over 650 child scientists from all across the country participated. Along with them, Indian children from four Gulf countries also participated. ASEAN countries also sent their child scientists to participate. The Child Scientists presented their research based projects on the focal theme Science, Technology and Innovation for a Clean, Green and Healthy Nation. 56 % of the child scientists were girls, the highest participation of girls so far in the 26 years of NCSC. 44% of the children were from rural sector.
- xxiii.** Initiative in Research and Innovation in Science (IRIS) and Make Tomorrow for Innovation Generation: Department of Science and Technology, Indo US Science and Technology Forum and Intel come together from 2<sup>nd</sup> - 4<sup>th</sup> Dec 2018 at the Sam Manekshaw Centre, New Delhi to Celebrate Innovation with their partnership programs:
- Initiative for Research and Innovation in Science(IRIS) – 107 students with 80 projects from 39 cities
- Make Tomorrow for Innovation Generation (MTFIG) – 100 students with 50 projects from 17 states.
- A 3 day festival of Science Technology Innovation and Ideas brought together Students, Teachers, Parents, Members of the Scientific community and Corporate world that culminated in a Grand Award Ceremony on 4<sup>th</sup> December 2018. They will be a part of Team India which will compete in International Science and Engineering Fair 2019 at Phoenix, Arizona.
- xxiv.** One day orientation workshop was conducted on 18 December, 2018 under "S&T through Community Radio" programme at Indian National Science Academy, New Delhi. Representatives of 71 Community Radio Stations (CRS) participated in the event. The participants were guided on how to develop need based proposals and scientific content creation for communicating through Community Radio.
- xxv.** TERI – NCSTC Eco Next Investigation for Youth Project was launched under NCSTC's Mission Eco Next with a first in series, Eco Eureka Training was organized on 17 – 21 December 2018 by The Energy & Resources Institute (TERI) for Undergraduate and Post graduate students between the age group of 18- 25 years. The training focused on connecting nature and science in order to

showcase the ways in which science can be used for the conservation of nature and the environment.

**xxvi.** Technical Advisory Committee for STEMM India initiative met on 13-14<sup>th</sup> December 2018 at Hyderabad. 56 proposals were considered and 35 were recommended for support along with review of 26 Project Completion Reports/Progress Reports.

**xxvii.** Mobile Science Exhibition (*Vigyan Ka Jantar Mantar*) was launched in Haryana on 1<sup>st</sup> December 2018 for creating awareness among children & people at large.

a. New Projects supported (Theme wise):

- Science Motivation/ Awareness/ exhibition/fair - 17 Nos
- State Level Children's Science Congress- 02Nos
- S&T Communication Training in Folk Media - 03 Nos
- Science Media & Communication Research - 01 No
- Community Radio - 01 No
- Mission Eco Next - 03 Nos

**xxviii.** The second meeting (Sensitization Workshop) under the banner of DST's Swachhata Action Plan 2018-19 with the thrust area of "Biomedical and Electronic Waste Management" was organized at KL University, Vijayawada on 10-11<sup>th</sup> December, 2018.

More than 40 Researchers including Scientists from various central labs, professors from IITs, NITs, Central and State Universities attended the two day program and a total of 33 proposals were presented over two days. The experts had detailed discussions with the principal investigators and provided them with valuable feedback to further refine the proposal and increase the value proposition.

**xxix.** DST participated in the 24<sup>th</sup> Session of the Conference of the Parties (CoP-24) to the United Nations Framework Convention on Climate Change (UNFCCC) Katowice, Poland 3– 7<sup>th</sup> December.

Two side events on "Technology Need Assessment and Innovations for Managing Climate Change" and "Mountain Ecosystems- Himalayan Region" were anchored by DST as the line Ministry / Department responsible for their implementation.

**xxx.** 22<sup>nd</sup> FIST Advisory Board (FISTAB) Meeting was held on 8 December, 2018 at Indian Academy of Sciences, Bangalore. Out of 777 proposal received this year, FISTAB finally recommended 145 proposals (L0-58 , Level I-82, Level II-9 and

Level III-01) this year through the available mechanism of the FIST Program to consider financial support at a total budget of about Rs 182.23Crores for 5 years.

**xxxii.** In December, the scholarship releases were made to 170 scholars.

The documents of ongoing and fresh scholars for continuation of scholarship received online were evaluated with the help from back end at ARCI, Gurgaon. Subsequently, scholarship release files were processed for financial approval of scholars of 2014, 2015, 2016 and 2017 batches.

BSc 1<sup>st</sup> year documents of 9043 provisionally selected scholars of 2017 batch (result announced in May 2018) were evaluated and still in progress.

Technical, scientific and administrative queries of scholars were addressed on every Monday. In December 2018, queries were addressed and solutions were provided for 130 scholars who visited DST.

**xxxiii.** Results of 11<sup>th</sup> advertisement of INSPIRE Fellowship declared in December 2018. Out of total 2479 received applications, 417 applications have been rejected, 2058 applications are accepted and 4 in abeyance. Out of 2058 accepted applications, Provisional Offer issued to 1570 applicants who are yet to gain admission into Ph.D. The remaining 488 accepted applicants who have already gained admission into Ph.D. at the time of making application are presently being evaluated at Level-2 by the Domain Experts.

**xxxiiii.** Total **725** (528 ongoing and 197 New) INSPIRE Fellows were supported during December 2018.

**xxxv.** Total 70 Fellows have been upgraded from JRF to SRF.

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