

CSIR IN MEDIA



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NEWS BULLETIN

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CSIR-NIScPR's 4th Foundation Day & 'STIIG-2025' International Conference Kicks Off to Refine R&D Indicators

CSIR-NIScPR, HRDG

15th January , 2025

The two-day International Conference being organized by CSIR-National Institute of Science Communication and Policy Research (NIScPR) on “Aligning Science-Technology-Innovation (STI) Indicators for Effective R&D Governance” (STIIG-2025) & commemoration of its 4th Foundation Day was inaugurated on January 14th 2025 at Vivekananda Hall of CSIR-NIScPR.



Prof. Ranjana Aggarwal, Director, CSIR-NIScPR during her inaugural address welcomed all the delegates and dignitaries and thanked them for their presence for this two-day event. She gave the overview of the conference and highlighted the significance of the foundation day of NIScPR (earlier NISCAIR and NISTADS) which has a combined legacy of more than 100 years. She elucidated the history of NIScPR which was formed 4 years ago after merging of CSIR-NISTAD and CSIR-NISCAIR. Prof. Aggarwal mentioned CSIR-NIScPR as the youngest and one of the most dynamic labs of CSIR & its role as think tank of Science communication and STI policy research. She also discussed about divisions and missions of CSIR-NIScPR like SVASTIK, TRL, NETRA, Creating livelihood opportunities in rural areas, ISSN, journals Publication division etc. She also remembered the role of Prof. Ashutosh Sharma while he was secretary of DST in 2020 in formulating STI policy around the country.

The guest of honor Dr. Suman Kumari Mishra, Former Director, CSIR-CGCRI, Kolkata and Adjunct Professor, IIT Ropar in her address thanked the NIScPR family for organizing conference on this important topic of Science Technology Innovation (STI) indicators. She also highlighted the role of NIScPR in societal development in S&T and memorize the role of

NIScPR's popular science magazines 'Vigyan Pragati' and 'Science Reporter' in disseminating science information to public since decades. She also said that "We have ample room for innovation, and scientists are willing to take risks".

Prof. Sachin Chaturvedi, Director General, Research and Information System (RIS) for Developing Countries and Guest of Honor in the inaugural session of the conference, presented 'Foundation Day Lecture' under the theme "Reimagining Science, Technology and Innovation Indicators: Towards Development Agenda for Viksit Bharat at 2047". He said that the world is changing, and new development priorities and targets are essential, so we must prepare for STI globalization. He also emphasized the role of Inclusion and Sustainability as key R&D indicators. Along with many aspects of STI, he said that the role of ethics, sustainable development goals, green growth, MSME connectivity, Wellbeing-related parameters, qualitative parameters and others should be included in indicators.

Prof. Ashutosh Sharma, President, INSA, Institute Chair Professor & C. V. Seshadri Chair Professor, IIT Kanpur and the Chief Guest of the conference during his address said, NIScPR's years of expertise have yielded excellent results in science communication and policy research. We need knowledge that impacts society through STI and it is not just about new technologies, but about cultural behavior towards science in society, therefore we require indicators to address this too. He added that the impact of AI and newer technologies is essential for future and in this regard, he highlighted the example of various multibillion industries that failed because they could not catch up with the advances of science like digital photography and personal computing. During his address, he also put key emphasis on translation of knowledge and wisdom into monetary terms or wealth and thus asked to add this parameter as an important indicator of evaluation.

After the insightful addresses, the dignitaries on the dais released the conference souvenir, three books, one special issue of Science Diplomacy newsletter and a special issue of Journal of Intellectual Property Right, all published by NIScPR. During the closing remarks of inaugural address, Shri Mukesh Pund, Chief Scientist, CSIR-NIScPR and Co-Chairperson,

STiG 2025 thanked all the participants. Prof. Sujit Bhattacharya, Chief Scientist, CSIR-NIScPR & Chairperson, STiG 2025 and other team members of core organizing team to make this event happen successfully. As a memoir, tree plantation under "Ek Ped Maa Ke Naam" initiative was also organized in which national and international experts planted trees in CSIR-NIScPR campus.

There were eight different sessions on the day one of the conference, some of which were parallelly organized in Vivekanand Hall and committee room. Session Chair, Prof. Akhilesh Gupta, Former Secretary of Science and Engineering Research Board (SERB) and Senior Advisor at Department of Science and Technology, Government of India, featured an engaging thematic overview of the session 1 on STI Indicators for R&D Governance. Insightful keynote address from distinguished speaker like Prof. Sujit Bhattacharya, Chief Scientist at CSIR-NIScPR, highlighted the critical need to align STI indicators with foresight and governance mechanisms and Prof. Oleg G. Golichenko, from CEMI Russian Academy of Sciences and Department of Industrial Organisation, Russia presented his keynote address on "Mesotrajectories of Technological Development: Aligning Science-Technology-Innovation Indicators". Prof. Vivek Kumar Singh, Senior Advisor (Science and Technology) at NITI Aayog, Government of India, delivered a talk on "Towards Performance-Based Research Funding: Institutional Expertise and Diversity Assessment." Prof. Singh emphasized the importance of robust STI indicators in driving performance-based funding models, which leverage institutional strengths and embrace diversity to enhance research output.

The 2nd session of Poster Presentations chaired by Dr. Charu Verma, Chief Scientist, CSIR-NIScPR and total 17 posters were presented in the session. The 3rd session was on the theme "Measuring the Social Impact of R&D". It was Chaired by Prof. Brajesh Pandey, Executive Director, INSA in which Dr. Ismael Rafols, Senior Researcher, Leiden University gave invited talk and paper presentations were given by Dr Shiv Narayan Nishad and others integrating with the theme of session.

A 4th panel discussion session on the theme "STI Indicators for R&D and Society" took place

in which the scientists like Dr. Nadia Asheulova from Russian Academy of Sciences, Dr. Naresh Kumar, Chief Scientist, CSIR-NIScPR and others had discussion on the proposed theme. The session was chaired by Prof. Vivek Kumar, Head, CRDT, IIT Delhi and moderated by Ms. Sandhya Wakdikar, CSIR-NIScPR & Dr. N K Sahoo, Scientist, CSIR-NIScPR. The panelists discussed the implementation of new protocols for research evaluation, need to evaluate individual scientists, rather than just organizational units and the need for careful consideration of SCI indicators at the international and national levels, especially with the emergence of new technologies like AI among others.

In the 5th session which has the theme Connecting R&D and social media, an invited talk by Dr. Pit Pichhapan, Digital Information Research Labs, Chennai, India was given on “The impact of measuring large vs small aggregate of research units” and papers were presented which were followed by questions and answers. The session was chaired by Prof. Madhav Govind, CSSP, Jawaharlal Nehru University.

Another 6th session, panel discussion was arranged on the theme STI Indicators for R&D and social media. The discussion was chaired by Prof. Ki-Seok Kwon, Hanbat National University, South Korea and moderated by Dr. Yogesh Suman, Chief Scientist, CSIR-NIScPR. During the panel discussion the panelist like Dr. Jagvir Singh, Head, Outreach & SAGE-NCS Ministry of Earth Sciences; Dr. Nisha Mendiratta, Executive Director, IUSSTF; Dr. (Mrs) Rama Swami Bansal, Head, ISTAD, CSIR-HQ; Dr. Geeta Vani Rayasam, Head, CSIR-HRDG; Dr. Rashmi Sharma, Head, NCSTC Division, DST; Dr. Hemant Kumar, DSSTIP, Central University of Gujarat; Dr. G. Mahesh, Head, DGED, CSIR-HQ; Dr. Anukrati Sharma Director, Skill Development Center, University of Kota, Rajasthan discussed the pros and cons of Altmetrics in research, funding decisions, societal development and other important aspects of policy making. They concluded that social media is important aspect and efficient way to connect, research should be evaluated based on local needs and language-based science policy should be made to broaden access to research activities.

The last two sessions (session 7 and 8) were both based on the theme Methods, Approaches

and Practices in Performance Evaluation. They were parallel sessions which were chaired by Dr. Arvind C Ranade, Director, National Innovation Foundation (NIF) and Dr. Vipin Kumar, Chief Scientist, CSIR-NIScPR. During the sessions, around 13 presentations were made where leading experts discussed cutting-edge strategies and metrics on how social media and R&D together can impact the society in various ways. Overall, the 1st day of the conference witnessed high enthusiasm and excitement among the participants, which was evident by their active participation and involvement with the speakers and panelists.

an h-index of 71, an i10-index of 370, and over 19,500 citations. A recipient of the Padma Shri (2016), Prof. Yadav is one of the few Indians to be elected to two prestigious U.S. academies: National Academy of Engineering (NAE) – among only 23 living Indians to receive this honor, and National Academy of Inventors (NAI) only the second Indian ever to achieve this distinction.

Prof. Yadav's numerous accolades include the Bharat Ratna Dr. A.P.J. Abdul Kalam Award for Science & Technology (2022), the SASTRA C.N.R. Rao Award (2024), and the Advantage India Chemical Conclave Award (2024) for his unmatched contributions to academic research and industrial innovation. He was named among Asia's Top 100 Scientists by Asian Scientist Magazine (2023) and honored with the Excellence in Catalysis Research Award (2023) by the Association of Catalysis Societies of Asia-Pacific.

In addition to his academic achievements, Prof. Yadav is a sought-after corporate advisor, serving as an Independent Director on the boards of seven leading companies, including Godrej Industries, Clean Science & Technology, Meghmani Organics, Bhageria Industries, Astech Lifesciences, and Dorf Ketel Chemicals India. He previously held board positions with Aarti Industries and Survival Technologies.

Prof. Yadav also plays an active role on the editorial boards of leading international journals and has received multiple lifetime achievement awards. Currently, he serves as the President of the Indian Chemical Society during its centennial jubilee year.

NEERI's findings cast shadow on construction work along Kumbalgarh's Lakhela lake catchment area

CSIR-NEERI

14th January , 2025

Lakhela lake's catchment area in Rajasthan's Kumbhalgarh Wildlife Sanctuary has witnessed a surge in construction activity over the past decade, a survey conducted by the Council of Scientific and Industrial Research (CSIR)'s National Environmental Engineering Research Institute (NEERI) has revealed.

In a report submitted to the Supreme Court last week, NEERI presented the findings of its "change-detection study" of the eco-sensitive zone, indicating that the built-up portion in the lake's eco-fragile area constitutes close to three percent of the total area of the catchment zone. According to the report, the total catchment area spans approximately 13.662 square kilometres.

Under the River Conservation Zone (RCZ) Regulations, 2015, and the Environment Protection Act (EPA), construction activity is prohibited in the catchment zone to prevent pollution of the water body, reduce the risk of flooding in the region, and, in turn, avoid damage to the local ecosystem.

While the NEERI report says that the built-up portion constitutes about three percent of 13.662-square-kilometre catchment area, it also reveals that less than one percent of the zone is occupied by the water body, indicating "a minimal presence of water". More than 44 percent of the total area comprises barren land, while agriculture is practised on 6.86 percent, suggesting moderate cultivation and farming activity around the water body. Vegetation covers approximately 45 percent of the land. NEERI's analysis of the lake's submergence area showed that construction activity around the lake began after December 2010. "The analysis of the satellite data of the submergence area of the lake indicates that part of the submergence area has been replaced by built-up area in November 2019 and April 2023," the report said.

The extent of the built-up area that has replaced the lake water can be accurately assessed through a professional surveyor, NEERI has submitted to the top court. NEERI's report is part of a pending case in the top court concerning unauthorised construction in the eco-sensitive zone of the Kumbhalgarh Wildlife Sanctuary in Rajasthan. The case relates to private constructions, including hotels and landscaped developments, in the fragile area.

Interestingly, one of the hotels in the area is a state government-owned property—Kumbhalgarh Yatri Niwas. The petition in the Supreme Court has raised concerns about violations of environmental regulations by these illegal buildings and their impact on the sustainability of the lake and its surroundings.

NEERI's report confirms the existence of unauthorised structures in the catchment area, as highlighted in the petition before the top court. These findings could have significant implications for ongoing and existing projects in the region. During last week's hearing, a bench of Justices Abhay S. Oka and K.V. Vishwanathan sought the Rajasthan government's input on NEERI's report.

Representing the state, additional advocate general Shiv Mangal Sharma informed the court that all stakeholders would be consulted before submitting a final response. Taking note of Sharma's submissions, the bench set a three-week deadline for Rajasthan to respond to NEERI's report and scheduled 14 February as the next hearing date.

Speaking to ThePrint, Sharma said NEERI's findings form the basis for ongoing deliberations about balancing ecological preservation with development needs in the sensitive area. "We shall look into the NEERI report and give a response."

However, the counsel acknowledged that a Supreme Court decision based solely on the report's findings could have far-reaching implications for ongoing construction projects in Kumbhalgarh's eco-sensitive zones. "That's why the court wants the state to step in."

Published in:

[Theprint](https://theprint.in)

How DNA detectives are unmasking wildlife crime in India

CSIR-CCMB

13th January , 2025

A recent investigation¹ revealed that dried animal parts, sold under the guise of *Martynia annua* roots used in occult practices, were actually the processed male gonads of Bengal monitor lizards. This revelation led to the prosecution of poachers in Tamil Nadu who had disguised the illegal animal organs as plant material, according to researchers.

Experts say the use of forensic genetic evidence is becoming a powerful tool for securing convictions in wildlife crimes. Specialized protocols for DNA extraction and amplification are enabling investigators to identify illegal samples, even when the original specimens are severely degraded or altered.

The fraudulent trade centres on *hatha jodi*, items resembling hands clasped in prayer, which are believed to bring prosperity. Instead of the genuine roots of the *Martynia annua* plant, poachers harvest the forked penises of monitor lizards and sell them at high prices as a substitute. Traders further modify the material to make it look like plant roots, adding another layer of complexity to its identification.

The challenges of identifying such specimens are compounded by the degradation of genetic material over time. “Dried specimens present unique difficulties,” says C. Bala Amarnath of the Centre for Wildlife Forensic Sciences at the Advanced Institute for Wildlife Conservation (AIWC) in Tamil Nadu. Amarnath, who co-authored the study, explained that researchers developed a modified DNA extraction protocol to overcome these challenges.

“Traditional nucleic acid extraction typically involves breaking down tissues or cell membranes mechanically or enzymatically to isolate nuclear material. When dealing with unknown levels of DNA damage or chemical contamination, we pre-treat samples with specific chemicals and enzymes before the lysis step,” he explains.

The team successfully amplified the cytochrome b gene from the extracted DNA. Found in mitochondrial DNA (mtDNA), this gene is critical for mitochondrial function and is widely used for species identification. Unlike nuclear DNA, mtDNA exists in multiple copies per cell, making it more abundant and easier to analyze in degraded samples. Researchers also compared species-specific patterns in the control region of the mtDNA to established DNA databases for precise identification.

Amarnath notes that wildlife crimes often involve a wide range of species. “We regularly receive samples from elephants, tigers, leopards, bears, and even hares, poached for their skin, meat, and claws,” he says.

The use of genetic evidence is gaining traction among Indian authorities. Conservation geneticist Ajay Gaur, leading wildlife DNA forensics at CSIR-Centre for Cellular & Molecular Biology, Hyderabad, highlights the judiciary’s growing support for DNA-based evidence in wildlife crime cases.

Gaur’s lab analyzes 500 to 600 samples annually, including meat, skin, tusks, bones, claws, nails, hair, blood, and saliva swabs. “Sample-specific treatments are especially useful for extracting high-quality DNA from degraded or poorly stored biological specimens,” he notes.

However, the success of such analyses also depends on proper field methods for sample collection, preservation, and transportation. Gaur and his team have been training forest department staff to preserve samples more effectively. In the absence of laboratory-grade chemicals, they recommend using table salt to preserve tissue samples. “We advise against using formalin, which, while an excellent preservative, is the worst enemy of DNA,” he says. Efforts are also underway to build a comprehensive in-house DNA reference database for Indian species, which will strengthen forensic investigations. Gaur takes pride in the lab’s role in bringing poachers to justice. “We unravel cases in the lab. It’s deeply satisfying when we hear about prosecutions based on our findings,” he says.

Published in:

[Nature](#)

CSIR-NIScPR is organizing two day International Conference on “Aligning Science-Technology-Innovation Indicators for Effective R&D Governance” from January 14th-15th 2025

CSIR-NIScPR

10th January , 2025

The two day international conference is being organized by the National Institute of Science Communication and Policy Research (NIScPR), a constituent laboratory of the Council of Scientific and Industrial Research (CSIR). The conference will be Commemorating the institute's 4th Foundation Day Celebrations. NIScPR focuses on science communication and evidence based policy studies, acting as a bridge between science, technology, industry and society. The two-day conference intends to bring together leading experts, policymakers, scholars, researchers to discuss the emerging issues in contemporary research and challenges in performance evaluation for R&D governance. The conference will have the following key themes: Methods, Approaches, and Practices in Performance valuation, Open Science, Open Source & Open Access, Measuring the Social Impact of Connecting R&D and Social Media, and Foresight in R&D Governance. The conference will also deliberate upon how in more robust ways performance and impact of government programs can be captured, the critical inputs that can strengthen these initiatives.

The conference is expected to be attended by 300 participants with leading experts from India and abroad speaking on different sessions of the conference. Many young researchers will presenting papers and posters. India's top scientists and policy makers will address the conference. Prof. Ashutosh Sharma, President, INSA, Institute Chair Professor & C. V. Seshadri Chair Professor, IIT Kanpur, Former Secretary, DST, Govt. of India will deliver the Chief Guest address. Prof. Sachin Chaturvedi, Director General, Research and Information System for Developing Countries (RIS) will deliver the Foundation Day Lecture.

Experts from the NITI AaYOG, Office of the Principal Scientific Advisor to the Govt. of India, and from reputed academic institutions will address this conference. Along with keynote and invited talks, there will be panel sessions and paper presentations. International experts speaking on the conference will be from France, Russia, South Korea, the Netherlands, Brazil,

Australia, and Armenia. Science councilors from Germany, Mexico and The Netherlands will also attend and be on the panel. Conference is structured to bring diversity and involve the participants in engaging discussions through keynote and invited talks, panel sessions among others.

The conference is expected to bring out novel methods and practices for performance evaluation and impact assessment of R&D. It will bring out some key policy suggestions of how R&D governance, access and inclusion can be strengthened by proper application of the STI indicators. The deliberations on new initiatives like PM One-Nation-One-Subscription will also be reflected in the final document. The conference will expose young researchers to various nuances of evidence based policy making, the tools and techniques and shaping their research to address developmental challenges. The outcome of the conference will be published in different formats, from a dedicated special journal issue to a policy bulletin and book proceedings.

CSIR-NIScPR organizes International Conference on STI and R&D Governance on its 4th Foundation Day

CSIR-NIScPR

13th January , 2025

The National Institute of Science Communication and Policy Research (NIScPR) is set for two day international conference on 14th and 15th January 2025. The theme of the conference is “Aligning Science-Technology-Innovation Indicators for Effective R&D Governance”. NIScPR is a constituent laboratory of the Council of Scientific and Industrial Research (CSIR). The conference will be commemorating the institute’s 4th Foundation Day Celebrations. NIScPR focuses on its key objective of science communication and evidence based policy studies and this institute acts as a bridge between science, technology, industry and society. The two-day conference will bring together leading experts, policymakers, scholars, researchers to discuss the emerging issues in contemporary research and challenges in performance evaluation for R&D governance.



India's top scientists and policymakers will address the conference. The welcome address will be delivered by Prof. Ranjana Aggarwal, Director of CSIR-NIScPR. Prof. Ashutosh Sharma, President of Indian National Science Academy (INSA), Chair Professor, and C. V. Seshadri Chair Professor at IIT Kanpur, and Former Secretary of Department of Science and Technology, Government of India will deliver the chief guest address. Prof. Sachin Chaturvedi, Director General of the Research and Information System for Developing Countries (RIS), will deliver the Foundation Day Lecture on day one.

The conference will feature five key themes, each coordinated by a chief coordinator: Dr. Sujit Bhattacharya for Methods, Approaches, and Practices in Performance Evaluation, Shri

MukeshPund for Open Science, Open Source, and Open Access, Dr. Naresh Kumar for Measuring the Social Impact of Connecting R&D, Dr. Yogesh Suman for Connecting R&D and Social Media, and Dr. Vipin Kumar for Foresight in R&D Governance. The conference is expected to be attended by 300 participants with leading experts from India and abroad speaking on different sessions of the conference. Many young researchers will be presenting papers and posters.

Experts from the NITI Aayog, Office of the Principal Scientific Advisor to the Govt. of India, and from reputed academic institutions will address this conference. Along with keynote and invited talks, there will be panel sessions and paper presentations. International experts speaking on the conference will be from France, Russia, South Korea, the Netherlands, Brazil, Australia, and Armenia. Science councilors from Germany, Mexico and The Netherlands will also attend and be on the panel. Conference is structured to bring diversity and involve the participants in engaging discussions through keynote and invited talks, panel sessions among others. Prof. Venu Gopal Achanta, Director of CSIR-National Physical Laboratory will grace the valedictory session of the conference. The summary of the conference will be delivered by Dr. Sujit Bhattacharya, Chairperson of the International Conference and Chief Scientist, CSIR-NIScPR. Dr. AvinashKshitij, Principal Scientist, CSIR-NIScPR is the Convenor of the international conference.

The conference is expected to bring out novel methods and practices for performance evaluation and impact assessment of R&D. It will bring out some key policy suggestions of how R&D governance, access and inclusion can be strengthened by proper application of the STI indicators. The deliberations on new initiatives like PM One-Nation-One-Subscription will also be reflected in the final document. The conference will expose young researchers to various nuances of evidence based policy making, the tools and techniques and shaping their research to address developmental challenges. The outcome of the conference will be published in different formats, from a dedicated special journal issue to a policy bulletin and book proceedings.

Published in:

[Pib](#)

Challenges and Opportunities in Biodegradable Polymers

CSIR-NIIST, NCL

13th January , 2025

The ongoing PLASTO 2025 event hosted a highly insightful panel discussion centered on the challenges and opportunities in biodegradable polymers, a subject of growing global importance. The panel shed light on the socio-ecological challenges posed by non-biodegradable plastics and explored solutions involving biodegradable and compostable polymers derived from both synthetic and agricultural feedstocks.



The discussion acknowledged the pressing need for alternatives to conventional plastics, which are non-biodegradable, non-compostable, and generate waste that is difficult to manage, often resulting in severe environmental problems. While methods like landfilling and incineration are commonly used, they pose significant ecological risks. Biodegradable polymers, such as polylactic acid (PLA), emerged as the need of the hour, though their high production costs remain a major barrier to widespread adoption.

Key Highlights of the Panel Discussion

The panel featured prominent scientists, industry leaders, and policymakers who discussed the journey towards producing affordable biodegradable polymers and making them accessible to the masses: Dr. Kumbhar from Praj Industries highlighted the production of biodegradable polymers such as PLA in Maharashtra and their application in packaging.

Dr. Sachin Jain from Skyi FKUR Polymers shared his collaborative efforts with a multinational corporation to develop biodegradable polymer applications for both Indian and international markets.

Dr. Jadia from ERRL Mumbai, the government-authorized laboratory for testing and certifying biodegradable polymers, explained their role in ensuring compliance with Indian market standards.

Dr. Kundu from CSIR-NIIST Trivandrum emphasized advancements in testing methods for biodegradable polymers.

Dr. Paresh Dhepe from CSIR-NCL Pune discussed the innovative use of agricultural waste as feedstock to produce monomers for polymer production.

The session was moderated by Dr. Harshawardhan Pol, Senior Principal Scientist at CSIR-NCL Pune, who also delivered the vote of thanks.

Discussion on Plastic Recycling and Environmental Impact

Another panel focused on the recycling of plastics and its environmental implications. This session was moderated by Dr. Samir Chikkali, Senior Principal Scientist at CSIR-NCL Pune.

Panelists included:

Dr. Medha Tadpatrikar from Rudra Envisolutions, who addressed innovative recycling solutions.

Swapan Ray from ICP Mumbai and Rajiv from Swach shared insights on local recycling initiatives.

KRS Narayanan from Reliance Industries Ltd. Mumbai and Shriniwas Adhe from Padcare discussed corporate strategies for sustainable plastic management.

Dignitaries in Attendance

The event was graced by several dignitaries, including Anil Naik, President of the Association for Promotion of Plastics (APP), Ajay Zod, Chairman of PLASTO 2025, and industry leaders like Sankarraman, Pranav Belhekar, Anand Kumbhojkar, Raj Mirje, Gopal Dhage, and Sanjay Mehere, all associated with APP.

The discussions at PLASTO 2025 not only highlighted the challenges of transitioning to biodegradable polymers but also showcased promising advancements and collaborative efforts to address the global plastic crisis.

Published in:

Punekarnews

Evaluation of Steel Wire Rope need of hour: Experts

CSIR-CIMFR

12th January , 2025

A one day workshop on “Advances in Non-Destructive Evaluation of Steel Wire Rope in Mining and Aerial Installations: Theory and Practice” organised jointly at CSIR-CIMFR and ASNT India NDT Network concluded on Friday late evening here. The event was attended by representatives from various ropeway construction and operation industries of the country including DGMS, BCCL, BIS, wire rope manufacturing industries, American Society of Non-Destructive Testing, experts from the field of non-destructive evaluation and students from various research institutes.

Deputy Director General (Mechanical), Directorate General of Mines Safety D.B. Naik inaugurated opening session and Shri Prakash Gokulnandam, Director and General Manager, American Society for Non Destructive Testing India was the special guest. Director of CIMFR Prof. Arvind Kumar Mishra welcomed the dignitaries on the dais and all the distinguished guests and members of the Institute present in the auditorium Prof. Mishra said - With the expansion of mining operations and the rapid construction of ropeways under the Government's Parvatmala Yojana across India, the role of steel wire ropes has become extremely important for safe, efficient operations in the field of mining and air transport. Currently, ropeways are being constructed in various areas across the country, which provide access to remote areas and also facilitate the transportation of materials to mining sites. This development underlines the need for robust non-destructive evaluation (NDE) methodologies to ensure the integrity and longevity of steel wire ropes. Advanced NDE technology will not only improve operational safety, but will also prove to be helpful in the maintenance and inspection of essential infrastructure. Establishing indigenous standards and best practices in wire rope NDE is an important step towards achieving self-reliance in this sector.

He drew attention to the growing innovation and increasing use of ropeways in mining and aerial installations. Prof. Mishra explained the critical role of ropes in underground mining,

ropeways and bridges, highlighting the importance of safety, integrity and cutting-edge research. He also emphasized the need for smart, AI-driven and machine learning-based solutions in NDT and encouraged sharing of interdisciplinary knowledge. He urged the participants to carry out research that will not only benefit the industry but also contribute to the global future.

Dr. Debashish Basak, Advisor and Chief Scientist of the workshop, explained the objective of the workshop and said, " we all have gathered here to discuss a very important topic for safety, reliability and innovation in our respective industries.

Guest of Honour, Prakash Gokulanandam, complimented CIMFR for organising this successful workshop and noted the significant advances being made in NDT technologies, particularly their application to steel wire ropes. Shri Gokulanandam also spoke about the important role of ASNT India in promoting NDT and its importance in various industrial sectors. Established as a professional society dedicated to the development of NDT technologies and methodologies, ASNT India provides a platform for industry professionals to collaborate, exchange knowledge and contribute to the development of NDT in various industries.

The souvenir of the workshop was also released by the scholars present on the stage.

Japanese mint cultivation expanded to 40 acres in Koraput

CSIR-CIMAP

11th January , 2025

To ensure economic growth of farmers, the Koraput administration has expanded the cultivation of Japanese mint to 40 acres across Pottangi, Narayanpatna and Bandhugaon blocks by involving over 75 tribal farmers. This initiative follows a successful experimental cultivation of the herb that sparked interest among local farmers. The expansion is supported by the CSIR-Central Institute of Medicinal and Aromatic Plants



(CIMAP), Lucknow, with Rs 45 lakh funding from the District Mineral Fund (DMF) over three years in collaboration with Odisha Rural Development and Marketing Society (ORMAS).

"In Jan 2023, two varieties of Japanese mint — Kosi and Kranti — were introduced on an experimental basis. The encouraging response from farmers led us to expand cultivation to more areas," said Roshan Kartik, deputy director of ORMAS, Koraput.

Unlike the common kitchen herb 'pudina', Japanese mint is harvested during the lean period between paddy and maize cultivation. It has versatile uses in food flavouring, medicine, confectionery, pan masala, soft drinks and pharmaceuticals. A recent batch of 500 grams of mint from Kondapadi village was sent to CIMAP for laboratory testing to assess its suitability for applications like chewing gum. Upon approval, the cultivation may be expanded further.

The crop is yielding promising results, with one acre producing three tonnes of fresh biomass and 40 to 55 litres of oil. Mint oil is sold at market prices ranging from Rs 1,300 to Rs 1,500

per litre, ensuring good returns. The project also includes installation of a mint oil extraction unit at Sipaiput. Each acre is projected to generate a net income of around Rs 35,000. "We are confident that mint cultivation will not only improve the livelihood of tribal farmers but also establish Koraput as a key player in the aromatic plants market," said Kartik.

NBRI's rose and gladiolus show on Jan 18, 19

CSIR-NBRI

11th January , 2025

If roses and gladiolus varieties attract you, do plan a visit to NBRI Rose and Gladiolus Flower Show on Jan 18 and 19.

"Apart from beautiful and distinct rose and gladiolus blooms, visitors will get to view NBRI's unique plants such as scarce varieties of pitcher, species of aloe vera, cactus, and others too. Visitors can also purchase plants as commercial stalls and plant sale stalls will also be present," said NBRI spokesperson Rajat Raj Rastogi.

"We have a good collection of aloe vera plants, including the NBRI-Nihar variety. The NBRI-Nihar variety is a clonal selection that produces more gel than other aloe vera plants and is less susceptible to fungal and bacterial diseases. Also, we have the golden barrel cactus, which is a species of barrel cactus endemic to east-central Mexico," Rastogi said.

Plant lovers can visit to view NBRI's collection from 2pm to 5.30pm on Saturday (Jan 18), while on Sunday (Jan 19), it will be open from 10 am till 5.30 pm.

Ocean fishing potential under-exploited, says scientist at NIO event

CSIR-NIO

11th January , 2025

The potential for fishing, especially deep Ocean fishing, is under-exploited vis-a-vis the exploitable marine resources available, according to Shailesh Nayak, a senior scientist who was delivering a public lecture on 'Blue Economy' at NIO's 60th Foundation Day celebrations on Friday.

"Of the species-specific forecast of the potential for tuna, only 12% of it is harvested," said Nayak, who heads the National Institute of Advanced Studies, Bengaluru and has also been interim chairman of ISRO in the past.

To make fishing more efficient, Nayak said technology is now developed to identify areas that have high levels of the algal blooming phenomenon where the catch is doomed to be poor.

"Satellite-based advisories depending upon availability of food (Chlorophyll) and environmental conditions and currents are dished out daily," Dr Nayak said, adding that these are disseminated to the fishing community in local languages and also through the internet and apps.

India's potential yield estimates are 5.31 million tonnes and fishery accounts for only 3.8 million tonnes even as 91% of the fish stock is healthy and 87% is sustainable in India waters, he said.

Meanwhile, Dr Nayak said harvesting freshwater from the sea could be the next big thing in India's blue economy with two low temperature desalination based plants in Lakshwadeep in operation. Six more plants are under construction and these could be replicated along the coast, he said as costs are as low as 10 paise per litre. Dr Nayak also said that off-shore plants will now be experimented with a project report of a 10 MLD capacity plant already prepared.

Harnessing ocean energy would be critical as the industrial world is increasingly on the lookout for 'clean energy' to replace the traditional fossil fuels, he said adding that off-shore wind energy farms is another area of potential.

Earlier, chief scientist at CSIR-NIO Dr Sanil Kumar underscored the growing importance of oceans in both the global and Indian economy, particularly in relation to the blue economy.

“The oceans will play an increasingly vital role in both the global and Indian economy, especially in terms of the blue economy. With climate change impacting ecosystems, it is essential that we continue to deepen our understanding of these shifts and their effects on biodiversity. Our work has never been more crucial and we remain committed to advancing scientific research to address these pressing challenges,” he said.

Kumar said, NIO marks six decades of advancements in ocean sciences and technology and on the occasion of the diamond jubilee appreciate our achievements and look to future challenges and opportunities.

Secretary Ministry of Earth Sciences (MoES), New Delhi, Dr Ravichandran also delivered a lecture on the challenges and opportunities of the Oceans and director general of CSIR, Dr N Kalaiselvi presided over the celebrations.

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