

Government of India
Ministry of Science and Technology
Department of Science and Technology
(CDN Section)

Technology Bhawan,
New Mehrauli Road
New Delhi-110016
Dated: 12.04.2022

OFFICE MEMORANDUM

Subject: Monthly Summary to the Cabinet for the month of March, 2022.

The undersigned is directed to enclose herewith a copy of the Monthly Summary of important policy decisions taken and major achievements of the Department of Science & Technology for the month ending 31.03.2022 for information.

2. This has already been approved by Secretary, DST.

(Pulok Sen Gupta)
Under Secretary to the Govt. of India

To,

All Members of the Council of Ministers (as per Annexure-I)

Copy with enclosures, forwarded to:-

- i. Vice Chairman, NITI Aayog, NITI Bhawan, New Delhi. (vch-niti@gov.in)
- ii. The Chairman, Union Public Service Commission (chairman-upsc@gov.in)
- iii. Chief Executive Officer, NITIAayog, NITI Bhawan, New Delhi (ceo-niti@gov.in)
- iv. The Principal Secretary to the Prime Minister, Prime Minister Office, South Block, ND (pkmishra.pmo@gov.in)
- v. All members of NITI Aayog, NITI Bhawan, New Delhi. (vk.saraswat@nic.in, rc.niti@gov.in, vinodk.paul@gov.in)
- vi. Secretary to the President of India. (secy.president@rb.nic.in)
- vii. Secretary to the Vice-President of India. (secyvp@nic.in)
- viii. Principal Scientific Advisor to the Govt. of India. (vijayraghavan@gov.in)
- ix. All Secretaries to the Government of India (secy-goi@lsmgr.nic.in)
- x. The Principal Director General, Press Information Bureau, Ministry of Information and Broadcasting. (pdg-pib@nic.in)
- xi. The Director, Cabinet Secretariat, New Delhi. (cabinet@nic.in)
- xii. Dr. Rabindra Kumar Panigrahy, Sc. 'E', DST for uploading the Monthly Summary on DST's website. (rabindra.p@gov.in)
- xiii. PSO to Secretary, DST. (anuj.tripathi@nic.in)
- xiv. AD (OL), DST for Hindi Translation (kn.singh65@gov.in)

Department of Science & Technology
Monthly Report
March, 2022

I. Important policy decisions taken and major achievements during the month:

A. Science for society

1. National Innovation Foundation (NIF), Ahmedabad facilitated granting of 9 patents to its grass root innovators, of which four major ones are:
 - i. Attaching-Detaching Climbing Device to Climb Vertical Objects with Attachable Leg Grips During Climbing.
 - ii. A Multifocal Lighting Device.
 - iii. Two Way Operating Gear System.
 - iv. Herbal compositions for treatment or prevention of liver disorders.
2. NIF facilitated an online refresher training to the women cooperatives for making sanitary pads in the State of Nagaland also North East Centre for Technology Application and Reach (NECTAR), Shillong has developed low-cost bio-degradable sanitary pad and distributed to school girls at BCDI, Agartala.
3. On the occasion of International Women's Day, a programme was organized on 08.03.2022 to showcase women empowerment through S&T. Hon'ble Minister of State (Independent Charge) of Science and Technology, Dr. Jitendra Singh graced the event and released the Women Empowerment Atlas of India: Science & Technology Perspective and Brief Report on the study of Women Technology Parks (WTPs) for integrated development of rural women.
4. As a part of "**AzadiKaAmritMahotsav**", "**Tech Neev@75**" programme was organized on 11th and 24th March, 2022 in collaboration with the Ministry of Earth Sciences (MoES).

B. Technology Development

1. A two month comprehensive theoretical course and hands-on training for the Li-ion cell fabrication and testing, was conducted by ARCI for Nsure.
2. Know-How Document was handed over to (a) M/s. Las Consultants and Engineers Pvt. Ltd., Mumbai towards transfer of technology for 'Synthesis of

Electro catalysts for use in Fuel Cells' by ARCI. (b) Borosil Renewables Ltd., Mumbai for 'Anti-reflective sol from organic solvent based composition for solar PV glass'.

C. International Cooperation

1. Mexico Minister of Foreign Affairs, Marcelo Ebrard, met Union Minister of State (Independent Charge) Science & Technology; Dr Jitendra Singh and the two agreed to make a new call for joint proposals in different areas of science & technology. Both are also interested in renewing PoC further with a special focus on working in the areas of Health; Human Security; and Energy in the coming years.
2. **Visit of Canadian S&T Minister to India:** In the meeting held on 11 March 2022. Hon'ble S&T Minister of India mentioned that India-Canada Bilateral Center will be set up for dedicated S&T activities between India and Canada. Also, renewal of MoUs shall be done soon and new opportunities for cooperation may be explored.
3. India-Oman Programme of Cooperation was signed on 23rd March 2022. Apart from other areas of cooperation identified for the period 2022 – 2025 Medicinal Plants and its processing, Real-time Air Quality Monitoring, Development of an electronic platform for knowledge sharing in the field of Genetic Resources Plastic Bio-fuel, and Bio-diesel Research has been included.
4. **IGSTC tie-ups with Tata Steel Ltd. And BASF:** Indo-German Science and Technology Centre (IGSTC) signs MoU and Letter of Intent (LoI) agreements with Tata Steel Ltd and BASF Chemicals India Pvt Ltd (BASF).

D. Human Capacity Building

1. An Online Workshop on "**Climate Change Impact On Agriculture And Biodiversity In North – East India**" was conducted by DST's Center of Excellence (CoE) established at Department of Environmental Science, Tezpur University during 1st March to 5th March 2022.
2. A talk on **Research Opportunities and Thematic Areas for developing Research proposals on Climate Change** at Teachers Training Program (TTP) organized RGPV, Bhopal. More the 73 faculties from different academic and research institution attended the session.

3. A hands-on training programme on '**RS & GIS applications in forestry & ecology**' was organized at North Eastern Space Applications Centre (NESAC) Shillong, Meghalaya by DST's CoE Tezpur University from 22nd March to 27th March, 2022.
4. Capacity Building Workshop on "**Air Pollution Monitoring, Dendrochronology & their application in Climate Change Studies**" was organized by Center for Environmental Assessment and Climate Change, G.B. Pant National Institute of Himalayan Environment Uttarakhand on 26th March 2022.
5. **International Women's Day Celebration:** Hon'ble Minister announced 3 new programmes for women scientists and also announced age enhancement till 60 years of age under Women Scientists Scheme. As a part of Azadi ka Amrit Mahotsav, 75 Success Stories of Women Scientists Scheme-C WOS-C) and a booklet on the programmes under WISE-KIRAN Division have also been released.
6. **Vigyan Jyoti:**

Expansion of Vigyan Jyoti: DST has expanded Vigyan Jyoti in 200 districts of the country in its Phase-III.

Science Festival: Vigyan Jyoti scholars of JNV Warangal participated in Science Festival programs conducted by NIT Warangal on 25th February, 2022. It included science experiments, science movies and interesting videos.

Tinkering Activities: Two Atal Tinkering Lab workshops for teachers were organized from 7th – 12th March, 2022 and 28th March in collaboration with American India Foundation (AIF) and the Vikram A Sarabhai Community Science Centre (VASCS).
7. **Innovation in Science Pursuit for Inspired Research (INSPIRE) Scheme**
 - o **Two days mentoring workshop** destined towards preparing innovative and creative children for the National Level Exhibition and Project Competition (**NLEPC**) of the INSPIRE Awards - MANAK was organized in association with **Birla Institute of Technology Mesra Ranchi** on **22nd and 23rd March, 2022** in a **hybrid mode**.
 - o **One day mentoring workshop** for each **State Level Awardees of Mizoram under INSPIRE –MANAK 2020-21** was organized at **MZU incubation centre**,

Mizoram University, Aizawl on **22nd March 2022**, where students got the opportunity to discuss their projects with the experts for further improvements in the prototype.

8. INSPIRE Fellowship:

- The INSPIRE Fellowship **advertisement for call of applications** for the year **2021** is open from **1st march 2022 to 24th April, 2022** for receiving the applications from the students.
- Announced the **INSPIRE Fellowship -2019 and -2020 Level 2 result** for award of INSPIRE Fellowship. **341 applicants** were offered INSPIRE Fellowship for **pursuing Ph.D.** in the **areas of Science and Technology**.
- **1287** INSPIRE Fellows received INSPIRE Fellowship (Total Amount **₹55,71,80,296/-**) for **continuing their doctoral degree program**.

E. Scientific Research

1. Giant exchange bias (EB) field of about 3.68 kOe during field cooled process in all-d-metal Ni-40(FeCo) (4) Mn₃₆Ti₂₀ Heusler alloy was studied by S N Bose National Centre for Basic Sciences (SNBNCBS), Kolkata. The result will open up a new way toward the development of EB materials considering all-d-metal Heusler alloy systems.
2. In a study conducted by BI on geomicrobiologies of the hot springs of Chumathang and Panamik (located in the Indus and Nubra valleys of eastern and northern Ladakh, respectively) were revealed and compared with the Lotus Pond spring of Puga Valley (eastern Ladakh), which is known for its mineralogical and ecological peculiarities.
3. Wadia Institute of Himalayan Geology (WIHG), Dehradun demonstrated that continuous high frequency signals were generated and recorded in the seismic data ~2:30 h before the main release of avalanche during the 07 Feb 2021 Rishiganga disaster at Chamoli district, NW Himalaya; The entire scenario of devastation starting from the nucleation to its advancement was reconstructed.
4. Studies of a high mass X-ray binary pulsar (a binary system of a “normal star” and a neutron star) using an X-ray telescope has enabled astronomers at Raman

Research Institute (RRI), Bengaluru and international collaborators to constraint the magnetic field strength of the neutron star.

5. An international team of researchers led by Aryabhata Research Institute of Observational Sciences (ARIES), Nainital scientist have examined the impact of massive forest fires on the reduction in solar energy over the Indian subcontinent via remote-sensing techniques for the first time.

F. Scientific Infrastructure Building

1. Under NMSHE, two projects are concurred and approved which are part of the mission to establish a **Major R&D Programmes (MRDP) in Ladakh region.**
2. Under NMSKCC, proposals are concurred for the establishment of three new state climate change cell/center (SCCCs) in the states on **Goa, Jharkhand and UT Chandigarh,** making a total of 28 SCCCs by CCP, DST in the country.