

## In The News

# India's Biggest Climate Clock Activated at CSIR HQ to Celebrate Earth Day



CSIR, as a part of the Earth Day Celebrations, installed and activated India's biggest Climate Clock on the CSIR Headquarters Building in Rafi Marg, New Delhi, on 23 April 2024. The event signifies CSIR's aim to spread awareness about climate change and its ill effects.

Speaking on the occasion, Prof. Chetan Singh Solanki from IIT Bombay and Founder of the Energy Swaraj Foundation said that there is an urgent need for every citizen of the country to be energy literate. He said every citizen must take steps to avoid or minimise energy usage as much as possible.

Dr Shailesh Nayak, Former Secretary, Ministry of Earth Sciences and Director,

National Institute of Advanced Studies, delivered the CSIR AMRIT Lecture on "Unravelling the Secrets of Triggered Earthquakes: The Lighthouse Project of Scientific Drilling in Koyna". The CSIR Accelerating Modern Research, Innovations and Technologies (AMRIT) Lecture Series aims to learn from the ideas and thoughts of India's foremost S&T leaders that can help pave the way for actions by R&D organisations in general and CSIR in particular.

Addressing the gathering, Dr N Kalaiselvi, DG-CSIR, said that Earth Day is a reminder for us to protect the environment. She informed that under the CSIR-Energy Swaraj Foundation MoU,

a large number of scientists and staff in CSIR have undergone the Energy Literacy Training. Climate clocks provided by the Foundation have been installed in most CSIR labs.

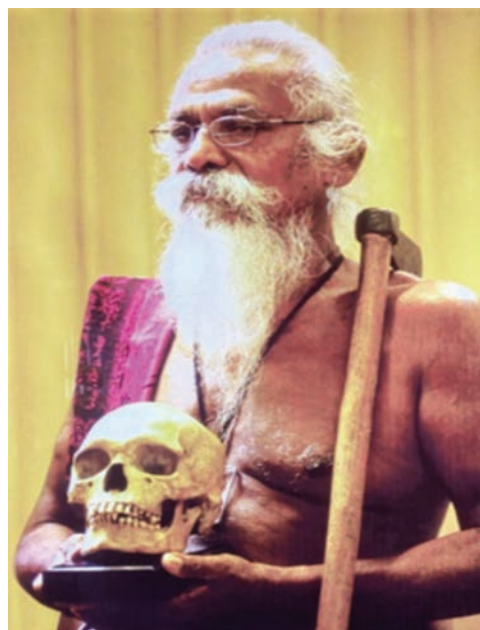


## Vedda of Sri Lanka has Close Genetic Affinity with the Indian Populations

**I**n a landmark study published recently in the journal *Mitochondrion*, ten researchers from five institutions have unveiled significant findings regarding the genetic history of the Vedda population, an indigenous group of Sri Lanka. The study, which involved a comprehensive analysis of high-resolution autosomal and mitochondrial genomes, sheds new light on the initial peopling of Sri Lanka and the ancient genetic ties between the Vedda and other populations in Asia.

“The language isolates Vedda, who are among the least studied indigenous populations in Sri Lanka, have long intrigued scientists and historians alike due to their unique linguistic and cultural characteristics. This study, therefore, unravelling the mysteries of their genetic origins and affinities with Indian populations,” said Dr K Thangaraj, one of the senior authors of the study and JC Bose Fellow at the CSIR-Centre for Cellular and Molecular Biology (CSIR-CCMB), Hyderabad.

Key findings from the research indicate that despite the lack of close linguistic similarities, the Vedda people share a significant genetic link with the ethnic populations in India. “Our autosomal analyses suggest a



close genetic connection between the Vedda and Indian ethnic populations speaking various tongues, pointing towards a deep-rooted history that predates linguistic diversifications,” stated Prof. Gyaneshwer Chaubey, molecular Anthropologist at the BHU, Varanasi.

“Maternal DNA analysis supports the existence of an ancient link, reinforcing the notion of a shared genetic heritage. The study proposes that the Vedda population has undergone genetic drift and a recent bottleneck, resulting in a unique genetic makeup with limited gene flow from neighbouring Sinhalese and Sri Lankan Tamil populations,”

*The study sheds new light on the initial peopling of Sri Lanka and the ancient genetic ties between the Vedda and other Asian populations.*

said the lead author, Dr Ruwandi Ranasingh, from Colombo University, Sri Lanka.

Anjana Welikala, the first author of the study, stated that this unique discovery challenges the conventional isolation-by-distance model and underscores the distinct demographic history of the Vedda.

The implications of this research are vast, offering novel perspectives on the demographic history of not only Sri Lanka but also the broader South Asian region. This study underscores South Asia's complex mosaic of human migration and

genetic diversity. It reveals how the Vedda have preserved their genetic identity over millennia despite massive cultural and linguistic changes around them.

These valuable insights will contribute to a better understanding of the genetic diversity in South Asia and foster a deeper appreciation for the unique cultural and genetic heritage of the Vedda people, said Dr Vinay Nandicoori, Director, CSIR-CCMB, Hyderabad.

#### Reference

<https://www.sciencedirect.com/science/article/pii/S1567724924000424>

### MoUs/Agreements

## Commercial Launch of HealthChlor *An Onsite Hypochlorite Disinfectant Generator*

CSIR-Advanced Materials and Processes Research Institute (CSIR-AMPRI), Bhopal, developed a portable device “AMPRICARE Instantaneous Hypochlorite Generator Using Kitchen Salt” which gives freedom to make hypochlorite disinfectant anywhere simply using tap water, kitchen salt, and a mobile charger. Its Know-how was transferred to industry partner “M/s HES Water Engineers (India) Pvt. Ltd, Nagpur” on 26 June 2021.

This device is now being deployed on a pilot scale in the Aizawl district of Mizoram in collaboration with the Mizoram Science, Technology & Innovation Council. On 24 April 2024, on the occasion of the 49<sup>th</sup> Research Council meeting of CSIR-AMPRI in the presence of Prof. Vinod Kumar Singh (Padma Shri Awardee), Chair Professor, IIT Kanpur and Chairman RC, CSIR-AMPRI and Prof. Avanish Kumar Srivastava, Director, CSIR-AMPRI,

*“AMPRICARE Instantaneous Hypochlorite Generator Using Kitchen Salt” allows the use of tap water, kitchen salt, and a mobile charger to make hypochlorite disinfectant anywhere.*



*The device does not require any skilled manpower, easy to operate, and will automatically stop once the reaction is over.*

6-litre Hypochlorite Generator “HealthChlor” was launched. Various dignitaries from different organisations graced the occasion.

HealthChlor developed by CSIR-AMPRI and HES Water Engineers (India) Pvt. Ltd can generate hypochlorite solution varying from 0.2% to 1% strength, killing microbes, including bacteria and viruses. The device does not require any skilled manpower, easy to operate, and will automatically stop once the reaction is over. The disinfectant has numerous applications, such as cleaning waste generated from hospitals, glassware, water tanks, drinking water, OT tables, cleaning vegetables, toilets, etc.

At the outset, Prof. Avanish Kumar Srivastava highlighted CSIR-AMPRI’s journey from a 250 ml device to a 6L HealthChlor in close collaboration with the industry partner. He also informed that the device is being implemented in Aizawl in a project funded by the North East Center

for Technology Application and Reach, Department of Science and Technology, under which the product (250 ml) was launched by the Honourable Health Minister of Mizoram, Smt. Lalrinpuii. The device is already being implemented at the Cancer State Institute, Urban Primary Health Centre, Zemabawk, churches, etc. He also appreciated the efforts of HES Water Engineers to bring this device to 6L capacity.

Mr Jatin Ahuja, CEO, HES Water Engineers (India) Pvt. Ltd Nagpur, thanked CSIR-AMPRI, for their support and spoke about the working principle of the device. He also mentioned countless advantages of owning HealthChlor in hospitals, primary healthcare centres, hotels, restaurants, public places, etc.

Prof. Vinod Kumar Singh appreciated the joint efforts of CSIR-AMPRI and HES Water Engineers (India) Pvt. Ltd and expected a big market for this technology.

## CSIR-IIIM & NDTL Extend MoU to Achieve Excellence in Dope Testing in Sports

In a collective endeavour to work together to achieve excellence in the field of Dope Testing in Sports in India and to promote Anti-Doping Science and Research in the country, CSIR-Indian Institute of Integrative Medicine (IIIM), Jammu, and the National Dope Testing Laboratory (NDTL), Government of India, renewed their Memorandum of

Understanding (MoU) for another three years on 26 April 2024. Scientists and other staff of both institutes attended the event.

Dr Zabeer Ahmed, Director of CSIR-IIIM, and Dr Puran Lal Sahu, Director, NDTL, New Delhi, signed the MoU on behalf of their respective institutes to continue their collaborative research and reference standard synthesis work



for the next term. While giving details of the work to be done under the MoU, Dr Zabeer Ahmed said that in 2021, a groundbreaking scientific collaboration was initiated jointly by CSIR-IIIM and NDTL for the synthesis of reference standards and cells-based and pharmacokinetics studies on the metabolites with the main emphasis on the national goals in the area of Dope Testing and Global Positioning.

“Quite significant work was done during the initial phase of collaboration” he underlined and mentioned that to meet the pressing need for reference materials essential in accurately detecting and deterring prohibited substances in sports, CSIR-IIIM has accomplished the successful synthesis of multiple secondary metabolites intricately associated with substances banned by the World Anti-Doping Agency (WADA). It is noteworthy to mention that due to the adoption of the multifaceted approach during the first phase of the MoU, besides ensuring the delivery of metabolites, the CSIR-IIIM initiated patent filings, thereby laying the groundwork for a promising three-year extension of their collaboration.

Appreciating the team CSIR-IIIM led by the Director of the institute for its unwavering commitment to synthesising

indispensable reference standards for doping control laboratories, Dr PL Sahu strongly advocated for future collaborations between CSIR-IIIM and NDTL, envisioning a roadmap for global projects aimed at advancing research in doping analysis. To achieve excellence in the field of Dope Testing in Sports in India and to advance Anti-Doping Science and Research in the country, he underscored the need to put together the expertise of both the partner institutions, offering substantial value in elucidating metabolic pathways and augmenting detection capabilities of the drug in sports.

Dr Qazi Naveed Ahmed, Head of the Natural Products and Microbial Chemistry (NPMC) Division, extolled the institute’s remarkable strides in doping analysis. He attributed these accomplishments to the institute’s leadership, which has elevated the institution to the national standards in scientific and societal endeavours.

It may be recalled that about three years back, both organisations had agreed to research collaboration by combining their respective research capabilities in the areas of synthesis of reference standards and in-vitro and in-vivo studies (PK studies) on the metabolites with a main emphasis on the national goals in the area of Dope testing

*Dr PL Sahu, Director, NDTL, strongly advocated for future collaborations between CSIR-IIIM and NDTL.*

and Global positioning. In future, both institutes will also explore the role of phyto-chemicals, in particular the phyto-steroids, in dope testing.

Notable dignitaries witnessed the MoU signing ceremony. Er Abdul Rahim, Chief Scientist &

Head of the Research Management, Business Development and Information Sciences and Technology and Head of IIIM Srinagar Branch, expressed gratitude to all the attendees for their presence, ensuring the success of the event.

### Workshop/Seminar/Training Programme

## CSIR-NIScPR Celebrates World Intellectual Property Day



Dignitaries From R to L: Prof. Ranjana Aggarwal, Prof. Unnat Pandit and Dr Kanika Malik

*CSIR has been instrumental in safeguarding our nation's intellectual heritage, exemplified by its successful challenge against the patenting of turmeric and basmati rice in the United States, said Dr Ranjana Aggarwal, CSIR-NIScPR.*

CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR), New Delhi, organised a national workshop and celebrated World Intellectual Property Day on 25 April 2024 at its SV Marg Campus. The theme of the workshop was “IP and SDGs: Innovating for a Shared Future”. Prof. Unnat Pandit, Controller General of Patents Designs and Trademark (CGPDTM), graced the workshop as the Chief Guest. The workshop featured presentations from five outstanding innovators who were felicitated for their

technology and entrepreneurship contributions.

The workshop coordinator, Dr Kanika Malik, Senior Principal Scientist, CSIR-NIScPR, provided an insightful introduction to Intellectual Property Rights, emphasising the importance of protecting innovations for national development. She explained how school students can venture into this field and take it as a career option.

In her address, Dr Ranjana Aggarwal, Director, CSIR-NIScPR, said, “Historically, India was

often referred to as the “Golden Bird,” a testament to its advanced state and significant global economic contribution, which once stood at 30%. As we mark 75 years of independence, our GDP contribution has adjusted to 9%. Looking ahead to 2047, we aim to elevate this figure to 20%. This goal underscores the importance of fostering domestic technological innovation and nurturing indigenous knowledge systems. CSIR has been instrumental in safeguarding our nation’s intellectual heritage, exemplified by its successful challenge against the patenting of turmeric and basmati rice in the United States. This victory reclaimed crucial patents for India. It is imperative that we continue to protect our intellectual property vigorously. The *Journal of Intellectual Property Rights*, published by CSIR-NIScPR, is a significant step in this direction, serving as a beacon for intellectual property awareness and education.”

In his keynote address, Prof. Unnat Pandit highlighted the critical role of intellectual property in achieving the Sustainable Development Goals (SDGs) and fostering a culture of innovation. Prof. Pandit said, “Over the past decade, India has made remarkable strides in scientific achievements, a testament to the innate innovative spirit and research acumen of our nation’s thinkers, who are adept at addressing grassroots challenges. It is crucial to impart to the architects of India’s future, the youth – how a developed India will be shaped. As the school students of

today mature, they will spearhead the nation’s progress. Embracing the vision of a self-reliant India, we must pursue innovation and evolve into a ‘technology-embedded knowledge economy’. It is imperative to dissect the underlying causes of our setbacks and enhance our knowledge base to improve our creations.”

He added, “Since the National IP Awareness Mission has been initiated to foster awareness. In just one year, we have received 90,300 patents.”

The workshop’s highlight was the inspiring stories shared by young innovators and entrepreneurs. These visionary individuals have made significant strides in their respective fields and demonstrated how creativity and innovation can lead to a sustainable future.

The five innovators felicitated at the workshop were:

- Mr Parth Bansal: for their groundbreaking work creating a walking guide for patients suffering from Parkinson’s disease.
- Mr Ram Sajivan: recognised for their innovative approach to an automatic mobile sprinkling system.
- Mr Manoj Kumar: celebrated for their advancements with a robotic helmet.
- Mr Subash Ola: honoured for their contributions with a recycle heat exchanger.
- Mr Dharmbir Kamboj: applauded for their cutting-edge research on developing a multipurpose food processing machine.

*The workshop’s highlight was the inspiring stories shared by young innovators and entrepreneurs.*

School students' participation was particularly noteworthy, as they engaged with the innovators, learning about the real-world applications of intellectual property and its significance in driving progress. More than 250 school students participated in the workshop and were enlightened. The workshop ended

with a vote of thanks by Dr Kanika Malik.

CSIR-NIScPR's commitment to fostering an environment where innovation thrives is evident in the success of this workshop. The institute continues to support and encourage young minds to explore the limitless possibilities of science and technology.

## CSIR-NCL Celebrates National Safety Week with Emphasis on ESG Leadership



*Dr Ashish Lele,  
Director, CSIR-NCL,  
emphasised 'Safety'  
as a value-based  
component of any  
organisation.*

CSIR-National Chemical Laboratory (CSIR-NCL), Pune, observed this year's National Safety Week held from 4 March to 10 March 2024. The theme of this programme was "Leadership for Excellence in EHS (Environmental, Health and Safety)", which aimed to promote a culture of safety consciousness and responsibility within the organisation. On this occasion, Dr Sharad Joshi, Senior Safety Management Consultant, delivered an awareness talk on Safety Management on 8 March 2024.

Throughout the week, CSIR-NCL conducted a series of activities to raise awareness and enhance safety practices among its students and staff. These activities included

fire drills, Personal Protective Equipment (PPE) displays, safety equipment showcases, safety slogans and poster competitions.

In his welcome address, Dr Ashish Lele, Director, CSIR-NCL, emphasised 'Safety' as a value-based component of any organisation. He urged all to imbibe safety practices as a natural responsibility and to be mindful of the possible risks associated with our actions, both within and outside the laboratory.

Adding a creative touch to the event, research scholars, students and staff at CSIR-NCL presented a safety-themed Nukkad Natak, highlighting the significance of safety awareness

and the adoption of best practices in laboratory settings. It resonated with the audience, delivering its message engaging and impactfully.

Dr Sharad Joshi delivered an enlightening talk on ‘Safety Management’. Drawing from his experience in safety maintenance, Dr Joshi shared real-life examples of risk mitigation strategies and emphasised the importance of a behaviour-based safety approach in handling workplace hazards. He also introduced the audience to the

NFPA’s fire diamond as a valuable tool for identifying material properties and potential hazards. He also encouraged students to explore and pursue safety-related career opportunities.

During the event’s culmination, awards were handed over to best posters, slogans and skit participants. Appreciation awards were also given to labs, staff members, and security personnel who demonstrated timely awareness of handling probable risk-related situations throughout the year.

## Skill Development Programme on ‘Drug Discovery & Development’ Concludes at CSIR-IIIM



CSIR-Indian Institute of Integrative Medicine (CSIR-IIIM), Jammu, successfully concluded its Three-day skill development training programme from 5 March to 7 March 2024, which saw the participation of more than 20 participants from different Universities of J&K

region. The valedictory function was chaired by Dr Zabeer Ahmed, Director CSIR-IIIM Jammu, who, in his address, underscored the need to obtain S&T skills as he termed Science – A way of thinking and said that to achieve SDG goals and success towards Viksit Bharat, the role of science has to be pivotal.

*Dr Zabeer Ahmed, Director CSIR-IIIM, fostered scientific temperament among participants and encouraged them to pursue research as their career.*

While addressing the participants, Dr Ahmed fostered scientific temperament among participants and encouraged them to pursue research as their career, emphasising the importance of science & technology for the future. Dr Ahmed, in his address welcomed all researchers to visit the institute and equip themselves with practical insights and skills vital for navigating the complexities of drug research and development.

During the three-day programme, participants were imparted training in drug discovery and development through meticulously designed hands-on training and practical sessions, equipping participants with fundamental skills and knowledge in drug discovery and development. Through lectures and practical exercises, attendees delved into various facets of drug discovery, including molecular biology, Pharmacology, computational modelling, and clinical trial management.

On Day One, Dr Parvinder Pal Singh, Principal Scientist, delivered a lecture on “Phytopharmaceuticals Drugs – Scientific Validation of Traditional Knowledge” while as Dr Ravindra S Phatake, Scientist, talked about “Natural Products in Drug Discovery – Advances and Opportunities”.

On day two, Dr Praseon K Gupta, Principal Scientist, gave an insightful talk on “Discovery of Bioactive Compounds through a High Throughput Strategy to Speedup Drug Discovery”. While

Dr Bharitkar Yogesh, Scientist, delivered a lecture on “Discovery of Novel Phytochemicals – A Systematic Process including Extraction, Isolation and Spectroscopic Characterisation”. Dr Kancherla Prasad, Senior Scientist, delivered a “Intellectual Property Rights” talk.

On Day Three, Dr Qazi Naveed, Principal Scientist & Head NPMC Division, talked about “Modern Drug Discovery-A Rational Approach”. Dr Showkat Rashid, Senior Scientist, delivered a lecture on “Natural Product Chemistry (NPC) and Synthetic Organic Chemistry (SOC) – A Tale of Two Complementary Partners in Modern Drug Discovery”.

Dr Bhahwal Ali Shah, Pr. Scientist and Technical Coordinator of the event enhanced the programme’s practical value by conducting hands-on training and lab sessions. He also gave a practical session on integrating Artificial Intelligence (AI) in drug discovery, with hands-on training on molecular modeling approaches and their application in drug discovery.

Earlier, Dr Nasir Ul Rasheed, Senior Scientist & Coordinator of Skill Development conducted the proceedings of the Valedictory function and shared objectives of such training programmes and informed participants about various initiatives under CSIR-Integrated Skill initiatives. The Training programme was conducted under the overall supervision of Er Abdul Rahim, Chief Scientist and Head, RMBD & IST Division.

# CSIR-HRDC Conducts various Programmes

## Training Programme on Evaluation of Uncertainty in Measurement

Two Days training programme on the Evaluation of Uncertainty in Measurement was organised from 29 to 30 January 2024 at CSIR-HRDC (CSIR-Human Resource Development Centre) Campus, Ghazaiabad. Dr Venugopal Achanta, Director, CSIR-NPL, was the chief guest of the session. Dr TS Rana, Head of CSIR-HRDC, welcomed the dignitaries and

gave the inaugural address. Dr Rina Sharma, Former Chief Scientist and Head Length & Dimension Metrology, was one of the key resource persons. Other resource persons were from various private sectors. Thirty-six CSIR-NPL and Tata Power Delhi Distribution Limited participants participated in the training programme.



## Learning Hour — Lecture Series

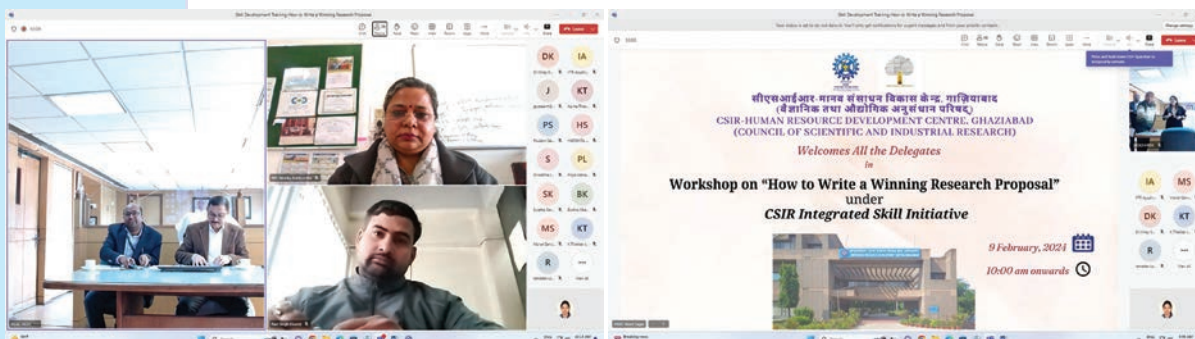
As part of the Learning Hour, a session on Naturopathy, Yoga and Health was organised on 2 February 2024. The objective was to keep

abreast the staff of HRDC with the science of holistic healing & healthy living and harnessing the potential of Ayurveda, Naturopathy and Yoga.



## **Workshop on How to Write a Winning Research Proposal**

The online workshop was conducted under the CSIR Integrated Skill Initiative on 09 February 2024. Thirty-Seven participants from various CSIR labs joined this certification programme.



## **Refresher Training Course for Drawing & Disbursing Officers**

Three days Refresher Training Course for Drawing & Disbursing Officers (DDOs) was organised from 26 to 28 February 2024, at the CSIR-HRDC campus, Ghaziabad. Shri Chetan Prakash Jain, JS & FA, CSIR and Shri Mahendra Kumar Gupta, JSA, CSIR, inaugurated the programme. Dr TS Rana, Head, CSIR-HRDC, welcomed the dignitaries and participants.

Smt. Simesh Verma, Senior Deputy Secretary, CSIR-HRDC, was the Training Manager and Dr Shobhna Choudhary, Principal Scientist, CSIR-HRDC, was the Programme Coordinator. The programme aimed to strengthen the abilities of the DDOs with updated

rules and enable them to perform their duties more efficiently. The programme broadly covered various rules and provisions for GST, income tax, EPF/ESIC, labour Cess, and other related issues.

The broad objective of this programme was to sensitise the DDOs for Finance and Accounts matters, CSIR Budget Heads, AMS, and to resolve the issues related to PFMS, etc. Shri Nafe Singh, Ex Faculty ISTM was the key resource person. Senior Finance persons of CSIR-HQs were also the resource persons for various sessions. Approximately forty-five participants attended the programme.



## Celebration of International Women's Day

International Women's Day Celebration on 8 March 2024 was organised to celebrate women's achievements, raise awareness about discrimination and promote gender equality. The programme provided an opportunity to employees to come together to

enhance their knowledge and sharpen their skills to balance work-life effectively. All the women employees of CSIR-HRDC attended the programme. Mrs A Dhanalakshmi, Joint Secretary, DST, was the Chief Guest of the programme.

## Induction Programme for Newly Recruited Scientists

CSIR-HRDC has conducted its flagship Induction Programme for Newly Recruited Scientists from 4 to 13 March 2024. The programme familiarised the scientists with the organisation's vision, mission, goals, ethos and culture, striving to introduce them to national and global S&T and industrial scenario, IPR and R&D management, procurement procedures, administrative issues, financial and legal matters, and vigilance-related issues. The programme included contemporary aspects such as impact assessment of R&D outcomes, S&T interventions

for rural societies, technology commercialisation, technology start-ups, artificial intelligence and machine learning, etc. The programme also envisaged upgrading soft skills such as interpersonal skills, effective teamwork, motivation, positive attitude, creativity and out-of-the-box thinking, interpersonal communication skills, etc. The programme pedagogy comprised interactive sessions, individual and group assignments, case studies and field visits.

Twenty-four scientists from 13 different CSIR laboratories



joined the programme. Chief Guest, Prof. Manoranjan Parida, Director, CSIR-CRRI and Dr TS Rana, Head, CSIR-HRDC, graced the occasion. Eminent Speakers from various Divisions and Directorate of CSIR Hqs. were the resource persons who shared their knowledge and experiences. Sh. Soumya Guha, SDG Analyst from UNDP and Ms Priyamvada, Training Management of iGot were also there to share their experiences.

Participants visited the Metrology lab. of CSIR-NPL, New Delhi, on 11 March 2024. Prof. Venu Gopal Achanta, Director, CSIR-NPL and Dr Shankar G Aggarwal, Chief Scientist, CSIR-NPL, interacted with the young scientists. The valedictory session was chaired by Dr Ramanuj Narayan, Director, CSIR-IMMT. He graced the occasion and shared his rich experience & knowledge. Participation certificates were also distributed to the participants.



# Bridging Science and Society

## *CSIR-NIScPR's Science Media Communication Cell Curated Orientation Workshops*

The CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR), New Delhi, recently conducted impactful orientation workshops for its Science Media Communication Cell (SMCC) between 23 February and 8 March 2024, at CSIR-NIScPR, Pusa, New Delhi. The aim of these workshops was to equip SMCC staff and PhD students with the knowledge and strategies needed

to effectively communicate Science and Technology (S&T) information to the public.

The workshops featured invited talks, interactive sessions, and hands-on assignments, fostering a dynamic learning environment for participants. Renowned experts from various media backgrounds shared their insights on crafting compelling science narratives across diverse platforms.

### **Week 1: Harnessing the Power of Traditional and Digital Media**

The opening week started with a focus on leveraging traditional and digital media for science communication.

Shri Dipen Mazumdar, Faculty, National Academy of Broadcasting and Multimedia (NABM), Prasar Bharati, shared his experiences on “Communicating S&T information effectively via radio,” on

23 February 2024. He highlighted the power of this medium to reach diverse audiences nationwide. He elaborated on the activities of All India Radio to effectively communicate science to the public.

Ms Rakhee Bakshee, Communication Advisor at the Indian Institute of Public Administration (IIPA), addressed



From (L to R): Dr BK Tyagi, Dr Manish Mohan Gore, Shri Dipen Mazumdar, Dr Sujit Bhattacharya & Ms Rakhee Bakshee



From (L to R): Shri Kuldeep Dhatwalia, Shri Manoj Miankar, Dr Sujit Bhattacharya & Dr Manish Mohan Gore

the growing importance of short-form content in the digital age. Her talk, “The Role of Short Videos and Reels in communicating science,” emphasised the power of engaging, concise, and accurate content to capture audience attention. Ms Bakshee also highlighted the critical issue of misinformation on social media and the importance of fact-checking information to combat its spread.

Dr BK Tyagi, a renowned science communicator, presented “Communicating Science through Traditional Folk Media.” He explored the effectiveness of utilising familiar cultural expressions to connect with communities and promote scientific understanding. Dr Tyagi’s talk provided valuable insights into

how to approach, communicate, and present scientific information through traditional folk media platforms.

Shri Manoj Miankar, Programme Executive at All India Radio, shared his expertise in crafting captivating science narratives for the audio format on 26 February 2024. The “Crafting Compelling Science Narratives for Radio” session delved into the essential elements of vocal delivery, including voice quality, emotional quotient, and texture. Shri Miankar emphasised the importance of clear pronunciation, engaging delivery, and utilising modern spoken language to connect with diverse audiences and bring science stories to life for radio listeners.

## **Week 2: Leveraging Electronic Media and Refining Content**

Week two of the workshops focused on the potential of electronic media and best practices for science content creation.

The day began with a session by Shri Mohan Sagoriya, Associate Editor of “Electroniki Apke Liye” (Bhopal), on 1 March 2024.

Shri Sagoriya discussed the importance of carefully selecting and presenting S&T content for print media, particularly science magazines. He shared valuable insights on selecting and tailoring appropriate content for a lay audience.



**Shri Mohan Sagoriya discussed precautions while disseminating S&T content in print media**

Prof. Ranjana Aggarwal, Director of CSIR-NIScPR, underscored the significance of electronic media in bridging the gap between scientific research and the public. She emphasised the crucial role of science communication in fostering public understanding of scientific advancements.

Following Prof. Aggarwal's address, Shri Anjay Mishra, Programme Producer at Doordarshan New Delhi,

shared valuable insights on the effectiveness of science programmes on television. His talk explored techniques and tools to enhance science programmes' presentation and impact on electronic media. Shri Mishra further expressed a commitment to incorporating SMCC's science communication products into Doordarshan's programming, recognising their potential to amplify the reach and impact of science dissemination efforts.



**Prof. Ranjana Aggarwal, Director, CSIR-NIScPR, delivering an Opening remarks in the workshop**



From (L to R): Ms Suman Ray, Ms Priyanka Tiwari, Dr Ashok Selwetkar & Dr Manish Mohan Gore

On 6 March 2024, Dr Ashok Selwetkar, Assistant Director at CSTT, shed light on the role of technical terminology in S&T dissemination. His session included a training component that familiarised participants with the latest technical terminology on scientific words from the government's newly launched website. This interactive session taught attendees to accurately and effectively communicate complex scientific concepts using appropriate technical terms.

The afternoon session featured presentations by Ms Priyanka Tiwari, Programme Executive from All India Radio, and Shri Bharat Bhushan, Project Director of Doordarshan. Ms Tiwari's talk focused on effective techniques for broadcasting the scientific achievements of Indian laboratories on the radio platform. She also shared her journey on the radio and explained how science communication has flourished in radio.



Shri Bhushan's presentation explored innovative ways to disseminate science through social media. He addressed the growing importance of Artificial Intelligence (AI) in content creation for increased audience

engagement on social media platforms. Both presentations gave participants valuable insights into the latest trends and best practices for science communication across radio and social media.

### Week 3: Capacity Building and Fostering Public Engagement



Shri Debobrat Ghose delivering his talk at the orientation workshop

The final week of the workshops focused on capacity building and fostering public engagement with science.

The day commenced with a session by Shri Debobrat Ghose, Editor of *Science India Magazine*, on 8 March 2024. Shri Ghose discussed "The Basics of Popular Science Writing," illuminating the core principles of crafting engaging science narratives for the public. He paid homage to the legacy of JC Bose, a pioneering science fiction writer, highlighting the power of science fiction in sparking public imagination and interest in scientific exploration. Shri Ghose emphasised the importance of demystifying complex scientific research by translating scientific jargon into captivating narratives for a broader audience. He

advocated for close collaboration between science communicators and scientists to ensure accurate representation of scientific discoveries and perspectives.

Dr Sarah Hyder Iqbal, Consultant at Fast India (a non-profit organisation), delivered an interactive session titled "Science and Public Engagement." This session actively engaged participants through illustrative drawing and expressive writing exercises. Dr Iqbal's approach underscored the critical role of capacity building in science communication. By equipping individuals with the tools and knowledge to effectively communicate science, workshops like this empower participants to contribute to a more scientifically literate society.



Dr Sarah Hyder Iqbal delivering her talk at orientation workshop

### Overall Impact and Continuing Efforts

The CSIR-NIScPR's orientation workshops on science communication were a valuable platform for knowledge sharing and professional development for SMCC staff and PhD students. The workshops equipped participants with a comprehensive toolkit for communicating science effectively across diverse media

platforms, including traditional folk media, electronic media, print media, radio, and social media.

Workshops like these play a crucial role in bridging the gap between science and society, ensuring that the wonders of science are understood and celebrated by the public.

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