

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

Technology Bhawan,
New Mehrauli Road
New Delhi-110016
Dated: 13.12.2021

OFFICE MEMORANDUM

Subject: Monthly Summary to the Cabinet for the month of November, 2021.

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 30.11.2021 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
November, 2021

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

A. Technology Development

1. A Low-cost process developed of synthesizing silver nanowires at large scale by CSIR-NCL Pune with the support of DST's "Make in India" aligned program of Advanced Manufacturing Technologies (AMT) Program. The technology has been successfully demonstrated and transferred to industries. The success story published by DST media cell may be seen at

<https://dst.gov.in/low-cost-process-developed-synthesizing-silver-nanowires-large-scale>

2. A New low-cost semiconductor manufacturing process to benefit strategic sectors like space and defense has been developed by IIT-Gandhinagar with the support of DST's "Make in India" aligned program of Advanced Manufacturing Technologies (AMT) Program. The technology has been successfully demonstrated and transferred to Semi-Conductor Laboratory (SCL), Mohali

<https://dst.gov.in/new-low-cost-semiconductor-manufacturing-process-benefit-strategic-sectors-space-and-defense>

B. International Cooperation

1. BRICS Science & Technology Ministers meeting: Under India BRICS Chairship 2021, the 9th BRICS Science & Technology Ministers meeting was hosted by India on 26th November 2021. This meeting was preceded by the BRICS senior officials meeting on 25th November 2021. Science and Technology Ministers or their deputy attended the meeting from all BRICS countries. From the Indian side the Hon'ble Minister of Science & Technology and Ministry of Earth Sciences, Dr. Jitendra Singh chaired the Meeting. The key deliverable of the meeting includes the adoption of three documents namely (i) BRICS Innovation Cooperation Action Plan 2021-2024 (ii) BRICS Science, Technology and Innovation Declaration (STI) (iii) BRICS Calendar of Science, Technology and Innovation activities 2021-2022.
2. Meeting of Secretary, DST with French co-chair of IFCPAR: French Co-Chair- Mr. Matthieu Peyraud, Director of Department of Culture, Education, Research and Networking, Ministry of Europe & Foreign Affairs (MEAE), Government of France and other delegates visited CEFIPRA office on 10 Nov 2021 wherein a meeting was organized between Indian Co-Chair, Dr. M. Ravichandran, Secretary, Ministry of Earth Sciences (MoES) and Secretary (Additional Charge) of Department of Science and Technology (DST), Government of India and French delegation.
3. India-Israel Women in STEM – Sharing Ideas & Initiatives: A mini-conference titled "India and Israel Women in STEM: Sharing Ideas and Initiatives" was held online on November 24th, 2021. Ambassadors from both countries were present at the conference. Experts from India and Israel highlighted the need

for changes in the socio-cultural environment while deliberating on ways of achieving gender parity in the field of Science, Technology, Engineering, and Mathematics (STEM).

4. India-Sweden Collaborative Industrial Research & Development Programme: Six joint projects were recommended for funding under the India-Sweden Collaborative Industrial Research & Development Programme. The programme will address a range of global challenges through technology and innovation. The Joint programme is co-funded by the Indian Department of Science & Technology (DST) and Sweden's Innovation Agency – Vinnova. The new programme is expected to bring together the world-class excellence of Sweden and India to address challenges in the area of Smart Cities and Clean Technologies and Digitalization / Internet of Things (IoT).
5. Women Involvement in Science and Engineering Research (WISER) programme by Indo German Science and Technology Centre (IGSTC):The Women Involvement in Science and Engineering Research (WISER) programme was launched by Indo German Science and Technology Centre (IGSTC) on 24th November 2021. This program will support woman scientists holding regular/long-term research positions in Academia or research Institutes/Industry involvement in the IGSTC program through lateral entry. In this program, there is neither requirement of Break-in-Career nor any age limit. It will enable easy participation.
6. Three online meetings of the earlier constituted and approved National Organizing Committee for successfully organizing the second United Nations World Geospatial Information Congress (UNWGIC) to be held in India in October 2022 were carried out.
7. Second Preparatory meeting with UNGGIM Secretariat via a virtual mode on discussing the various aspects of preparation of organising the Second United Nation World Geospatial Information Congress (UNWGIC) in the country in Year 2022 was held on 22nd November 2021. The candidate Logo, and initial website of the event were discussed and finalized.
8. Fourth online meeting of the NGP Expert Committee to review the Proposals received for establishing the Project Management Unit for successful hosting the Second United Nations World Geospatial Information Congress (UNWGIC) held online on 27 November, 2021. Minutes of the meeting are being finalized.
9. An online Brainstorming Session held online on, 9th November 2021 with all the coordinators supported under Summer/ winter Schools training programme on Geospatial Science & Technology was organized. The aim of the brainstorming was to create the preparatory stage for the upcoming UNWGIC in October 2022, Hyderabad.

C. Human Capacity Building

1. About 200 PhD students continued their research work in different mega science projects. The output includes 16 Research Publications, 13 collaborative Research Publications, 5 Conference papers, 1 School and training of 2 other human resource.

2. Three 21- days Summer/Winter School (level-2) on “Geospatial Science and Technology” were conducted by Department of Remote Sensing& GIS, University of Jammu, Jammu and Kashmir, Delhi Technical University (DTU) and Gauhati University, Assam.
3. About 1350 participants including Urban Planners, Govt. Officials, Faculty members, Representative of NGOs, researchers, students among others benefitted from online training programmes, workshop and webinars conducted by National Institute of Disaster Management (NIDM), New Delhi supported by CCP division on issues related to climate change such as Celebration of Eco-friendly Diwali, Livelihood and Climate Change Resilience with reference to Flood Hazards, Multi-hazard Risk Management in Changing Climate: Sustaining Economic Development & Livelihood in Western Himalaya Fundamental of Disaster Risk Reduction and Management etc.
4. DST-Centre of Excellence in Climate Studies, at IIT Bombay organized e-seminar series in which speaker Dr.Moetasim Ashfaq, Oak Ridge National Laboratory, USA discussed relative influences of various modes of natural climate variability on cold season precipitation over High Mountains of Asia (HMA) region among other climate related issues. The free to open session was attended by teachers and students.
5. Conducted a Training Course for Archivists of GLP Test Facilities on November 11&12, 2021.
6. Conducted two Sensitization Workshops on GLP for Students and Researchers at Amity University, NOIDA (U.P.) and Shri JYT University, Jhunjhunu (Rajasthan) on November 18, 2021 and November 26, 2021 respectively.
7. **CURIE:** A call has been announced to invite proposals from Women PG Colleges to seek support under Consolidation of University Research for Innovation and Excellence in Women Universities (CURIE).
8. **Vigyan Jyoti:**Girls from 1st phase of Vigyan Jyoti appeared in competitive examination this year and 226 girls qualified NEET and 149 JEE Mains. 20 girls have been able to qualified JEE Advance.
9. **Gender Advancement for Transforming Institutions (GATI):**

Joint workshops for GATI Pilot institutions:The DST and the British Council have jointly organized a workshop for Indian GATI Pilot institutions and UK Institutions. The purpose of this workshop was to provide step wise details and differences between UK Athena SWAN and Indian GATI Framework and differences between both.

2nd Meeting of GATI Expert Advisory meeting:Division has organized an Expert Advisory Committee meeting to review the progress of the Framework development project.

Panel Discussion: A panel discussion was organized by British Council in consultation with DST on “Strategies to promote Gender Equality in STEM. The event has successfully connected leaders and practitioners from India and UK to share insights on strategies to promote gender equality in STEM. A diverse audience of students and professionals have participated in this event.

10. **Women Scientists Scheme:** In November, Subject Expert Committee Meeting on Life Sciences under WOS-A has been organized on 29-30 November, 2021. The women who had career break have presented their proposal before SEC.

11. Innovation in Science Pursuit for Inspired Research (INSPIRE) Scheme

Million Minds Augmenting National Aspirations and Knowledge (MANAK):

7.53 lakh innovative ideas have been mobilized under the INSPIRE Awards - MANAK scheme during 2021-22 as compared to 6.53 lakh ideas received in previous year from the school students representing all States and Union Territories of the country. This is good indicator of increasing outreach of MANAK programme to schools across the country.

Scholarship For Higher Education (SHE): 2866 SHE scholars received scholarship (Total Amount ₹18,29,40,000/-) for pursuing B.Sc./M.Sc. Degree course in basic and natural sciences.

INSPIRE Internship: Five INSPIRE Internship Science camp completion reports were settled.

INSPIRE Fellowship:

- 75 INSPIRE Fellows received INSPIRE Fellowship (Total Amount ₹3,36,55,680/-) upon final selection
- 227 INSPIRE Fellows received INSPIRE Fellowship (Total Amount ₹10,23,05,414/-) for continuing their doctoral degree programme.
- 72 INSPIRE Fellows were converted from JRF to SRF

INSPIRE Faculty Fellowship:

- No. of beneficiaries: 71 (Total Amount ₹11,94,00,000/-)

D. Scientific Infrastructure Building

1. Loan Agreement has been signed by Technology Development Board on 8th November, 2021 with M/s Botlab Dynamics Private Limited, New Delhi for project titled “Design and Development of a Reconfigurable Swarming System Consisting of 500-1000 Drones for 3D Choreographed Drone Light Shows”.

2. Different project activities including production of in-kind components for establishment of Facility for Antiproton and Ion Research (FAIR) and design and development of in-kind components for establishment of Thirty Meter Telescope (TMT) continued. 22 Ultra-high Vacuum Chambers were flagged off to FAIR, Germany as Indian in-kind contribution. Also, CBM detectors were tested at CERN with muon beams in presence of intense gamma background.

3. Sophisticated Analytical Instrument Facilities (SAIF)

a) The SAIF Programme is being implemented through a 2-tier mechanism in which the Apex Committee is the “Steering Committee” chaired by the Secretary, DST and is assisted by the Facility Management Committee (FMC) of each SAIF Centre. FMC Meeting was conducted this month for SAIF

Centres at: i) Central Drug Research Institute (CDRI), Lucknow; ii) Punjab University, Chandigarh; iii) All India Institute of Medical Sciences (AIIMS), New Delhi and iv) Karnataka University, Dharwad.

- b) As a part of the mandate of SAIF scheme, the SAIF Centre at Shivaji University, Kolhapur, Maharashtra organized a Workshop cum hands on training of XRD on November 11-12, 2021.
