

## List of New projects supported during F.Y. 2017-18: Water Technology Initiative

| S.No. | File No. and sanction date        | Title   | PI Name & Institution Address  | Duration (in months) | Total Cost (in Rs.)        |
|-------|-----------------------------------|---|--|----------------------|----------------------------|
| 1.    | DST/TM/WTI/2K16/11<br>29.05.2017  | Novel biological treatment process for water recycle-reuse and energy conservation in refinery industry   | Dr. Kannan Pakshirajan, IIT Guwahati Guwahati.   | 36 Months            | 42,75,300                  |
| 2.    | DST/TM/WTI/2K16/30<br>28.04.2017  | Thermal Treatment & Solidification of Arsenic & Iron Sludge Generated from Arsenic & Iron Removal Plants : Their Safe Disposal & Value Added Products                   | Dr. Biswajit Ruj CSIR-Central Mechanical Engineering Research Institute Durgapur.              | 36 months            | 26,93,200                  |
| 3.    | DST/TM/WTI/2K16/50<br>28.04.2017  | Low cost technology for waste water treatment for domestic and industrial applications  | Dr. Soumitra Satapathi IIT Roorkee.  | 36 months            | 35,00,000                  |
| 4.    | DST/TM/WTI/2K16/127<br>28.04.2017 | Development of an Innovative Bioprocess for treatment and Recycling of Domestic and Industrial Wastewater.  | Dr .K.MurugesanPeriyar University Salem Tamil Nadu.  | 36 Months            | 48,60,400                  |
| 5.    | DST/TM/WTI/2K16/258<br>28.04.2017 | Removal of Heavy Metal from Wastewater: An Alternative Green Sonochemical Process Optimization and Pathway Studies  | Dr. S.Anandan National Institute of Technology Trichy Tamil Nadu.                              | 36 Months.           | 31,49,520                  |
| 6.    | DST/TM/WTI/2K16/276<br>01.05.2017 | Evaluation and optimization of uranium removal from groundwater by reductive precipitation with the H <sub>2</sub> -based membrane biofilm reactor                      | Dr. Ekramul Islam University of Kalyani West Bengal.   | 36 months            | 50,61,600                  |
| 7.    | DST/TM/WTI/2K16/122<br>28.04.2017 | Surface Modified Magnetic Nanoparticles for Wastewater Treatment  | Dr. Debanjan Guin University of Rajasthan Jaipur.  | 36 Months.           | 23,39,800                  |
| 8.    | DST/TM/WTI/2K16/305<br>01.05.2017 | Extraction of Water from Air at Zero Energy Expenditure to Mitigate Water and Energy Crisis in India: A Socio-technical perspective to develop 'ZERO EXTRACT CORPORATES | Dr. S. Senthil Kumar National College Tiruchirappalli Tamil Nadu.                              | 24 months            | 20,53,000(D ST share only) |
| 9.    | DST/TM/WTI/2K16/232<br>08.05.2017 | Development of de-fluoridation kit for domestic drinking water  | Dr. Sanjeev Gupta Grasim Industries Limited Bharuch Gujarat & Dr. Madhu Agarwal, MNIT, Jaipur. | 36 Months            | 28,70,560                  |

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| 10. | DST/TM/WTI/2K16/263<br>08.05.2017 (C)<br>12.09.2017 (G) | Development of Intelligent Embedded E-Sense System For Online and Offline Detection of Heavy Metals (Arsenic,Iron etc) in Ground Water for quality Assessment.                            | Dr. Saikrishna Vaddadi, CSIR-Central Electronics Engineering Research Institute (CSIR-CEERI), Philani, Rajasthan.      | 36 Months  | 52,97,500 |
| 11. | DST/TM/WTI/2K16/241<br>08.05.2017                       | Development of house hold defluoridation unit for safe drinking water in fluoride endemic regions.  | Dr. M G Sujana CSIR-Institute of Minerals and Materials Technology Bhubaneswar.  | 24 Months  | 75,67,027 |
| 12. | DST/TM/WTI/2K16/284<br>08.05.2017                       | Groundwater characterization along the coastal plain of Northern Malabar Kerala using isotope systematics   | Dr. Girish Gopinath Centre for Water Resources Development and Management Calicut Kerala.                              | 36 Months  | 31,88,907 |
| 13. | DST/TM/WTI/2K16/171<br>08.05.2017                       | Predictive approach for early detection of contamination zone in a intermittent and continuous water supply systems and its health impacts  | Dr. Pawan K. Labhasetwar CSIR-National Environmental Engineering Research Institute (CSIR-NEERI) Nagpur.               | 36 months  | 77,56,442 |
| 14. | DST/TM/WTI/2K16/88<br>08.05.2017                        | Assessment of Hydrological and Physical status of Traditional Water Harvesting Structures using Geo-spatial technologies and measures for restoration and rejuvenation in Karnataka State | Dr. U.T Vijay Karnataka State Council for Science & Technology(KSCST) Indian Institute of Science Bengaluru Karnataka. | 24 Months  | 48,29,500 |
| 15. | DST/TM/WTI/2K16/238<br>08.05.2017                       | Pilot Plant Demonstration of Nitrate Removal for Provision of Safe Drinking Water at Domestic Household and Community Level Using Chitosan Derivative                                     | Dr. A. Sowmya SRM University Kattankulathur Kancheepuram District Tamil Nadu.  | 36 Months. | 31,78,120 |
| 16. | DST/TM/WTI/2K16/252<br>09.05.2017                       | Structure Based Design of Aromatic Biosensors for Water Quality Monitoring  | Dr. Ruchi Anand Indian Institute of Technology Mumbai Maharashtra  | 36 Months  | 45,00,000 |
| 17. | DST/TM/WTI/2K16/66<br>09.05.2017                        | Development of Smart Materials for Rapid and Sustainable Water Treatment  | Dr. Sangeeta Tiwari Amity University Noida Uttar Pradesh.  | 36 Months  | 30,54,480 |
| 18. | DST/TM/WTI/2K16/188<br>09.05.2017                       | Water Quality Analysis and Mapping for Dimapur and Kohima District  | Dr. Ditho Kathiry Nagaland Science & Technology Council Nagaland.  | 36 Months  | 91,45,760 |

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| 19. | DST/TM/WTI/2K16/46<br>09.05.2017                            | Addressing water security of an urban settlement through multisource modeling   | Mr. Tency Baetens<br>Auroville Centre for Scientific Research(CSR)<br>Pondicherry.                                | 36<br>Months | 87,76,000 |
| 20. | DST/TM/WTI/2K16/224<br>09.05.2017                           | Nanoskinned coir matrix for the removal of biological contaminants from water   | Dr. K. Usha Mahatma<br>Gandhi University<br>Kottayam Kerala.  | 36<br>months | 31,09,600 |
| 21. | DST/TM/WTI/2K16/266<br>09.05.2017                           | Modelling for Enhancing Water Quality in Uttarakhand using Geospatial Technology  | Dr. D.P. Uniyal<br>Uttarakhand State Council for Science and Technology (UCOST) Govt. of Uttarakhand<br>Dehradun. | 36 Months    | 43,16,800 |
| 22. | DST/TM/WTI/2K16/98<br>09.05.2017                            | Design and Fabrication of Prefabricated NFRP Module for Decentralized Waste Water Treatment Systems (DEWATS)  | Dr. Syed Amanulla<br>Centre for Biopolymer Science & Technology (CBPST) Kochi.                                    | 36<br>Months | 42,65,305 |
| 23. | DST/TM/WTI/2K16/10<br>09.05.2017                            | Real-time Monitoring of Water Quality in the Lower Ganga River at Daily Time-scale using Remote Sensing Observations  | Dr. Bhabagrahi Sahoo<br>Indian Institute of Technology Kharagpur<br>Kharagpur.                                    | 36<br>months | 43,21,600 |
| 24. | DST/TM/WTI/2K16/43<br>09.05.2017                            | Use of Bacteriophages to ameliorate the hygiene conditions of secondary treated waste waters  | Dr. Z. Bhathena<br>Bhavan's College<br>Mumbai.  | 36<br>Months | 39,91,800 |
| 25. | DST/TM/WTI/2K16/91<br>11.05.2017                            | Arsenic immobilization by in-situ synthesis of iron-based adsorbent under reducing environment within porous media  | Dr. Trishikhi Raychoudhury<br>Indian Institute of Technology Patna (IITP) Bihar.                                  | 36<br>months | 39,36,000 |
| 26. | DST/TM/WTI/2K16/237<br>08.05.2017 C<br>11.05.2017 G         | A Novel Tio <sub>2</sub> coated Aluminum Electrode (Tio/Al) for textile dyeing wastewater using real time controlled multichannel electrocoagulation process  | Dr. P. Jegathambal and Dr. K Parameswari,<br>Karunya University,<br>Coimbatore, Tamil Nadu.                       | 36<br>months | 37,09,600 |
| 27. | DST/TM/WTI/2K16/193<br>11.05.2017                           | Optimization of disinfection process for secondary treated sewage by hybrid disinfection  | Dr. A. B. Gupta<br>Malaviya National Institute of Technology Jaipur Rajasthan.                                    | 24<br>Months | 42,64,440 |
| 28. | DST/TM/WTI/2K16/20<br>A- (C) 11.05.2017<br>B (G) 22.06.2017 | Removal of Pharmaceutical Derivatives present in waste water by advanced oxidation integrating with Microstructure and rotating packed bed of grapheme(G) Graphene oxide (GO)/GO-Metal Nanocomposites | Dr. Subrata Kumar Majumdar,<br>Indian Institute of Technology, Guwahati, Assam and Dr. Papita Das,                | 36<br>Months | 45,53,105 |

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|     |                                     |  | Jadavpur University, Kolkata.  |            |                              |
| 29. | DST/TM/WTI/2K17/91/ Consultation    | Evolving sustainable solutions for critical drinking water issues in India   | Dr. N. Shantha Mohan, National Institute of Advanced Studies (NIAS), Bengaluru       |            | 58,00,00                     |
| 30. | DST/TM/WTI/2K16/245 12.05.2017      | Sustainable Grey Water (GW) treatment technology for community buildings.  | Dr. Jitendra K. Pandey, University of Petroleum and Energy Studies (UPES), Dehradun. | 36 Months  | 1,25,15,000                  |
| 31. | DST/TM/WTI/2K16/154 16.05.2017      | Biological Nutrient Removal from Wastewater in Modified DEWATS System for Reduced Land and Energy Footprints                 | Dr. B. Manoj Kumar, Sri Jayachamarajendra College of Engineering, Mysuru, Karnataka. | 36 Months  | 49,40,000                    |
| 32. | DST/TM/WTI/2K16/95 15.05.2017 C & G | Decentralization water treatment for removal of arsenic, fluoride and mercury from drinking water                            | Dr. Robin Kumar Dutta, Tezpur University, Tezpur, Assam.                             | 36 Months  | 10,05,200                    |
| 33. | DST/TM/WTI/2K16/224 09.05.2017      | Nanoskinned coir matrix for the removal of biological contaminants from water  | Dr. K. Usha, Mahatma Gandhi University Kottayam, Kerala                              | 36 Months  | 31,09,600                    |
| 34. | DST/TM/WTI/2K16/39 31.05.2017       | Promoting community health by addressing incidence waterborne diseases in select village on Bihar                            | Dr. Lalit Mohan Sharma S M Sehgal Foundation Gurgaon Haryana.                        | 36 months  | 1,23,58,000 (DST Share only) |
| 35. | DST/TM/WTI/2K16/248 07.06.2017      | Study of pure and ion embedded iron oxide nanostructure for sensing and removal of hazardous wastes from water               | Dr. G.N. Dar University of Kashmir Hazratbal Srinagar Jammu & Kashmir.               | 36 months  | 31,04,420                    |
| 36. | DST/TM/WTI/2K16/90 07.06.2017       | Greywater treatment and reuse by combined sequencing batch reactor and solar photocatalytic reactor                          | Dr. Remya Neelancherry Indian Institute of Technology Bhubaneswar.                   | 36 Months. | 21,03,795                    |
| 37. | DST/TM/WTI/2K16/265 12.06.2017      | Reclamation of produced water generated from oil refineries using Nano composites  | Dr. Monika Joshi and Dr. Subhasha Nigam Amity University Noida. Uttar Pradesh.       | 24 Months  | 22,88,000                    |
| 38. | DST/TM/WTI/2K16/207 13.06.2017      | Developing rapid sensitive high throughput user-friendly kit for routine detection of androgens and antiandrogens in water." | Dr. Gargi Bagchi Bhattacharjee Amity University Gurgaon Haryana.                     | 36 Months  | 32,20,400                    |

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| 39. | DST/TM/WTI/2K16/264<br>21.06.2017 C & G       | Development of pH based portable arsenic biosensor by exploiting arsenic oxidizing bacteria   | Dr. Angana Sarkar and Dr. Sougata Kumar Kar, National Institute of Technology, Rourkela, Odisha   | 36 Months | 44,73,200   |
| 40. | DST/TM/WTI/2K16/103<br>23.06.2017             | Soft Computing framework based Integrated Multi Sensor Array for Water Quality Assessment: Targeting Fluoride as major Parameter  | Dr. Karunesh Kumar Gupta Birla Institute of Technology & Science Pilani.                          | 24 months | 38,70,000   |
| 41. | DST/TM/WTI/2K16/306(a)<br>10.07.2017 C & G    | Mitigation of water problems in Ausa town, Latur: Wastewater management, Gaothan lake rejuvenation, Potable water production through desalination of lake water and Training of residents in matters of sanitation and water conservation | Dr. Dilip Dhondu Sariode, Institute of chemical Technology, Mumbai                                | 24 months | 1,98,47,000 |
| 42. | DST/TM/WTI/2K16/78<br>18.07.2017              | Development of sludge free, clean, green and cost effectively technology at pilot scale for treatment of textile & dyeing Industry effluent   | Dr. Nupur Bahadur, The Energy and Resources Institute (TERI), IHC complex, Lodhi Road, New Delhi. | 36 Months | 39,80,000   |
| 43. | DST/TM/WTI/2K16/229<br>23.09.2016             | Intervention of artificial glacier technology to solve water crises due to climate change in Ladakh Trans-Himalayan region  | Mr. Chhering Tandup Institute of Mountain Environment University of Jammu Bhadarwah.              | 24 months | 47,52,000   |
| 44. | DST/TM/WTI/2K16/222<br>24.07.2017             | Development of a dual power portable RO plant   | Dr. B. Subramanyam SASTRA University Thanjavur Tamilnadu.   | 24 Months | 16,04,900   |
| 45. | DST/TM/WTI/2K16/164<br>08.08.2017             | Desalination through waste heat recovery from solar PV operated VCR system  | Dr. R. Velraj Anna University Chennai.  | 36 months | 35,35,000   |
| 46. | DST/TM/INDO-UK/2K17/55<br>C & G 17.02.2018    | Secular changes and Remediation of groundwater arsenic in the Ganga River Basin   | Dr. Narayan C. Ghosh, National Institute of Hydrology, Roorkee.                                   | 36 months | 2,91,46,000 |
| 47. | DST/TM/INDO-UK/2K17/30<br>C & G<br>17.02.2018 | The development and implementation of sensors and treatment technologies for freshwater systems in India  | Dr. Tapan K Dutta, Bose Institute, Kolkata.   | 36 Months | 3,42,27,700 |
| 48. | DST/TM/INDO-UK/2K17/66<br>C & G<br>17.02.2018 | Fate and Management of Emerging Contaminants  | Dr. Ligy Philip, Indian Institute of Technology Madras, Chennai                                   | 36 Months | 3,05,65,257 |

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| 49. | DST/TM/INDO-UK/2K17/46<br>C & G<br>17.02.2018    | AMR Pollutants: interactive studies and novel sensor technologies  | Dr. T. Renganathan, Indian Institute of Technology Madras (IITM), Chennai.                     | 36 Months | 3,22,46,400 |
| 50. | DST/TM/INDO-UK/2K17/47<br>C & G<br>16.02.2018    | Innovation low-cost optical sensor platform for water quality monitoring   | Dr. Sundarajan Asokan, Indian Institute of Science, Bengaluru.                                 | 36 Months | 1,09,72,000 |
| 51. | DST/TM/INDO-UK/2K17/64<br>C & G<br>17.02.2018    | Rehabilitation of vibro infested waters of vembanAd Lake: pollution and solution (REVIVAL)   | Dr. Anas Abdulaziz, CSIR-National Institute of Oceanography, Kochi.                            | 36 Months | 2,51,30,000 |
| 52. | DST/TM/INDO-UK/2K17/52<br>C & G<br>17.02.2018    | Impact of Rainwater Harvesting on Groundwater Quality in India with specific Referance to Fluroide and Micropollutants   | Dr. Anupma Sharma, National Institute of Hydrology, Roorkee.                                   | 36 Months | 2,55,88,400 |
| 53. | DST/TM/INDO-UK/2K17/74<br>17.02.2018             | PATHWAYS & evolution of pollutants: interaction between physical controlling effects, microbial community composition and pollutants biodegradation rates                | Dr. Kapil Gupta, Indian Institute of Technology, Bombay.<br><br>Email: kgupta@civil.iitb.ac.in | 36 Months | 46,10,400   |
| 54. | DST/TM/WTI/DD/2K17/39<br>(A) & (B)<br>15.03.2018 | New Strategies for optimal operation of water supply schemes by use of Scheduling and Decentralization Infrastructure  | Dr. Pradip Kalbar, IIT-Bombay<br>Dr. Sridharakumar Narasimhan, IIT Madras.                     | 36 Months | 2,68,19,410 |
| 55. | DST/TM/WTI/DD/2K17/62<br>20.03.2018              | Urban Flood Model for Bangalore  | Prof. M.S Mohan Kumar, Institute of Science, Bangalore.  | 36 Months | 5,72,41,500 |
| 56. | DST/TM/WTI/DD/2K17/06<br>28.03.2018              | Off the grid sensor controlled irrigation using bank filtration technology   | Ms. Kavita Patil<br>The Energy and Resources Institute (TERI), Goa.                            | 36 Months | 2,02,87,828 |
| 57. | DST/TM/WTI/DD/2K17/04<br>28.03.2018              | Agronomic Integration of Technologies for Productivity Management and Optimal Water Use in Wetlands of Cauvery River Delta   | Dr. RM.Kathiresan<br>Annamalai University, Chennai.  | 36 Months | 2,09,87,376 |
| 58. | DST/TM/WTI/2K16/124<br>28.03.2018                | Assessment on niche specific oxygenic photoautotrophic organisms for evaluation of Bhagirathi-Hooghly River basin water quality a biotic index based management proposal | Dr. Punyasloke Bhadury (IISERK).   | 36 Months | 43,03,800   |