

Department of Science & Technology

Important Developments/Achievements

August, 2018

- (i) **WAYU (Wind Augmentation and purifying Unit)** was inaugurated by Hon'ble Union Minister **Dr. Harsh Vardhan** at ITO intersection and Mukarba Chowk **on 25th September, 2018**. WAYU helps in reducing ambient air pollution levels ejected by vehicles at places, which have high concentration of pollutants. WAYU can reduce PM10, PM2.5, CO, VOCs, HC emitted in the atmosphere. The cost of device is Rs.60,000 per device with a maintenance cost of Rs.1500 per month.
- (ii) The Make Tomorrow for Innovation Generation a PPP Initiative between Department of Science & Technology, Intel Technologies and Indo-US S&T Forum, was launched during 26-28 September, 2018. The programme encouraged the school children of the age group of 14-17 to make innovative prototypes using the kits given to them. 52 children from four northern states including Himachal Pradesh, Jammu & Kashmir, Punjab and Uttarakhand participated in this event along with their guide teachers and mentors.
- (iii) Under Augmenting Writing Skills for Articulating Research (AWSAR), Department of Science and Technology (DST) organised four workshops for capacity building and handholding of PhD Scholars and Post-Doctoral Fellows (PDFs) working in R&D Universities and Academic Institutions at Uttarakhand State Council for Science and Technology (UCOST), Dehradun; Indian Association for the Cultivation of Science (IACS), Kolkata; Anna University, Chennai and Indian Institute of Science Education and Research, Mohali.
- (iv) IIT Kanpur along with MNIT Jaipur and MBM College of Engg, Jodhpur have set up a pilot plant of 10 KLD capacity comprising sensitive photo catalytic filters for visible light catalysis and carbon nano-mat fiber filter for treatment of the effluent of Common Effluent Treatment Plant, in Jodhpur.
- (v) A research programme on Optimal Operation of Water Distribution Networks has resulted in development and deployment of a low power wireless sensor and actuator network for monitoring and control of water distribution networks in IIT Madras. The network consists of low cost water level measurement modules (remote node), relay nodes, gateway nodes and actuator nodes. This model will now be replicated in multi village and industrial township schemes.
- (vi) A brainstorming session on "Guidelines on Ethical Practices in Bibliometrics" was held at University of Hyderabad, Hyderabad in September, 2018 with various stakeholders and experts to discuss various issues including strategies to combat menace of Predatory journals affecting the Indian scientific research publications. This is the first initiative of its kind being channelized by the largest extramural R&D funding agency, i.e. DST. The outcome of the BSS led to many important suggestions such as formation of a regulatory body (representing a consortia of various stakeholders) on good practices in

research publishing, alternative mechanism of publishing research papers by public research organizations, use of advanced technology etc.

- (vii) Expert Committee meeting for Technological Interventions for Tribal Empowerment(TITE) under ‘Tribal Sub Plan(TSP)’ held on 26-28th September, 2018 at Nagaland Science and Technology Council, Kohima (Dimapur Centre). 62 new projects considered for funding, 4 ongoing and 11 completed projects were reviewed during the meeting.
- (viii) The Joy of Science Mobile Lab and Exploratory was inaugurated on 25 Sep 2018 at Vikram A. Sarabhai Community Science Centre (VASCSC), Ahmedabad in presence of several dignitaries, teachers, media persons and the VASCSC team. This mobile lab facility is designed to provide excitement and spark in the schools, contributing to greater depth of understanding of science.
- (ix) An “**Indo-UK collaborative technical workshop**” on joint clean energy centres was held during **18th-20th September 2018 at Loughborough, United Kingdom** which was attended by 54 participants out of which 31 from India & 23 from UK representing 20 institutions from India & 23 institutions from UK. The three joint virtual centers supported by India & UK disseminated their strategy to achieve advanced hybrid microgrids capable of operation in grid connected & isolated mode with seamless mode transition. The outcome of five Smart Energy Grids and Energy Storage (SEGES) projects supported jointly by India & UK was discussed and disseminated for exploring technology transfer and also to find new opportunities/avenues of collaboration towards development/deployment of clean energy technologies.
- (x) Call for inviting letter of intents (LOIs) on Carbon capture and Storage under Mission Innovation received 89 (LOIs) from premier institutions and organisations across the country.
- (xi) Representation from National Good Laboratory Practice Compliance Monitoring Authority (NGCMA), India participated as a member in the on site Evaluation of Thailand GLP Compliance Monitoring Authority (Bureau of Laboratory Quality Standards, Department of Medical Sciences) alongwith representatives from the Netherlands and Belgium during September 3-7, 2018 at Bangkok, Thailand.
- (xii) A National Workshop on GLP under the ‘National GLP Series’ was organized on September 24, 2018 at Translational Health Science and Technology Institute, Faridabad.
- (xiii) The 1st Meeting of the Reconstituted Mission Steering Committee (MSC) of Climate Change Programme under the Chairmanship of Secretary, DST was held on 20th September, 2018 at Technology Bhavan, DST, New Delhi. The Committee recommended the proposal of “*Strengthening the Existing Center of Excellence in Climate Change: Divecha Center for Climate Change, Bangalore*” for support for a period of 5 years.

- (xiv) Fourth Meeting of Expert Advisory Group for Biomedical Device and Technology Development (BDTD) Programme and Group Monitoring Workshop (GMW) was organized to consider deferred proposals and review the progress of the on-going projects funded under the programme of BDTD of TDT Division of DST during 14th & 15th September, 2018 at Anna University, Chennai - 600 025.
- (xv) The first introductory training course on 'Nanofabrication technology', supported by the Department of Science & Technology was successfully organized during September 10-28, 2018 at the Centre for Nano Science and Engineering (CeNSE), Indian Institute of Science, Bangalore. The course was attended by 24 participants, mostly faculty members, senior scientists and research scholars from Sri Lanka, Bangladesh, Bhutan and Nepal.
- (xvi) Long term core support was sanctioned to two organizations under the scheme "Technological Advancement for Rural Areas (TARA)" - **Society for Environment & Development (SED), Delhi** and VIKSAT, Nehru Foundation for Development, Ahmedabad, Gujarat. SED will implement activities in Kota, Rajasthan mainly for the development of value chain of Flax and Soya crops from cultivation to post harvesting and also for the development of value added products through adaptive R&D and their marketing. Whereas, VIKSAT, Ahmedabad will implement core activities in Bhiloda, (Aravalli Dist.), Vijaynagar Block (Sabarkantha Dist.) & Bhuj (Kutch) covering 15 tribal villages in Gujarat mainly under integrated farming system for better livelihood (Agriculture/ Horticulture/ Livestock).
- (xvii) An India-Egypt Bilateral expert Meeting on 'Agriculture Biotechnology' was organized at Shillong, Meghalaya Egypt during September 10-12, 2018 under the India Egypt programme of Cooperation in S&T. Prof. N. K. Chrungoo, North Eastern Hill University, Shillong coordinated the expert meeting from India. On Egyptian side the meeting was coordinated by Prof. Moemen Hanafy, National Research Centre, Cairo, Egypt. About 20 experts from various part of India and 4 experts from Egypt participated in the workshop. This workshop will provide platform for future Indo-Egypt collaborative research projects in the field of 'Agriculture Biotechnology'.
- (xviii) An Indo-Italian Workshop on 'Renewable energy technologies at the crossroads of "glocal" energy grids' was held at University of Camerino (UNICAM), Italy during 17th to 19th September 2018. The workshop was focused on the multiple aspects of energy, not only related to electrical production but also in other aspects like social security.
- (xix) Pursuant to India becoming a full member of Shanghai Cooperation Organization (SCO) and joining the SCO Agreement on Scientific and Technological Cooperation, Department of Science and Technology Officer participated in the SCO S&T Working Group meeting on 11-12 September 2018 in Beijing, China. The Meeting finalised the draft Plan of practical measures ("Roadmap") on Cooperation of Scientific Research Institutions of the SCO Member States for 2019-2020 within the framework of SCO S&T Agreement.
- (xx) ASEAN-India Grass-root Innovation Forum event was organized in Jakarta, Indonesia during 27-30 September 2018. The event included Exhibition of Innovations,

Innovation Competition (Students and Grass-root Innovators) and a workshop on Innovation ecosystem in India and ASEAN. About 150 Innovators / professional from India and ASEAN Member States participated in the 4 days event. 40 Innovations were displayed and exhibited at the event. Six Innovations were awarded and selected for taking further for developing products/ services. Two Innovators from India won second prizes in each category of Students and Grass-root Innovators.
