No. DSIR/MS/2017/03
Government of India
Ministry of Science & Technology
Department of Scientific & Industrial Research
MONTHLY SUMMARY FOR THE CABINET
(For the month of **March, 2017**)
(Part-I Unclassified)

Ministry / Department : **Department of Scientific and Industrial Research (DSIR)**

MAJOR ACHIEVEMENTS DURING THE MONTH OF MARCH, 2017:

DEPARTMENTAL ACTIVITIES

1. Industrial R&D Promotion Programme

Recognition/ Registration and renewal of In-house R&D in Industry

- 36 in-house R&D units of industries were granted recognition as well as registration certificates.

Scientific and Industrial Research Organization (SIROs)
Recognition/ Registration and Renewal of SIROs

- 01 SIRO was granted recognition as well as registration certificate.

Public Funded Research Institute (PFRIs)
Registration and Renewal of PFRIs

- 01 PFRI was granted registration certificate.
- 08 PFRIs were granted renewal of registration certificates.

Fiscal Incentives for Scientific Research

- 12 industries were approved for issuance of form 3 CM under Section 35(2AB) of IT Act under weighted tax deduction.
- 56 reports in form 3CL submitted to CCIT under Section 35(2AB) of IT Act for weighted tax deduction on industrial R&D involving a total amount of Rs.671406.70 lakhs.

2. Promoting Innovations in Individuals, Start-ups and MSMEs (PRISM)

- The projects on 'Efficient composting of Bio-degradable wastes through Mesophili Aerobic Composting (MRC) continuous method at household & community levels' supported under PRISM Scheme has been successfully completed.

AUTONOMOUS BODIES

1. Council of Scientific & Industrial Research (CSIR)

1.1 CSIR-IICT Developed Technique to Separate Harmful Chemicals From Industrial Waste Water

CSIR-IICT, Hyderabad has developed a simple method to recover usable water from industrial waste. The technique, using a high flux, low fouling nanofiltration membrane, ensures the separation of harmful chlorides and cyanide from the contaminated waters in certain chemical industries. The membrane is economical and the process can substitute the regularly used reverse osmosis for specific applications. It was demonstrated in Tata Steel's Jamshedpur plant

1.2 CSIR-CFTRI Developed 'Smart Cart' (an energy-efficient solar-powered modular Cart)

CSIR-CFTRI, Mysuru has developed 'Smart Cart', an energy-efficient solar-powered modular street vending cart. In an effort to empower street food vendors and giving strength to the Swachh Bharat mission, the 'Smart Cart' has been developed to ensure enhanced hygiene in the street food arena with quality mobile infrastructure, which can be adopted pan-India for street food vending and preparation with wheels. The cart has ease of mobility and option of towing.

1.3 CSIR-NPL Dedicated to the Nation the first "Pristine Air-Quality Monitoring Station at Palampur

CSIR-NPL, New Delhi has established an atmospheric monitoring station in the campus of CSIR-IHBT, Palampur (H.P.) at an altitude of 1391 m for generating the base data for atmospheric trace species and properties to serve as reference for comparison of polluted atmosphere in India. At this station, CSIR-NPL has installed state of art air monitoring system, greenhouse gas measurement system and Raman Lidar. A number of parameters like CO, NO, NO2, NH_3, SO_2, etc. besides CO_2 & CH_4 gases are being currently monitored at this station which is also equipped with Automated Weather Station (AWS) for measurement of weather parameters. This station has been dedicated to nation.

1.4 CSIR -NIO Developed Robotic Platform to Track Oceanic Processes

CSIR-NIO, Goa has designed a robotic platform called Seabed Resident Event Profiler (SREP) to track oceanic processes. It can be stationed at any depth down to 200m along the Indian coast. The SREP is particularly targeted at studies related to the monsoon, global climate and upwelling. This robot records water column information as programmed during every profile four times a day stores the data and communicates the same to users.

1.5 CSIR- IICT Developed Membrane to Reduce Cost of Dialysis

CSIR-IICT, Hyderabad have developed a unique membrane that promises to reduce the cost of dialysis by 50 per cent. The thin hollow fibre membrane developed allows selective removal of metabolic toxins, such as urea and

creatinine. At present, the dialysis membrane modules are imported.

1.6 CSIR-CFTRI Developed Rice Mix Milk and Foot Operated Papad Press Machine

CSIR-CFTRI, Mysuru has developed 'Rice mix Milk' a convenience food with long shelf life of six months. The developed process is meant for addressing malnutrition in children aged between 6 months and 6 years. Also a foot operated papad making machine has been developed. Using the foot-operated press machine, 400 papads can be made in a hour. The technology can also be used to make golgappas and chapatis.

1.7 CSIR-NIO : Seafood with Harmful Microplastics

CSIR-NIO, Goa has found high concentrations of microplastics containing chemical pollutants, in fish tissue, mollusks (squids, mussels, etc.) and sea birds off the Galgibaga and Keri beaches. When consumed by fish, microplastics don't settle as sediments but become a part of their biomass, which when consumed by humans, can have an adverse impact on health.

1.8 CSIR- NIO : New Canyon System found near Kovvada, Andhra Pradesh

CSIR-NIO, Goa has discovered three new canyons, forming a major canyon system in the depths of the Bay of Bengal, close to Kovvada in Srikakulam district, Andhra Pradesh. CSIR-NIO has mapped the ocean floor between Visakhapatnam and Srikakulam by sending over 32 high density beams to the depths of the sea. The canyon could be rich in hydrocarbons

1.9 Research Vessel (RV) Sindu Sankalp completes 100 Expeditions

Research Vessel (RV) Sindhu Sankalp, the flagship research vessel of CSIR-NIO, Goa has completed a historic 100 oceanographic successful expeditions. The vessel, which was originally built as fishing training vessel (FV ChisioMaru) by Japanese Government in 1989, was procured by CSIR-NIO from Japan in 2008. It underwent extensive refit and modernisation to become one of the state-of-the-art ocean-going research vessels.

1.10 CSIR Intellectual Property

The Patent position for this month is given below:

Patents Filed		**Patents Granted**	
India	Abroad	India	Abroad
26	26	18	23

1.11 Significant Events

(a) Conferences, Workshops Organized

(i) Dr. Harsh Vardhan, Hon'ble Minister for Science & Technology and Earth Sciences inaugurated fourth 3R International Scientific Conference on 'Material Cycles and Waste Management' organized by CSIR-IIP, Dehradun. He said that India has been a key player in promoting the efficient waste management system in the world. "Prime Minister Narendra

Modi has played a key role at the International platform to develop the sense of waste management and material cycles. Now we need a directional change and positive approach for making a bigger impact", he further added. The conference focused on promoting techniques of the waste management and spread the concept of Reduce, Reuse and Recycle (3R) principles.

(ii) CSIR-NEERI, Nagpur has organized second National Workshop on 'Solar Energy Utilization (SUN)' for Sustainable Development for two days.

(iii) CSIR-NEIST, Jorhat organized a one day training programme on 'Cultivation of Aromatic Plant and distillation technology under the CSIR-800 programme. About 40 farmers/villagers/beneficiaries from different parts of Arunachal Pradesh and North Lakhimpur, Assam attended the programme.

(b) Agreements/Memorandum of Understanding Signed

(i) CSIR-CLRI, Chennai signed an MoU with the Leather Industries Development Corporation of Andhra Pradesh (LIDAP) for developing leather and affiliated industries in the State.

(ii) CSIR-NAL, Bengaluru signed an agreement with Mishra Dhatu Nigam Limited (MIDHANI), Bengaluru for processing Nickel – Titanium (NiTi) Shape Mercury Alloys on exclusive basis for engineering and bio-medical application.

(iii) CSIR-NCL, Pune has signed patent licensing agreement with M/s Ahammune Biosciences Pvt. Ltd., for the vitiligo drug development.

(iv) CSIR-NEERI, Nagpur has signed an MoU with: (i)Bharat Heavy Electricals Limited (BHEL) for joint working on projects related to water and waste water treatment in the municipal segment; and (ii) New Delhi Municipal corporation (NDMC) for the plans to install twelve STPs (Sewage Treatment Plants) having a capacity of 0.93 MGD.

(c) Honour & Awards

(i) Dr. R.A. Mashelkar, Former DG, CSIR has been appointed in the Board of Directors of ACCESS Health International.

(ii) Dr. Lalji Singh, Former Director, CSIR-CCMB, Hyderabad has been selected for the award of SERB Distinguished Fellow given by the Science and Engineering Research Board (SERB).

(iii) CSIR-CSIO, Chandigarh has received National Research Development Corporation (NRDC) Award for its innovation for developing on Earthquake-Warning system.

2. Consultancy Development Centre (CDC)

2.1 Content Development for the Course-Certificate Programme in Technology Management: The Contract agreement has been signed with M-Power Energy India (P) Ltd. (MEIL).

2.2 Software feature enhancement of CDC website and conversion of same in Hindi : The project has been awarded to V2Web Hosting Pvt. Ltd.

2.3 Study on "Status of Languishing Handicrafts in Clusters of Agra & Barabanki in the state of Uttar Pradesh (UP) and strategy for the revival by Development Commissioner (Handicrafts), Ministry of Textile : Presentation was made to Commissioner of DC Handicrafts on the Draft Report, which has been broadly accepted. Inputs received on the Report would be incorporated in the Final Report.

2.4 CDC Journal *'Consulting Ahead'*, Vol.:11, Issue: 1 has been brought out during this month.

PUBLIC SECTOR ENTERPRISES

1. National Research Development Corporation (NRDC*)*

- National Research Development Corporation (NRDC) has been assigned four technologies by three CSIR Labs. The details are given below :

Sr. No.	Technology	Name of Lab / University
1	Geo Polymer Cement	CSIR-NML, Jamshedpur
2	Solar Park	CSIR-CMERI, Durgapur
3	Toco Toilet	CSIR-SERC, Chennai
4	FCM Tank	CSIR-SERC ,Chennai

- NRDC has licensed three technologies and collected a premia of Rs.10.20 Lakh from licensing of these technologies during March, 2017. The details are as given below :

Sr. No.	Licensee	Technology	Rs
1	M/s J.K. Electricals	Evaporative cooling Apparatus resistance to vector breeding	10,000
2	M/s Microplex Biotech and Agrochem Pvt. Ltd.	Mosquito Larvicidal formulation of Bacillus Thuringiensis var	10,00,000
3	Meraj Laxman Kanhekar	Evaporative cooling Apparatus resistance to vector breeding	10,000
		Total	**10,20,000**

- NRDC collected royalty of Rs.23.99 Lakhs during March, 2017.
- National Research Development Corporation (NRDC) Meritorious Invention awards were presented by the Hon'ble Minister for Science & Technology and Earth Sciences, Dr. Harsh Vardhan during its annual event "Innovate India" on 24-25 March, 2017 at INSA, New Delhi. The award ceremony was followed by conference on "Leveraging Innovation Ecosystem for accelerating start-ups".

2. Central Electronics Limited (CEL)

Central Electronics Limited continued its activities in the area of solar photovoltaic systems, electronic gadgets for Railway and other electronic equipment/components etc. The company has manufactured electronic components/systems/ SPV products worth Rs.4271.41 Lakhs and realized sale of such items worth Rs.5997.43 Lakhs during March, 2017.The company has installed 600 kw ground mounted Solar Power Plant at its premises. The Company has reported highest ever turnover of Rs. 285 Crores.

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