

# CSIR IN MEDIA



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**NEWS BULLETIN**

**06 TO 10 JANUARY 2024**





## More extreme rains likely in future due to warm temperatures: UoH study

CSIR-4PI

10<sup>th</sup> January , 2023

In the future, there could be a decrease in cloud cover along with an increase in cloud water content, suggesting a shift in the cloud type to more convective clouds resulting in extreme rains. It means the Indian summer monsoon season is expected to have short bursts of convective rains leading to extreme rainfall events but drier conditions for most days. In the latest study by the University of Hyderabad (UoH) - Centre for Earth, Ocean and



Atmospheric Sciences (CEOAS), researchers have showed that global warming is leading to extreme climates like intensification of heavy rainfall events.

The study - 'Precipitation Scaling in Extreme Rainfall Events and the Implications for Future Indian Monsoon: Analysis of High-Resolution Global Climate Model Simulations' covers the topic of extreme rainfall events and their changing dynamics due to climate change at the end of the 21st century and it centres around the sensitivity of very extreme rainfall events to warmer temperatures.

Dr. Stella Jes Varghese, currently working as a Science and Engineering Research Board (SERB) national post-doctoral fellow at CEOAS carried out the research under the mentorship of Ashok Karumuri. It is also collaborative research involving scientists from CSIR Fourth Paradigm Institute, Indian Institute of Technology (IIT) Bombay and Meteorological Research Institute (MRI), Japan, including Sajani Surendran, Kavirajan Rajendran, Subimal Ghosh and Akio Kitoh. The study analysed the impact of climate change on the water-holding capacity of the atmosphere and found that warming exacerbates the intensity of rain events.



The scaling of extreme rainfall with temperature showed a clear shift in the peak temperature suggesting more very extreme rainfall events. The research anticipates that the altered radiative forcing due to global warming will not only heat the upper atmosphere but also stabilise it, offsetting the effect of increased humidity on precipitation intensity.

Researchers utilised outputs from both present-day climate simulations and future climate change projection experiments using a high-resolution global climate model of Japan. They pointed out that the intricate relationship between changes in temperature, humidity and extreme rainfall events has been established in the study.

Hence, understanding the dynamics of extreme rainfall events is crucial for climate adaptation and mitigation strategies. Findings from the study emphasise the need for proactive measures to address the potential impacts of climate change on precipitation extremes.

The current study utilised model outputs from a single climate model and Further work needs to be done by incorporating runs from different high-resolution models for a more robust result, said an official release on Tuesday.

The study was published in the latest issue of Geophysical Research Letters (<https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2023GL105680#main1>), added researchers.



## Dir CSIR-IIIM inaugurates 7-day workshop in Jammu

CSIR-IIIM

09<sup>th</sup> January , 2023

A seven-day workshop sponsored by SERB, DST under the Accelerate Vigyan Scheme started at CSIR-Indian Institute on Integrative Medicine Jammu, today.

The workshop is designed to focus on latest trends in scientific, medical and regulatory writings: upscaling skills in science communication and bridging the gap between academia and industry.



The workshop was inaugurated by Dr. Zabeer Ahmed, Director, CSIR-IIIM, Jammu. In his inaugural address, the Director emphasized the importance of effective science communication and outreach for better translation of research and technological advances.

He highlighted the pivotal role of CSIR-IIIM for implementation of the broader domain of scientific and technological outreach initiatives in for over all societal development like CSIR Aroma Mission, CSIR Floriculture Mission and other scientific programmes including the current science communication workshop.

He also highlighted the importance of the translational research, for its importance in the present context of scientific discoveries and need for novel innovations and their deployment for the betterment of society and national progress.

He commended the organizing committee of the workshop for devising an impactful workshop and enthused participants. Around 25 participants including PG and PhD students belonging to various specializations life Sciences and Pharmacy from all different parts the



country are participated in the week long workshop. The workshop will feature various sessions on science communication, medical and regulatory writing and expert technical lectures from the eminent resource persons from industry and academia. Earlier the welcome address was given by Dr Love Sharma Scientist RMBD&IST CSIR IIIM and coordinator of the programme.

He also briefed about the details of the workshop being organised under the patronage of Dr. Zabeer Ahmed, Director CSIR-IIIM, Jammu and Er. Abdul Rahim, Head RMBD&IST.



## **Conclave on Autonomous Technology and Systems (CATS-2024) organized by Institute of Defence Scientists & Technologists and Research and Development Estt. (Engrs) DRDO**

CSIR-NIO

09<sup>th</sup> January, 2023

Pune- Institute of Defence Scientists & Technologists and Research and Development Estt. (Engrs), DRDO is conducting seminars and exhibitions on the latest technology and systems to promote scientific research, technology, and systems development and innovation. Various experts and manufacturing companies working in these fields are coming together on this occasion. This exhibition will be held at the DRDO's Dr. APJ Abdul Kalam Auditorium at Pashan and will be an invitees-only event. Modern defense products in the field of submarines, tanks, aircraft, and drones can be seen here. The exhibition will be inaugurated on January 11 (Thursday) at 9 am by Dr. Shailendra V Gade, Director General ACE (Armament and Combat Engineering Systems, DRDO). In the presence of Research and Development Estt. (Engrs) Director Dr. Makarand Joshi this meeting will be held. The main objective of the program is to showcase the upcoming technological trends in the defense sector and to encourage academic institutions, industries, and startups to develop indigenous defense technology, information by Dr. Desai Bapurao Sarvade will be given.

The utilization of autonomous systems by users in paramilitary, disaster management, etc. will be discussed extensively. Designers from national research institutes like DRDO, ISRO, BARC, CDAC, CSIR, NIO, NIOT, etc. will be present to showcase their needs and ambitions as well as discuss eminent academics doing research in this field. The exhibition is organized to depict India's capability to forge defense materials to become militarily self-reliant.

**Published in:**

[Punekarnews](http://Punekarnews)



## Madras High Court asks litigants to approach NGT to determine distance criteria between stone crushing units

CSIR-NEERI

09<sup>th</sup> January, 2023

The Madras High Court on Tuesday asked a batch of litigants to approach the National Green Tribunal (NGT) challenging Tamil Nadu Pollution Control Board's July 31, 2019 notification which relaxed the 2004 requirement of maintaining a distance of one kilometre between stone crushing units.

Chief Justice Sanjay V. Gangapurwala and Justice D. Bharatha Chakravarthy granted 10 days' time for the litigants before the High Court to approach the NGT and said, an interim stay granted by the High Court in September 2019 to the TNPCB's notification would expire after the period of 10 days. Though Advocate General R. Shunmugasundaram requested the court to not extend the interim stay since it was granted prior to a study conducted by the Council of Scientific and Industrial Research-National Environmental Engineering Institute (CSIR-NEERI), the judges said, they had extended it only for a limited period.

The A-G also told the court that the CSIR-NEERI study, conducted with respect to air pollution caused by stone crushing units in Tamil Nadu, had concluded that there was no need to prescribe any distance criteria between the stone crushing units and that they could function even in clusters.

He said CSIR-NEERI had prescribed a safety distance of 500 metres only between the stone crushing units and national/State highways, inhabited sites, educational institutions, public offices, places of religious importance and so on in order to avoid the influence of dust emission. However, Senior Counsel T. Mohan, representing the litigants, claimed that the study report was wrong.

**Published in:**

[The Hindu](https://www.thehindu.com)



## College prof gets green Technology award

CSIR-NBRI

09<sup>th</sup> January, 2023

Kuldeep Yadav of Gandhi Memorial National College, Ambala Cantonment, has been conferred with “Green Technology Innovative Award 2023” by the National Academy of Environmental Sciences, New Delhi, at the CSIR-National Botanical Research Institute, Lucknow, Uttar Pradesh.

As per a press note issued by the college, Yadav is working as the head, department of botany at Gandhi Memorial National College.

He has contributed extensively in the fields of plant biotechnology, molecular biology, and mycology. He has published more than 65 research papers in journals of international repute and has also authored eight book chapters. Recently, he has published two Indian patents on extraction and separation of compounds from valuable medicinal plants in collaboration with other institutions.”



## Pune reported 150 cases of JN.1 variant

CSIR-NEERI

09<sup>th</sup> January, 2023

Rapid testing and genome sequencing at Pune's key laboratories of B J Government Medical College and Indian Council of Medical Research – National Institute of Virology among others has helped quickly identify the JN.1 covid variant.

According to the state health department, Pune has identified at least 150 cases of JN.1 Covid variant of the 250 cases reported so far from across Maharashtra.

The state has identified other laboratories like the Council of Scientific and Industrial Research – National Environmental Engineering Research Institute (CSIR-NEERI) at Nagpur, apart from Haffkine Institute and Kasturba Hospital for infectious diseases in Mumbai.

While the testing has increased in the state, the number of samples that are Covid-positive are sent for genome sequencing to identify the strain. According to Dr Rajesh Karyakarte, genome sequencing coordinator of Maharashtra, JN.1 is has replaced all Covid variants and is now the dominant strain. “However, it is important to note that this is a mild infection with no major uptick in hospital admissions,” Dr Karyakarte told The Indian Express.

In Pune, samples are sent from the network of private laboratories, apart from municipal and state health authorities. Samples from other places are also sent to Pune's labs and further for genome sequencing, which has helped identify as many as 150 JN.1 variant cases in Pune.

Dr Radhakrishna Pawar, who has the additional charge as joint director of health, Maharashtra, said a total of 2,728 Covid tests were conducted in the state on Monday. Till January 7, there were 891 patients with Covid, of whom 850 were in home isolation while 41 were hospitalized. Of these, 15 are in intensive care.

In the Mumbai circle there are 409 Covid patients while there are 207 patients in the Pune



circle (which includes Pune rural, areas under the Pune Municipal Corporation and the Pimpri Chinchwad Municipal Corporation, Satara and Solapur). On Monday, a total of 61 new cases were identified in the state.

Meanwhile, a rapid clinical study of patients affected with JN.1 Covid variant found that fever, cold and cough were the prominent symptoms. At least 100 patients were included in the study to assess clinical manifestations, of whom only 60 responded.

According to researchers at B J Government Medical College, the study found that it was a mild infection and other symptoms reported included myalgia, headache, sore throat, fatigue, breathlessness, vomiting and chest pain.



## Hyderabad: 30 young doctors enriched in Life Science Research at CCMB's MedSRT program

CSIR-CCMB

08<sup>th</sup> January , 2023

A total of 30 young doctors from across the country participated in the two-week Medical Students Research Training (MedSRT) program, aimed to familiarize medicos with cutting-edge life science research being taken-up at Hyderabad-based Centre for Cellular and Molecular Biology (CCMB). The program is specifically designed for medical students, who are provided training on research methodologies through a series of lectures and hands-on experiments. During the course of the training program, the young doctors also got exposed to concepts like scientific ethics, good laboratory practices, bio-safety and first-hand experience of working at various research facilities at CCMB and its Annexes.



The participating doctors also received certificates from CCMB after successful completion of the training. According to CCMB, the exposure to various tools related to life sciences is very important for physicians, as they are increasingly becoming commonplace in medicine. The selection process of MedSRT initiative of the CCMB was offered free of cost to young doctors.

**Published in:**

[Telanganatoday](https://www.telanganatoday.com)



## 100 varieties of gladiolus & roses to dazzle at NBRI show

CSIR-NBRI

07<sup>th</sup> January, 2023

If you desire to revel in the breathtaking sight of over 100 varieties of gladiolus blossoming in a field, accompanied by around 125 rose varieties wafting their fragrance through the air, then do not miss the CSIR-National Botanical Research Institute's (NBRI) annual 'Rose and Gladiolus' show scheduled for January 20-21. In a first, the scientific institute, in addition to showcasing beautiful rose and gladiolus varieties on its botanic garden grounds, will also throw open its gates to the public, allowing them to witness the institute's gladiolus field and rose garden.

“In the realm of roses, thornless green roses, climbing roses, damask roses, hybrid roses, and more will provide a visual delight for plant enthusiasts. Meanwhile, observing almost every shade of gladiolus in the field will offer another special experience for visitors,” said garden in-charge and chief scientist SK Tewari. He added that other major attractions of the show will include plants for sale and commercial stalls vending plant care-related and plant-based products.

NBRI director Ajit Kumar Shasany said, “The Botanic Garden organises an annual flower show to raise awareness among the masses about the importance and utility of plants, promote floriculture, and extend the outreach of its research activities. We aim for people not only to appreciate the beauty of flowers but also to comprehend the science behind each bloom.”

The NBRI director added that, just like in previous years, the annual event will take place on the weekend this time too, allowing a large number of people to enjoy the show. Those who are interested in exhibiting their collections in the show can reach out via email at [nbri.bg@gmail.com](mailto:nbri.bg@gmail.com) or contact chief scientist SK Tewari at 0522-2297961, the official further said



## Awareness programme on National Certification System for Tissue Culture Plants

CSIR-NEIST

07<sup>th</sup> January , 2023

An impactful awareness programme on the National Certification System for Tissue Culture Raised Plants (NCS-TCP) was organized by DBT-National Institute of Plant Genome Research (NIPGR), New Delhi in collaboration with the CSIR-North East Institute of Science and Technology (NEIST), Jorhat, Assam aiming at disseminating awareness and promoting the advantages of the NCS-TCP programme. This significant event was held in Jorhat on Saturday.



Dr. Subhra Chakraborty, Director, NIPGR and Coordinator, NCS-TCP highlighted the vision and mission and important initiatives of the Institute and provided a comprehensive overview of the NCS-TCP programme and discussed its pivotal role in revolutionizing the agriculture sector through the use of tissue culture raised virus-free and genetically uniform plants. She mentioned that NCS-TCP, a unique quality management programme of Department of Biotechnology, Government of India is playing a key role towards Nurturing Agribusiness by Encouraging Entrepreneurs and Safeguarding Farmers. Further, Dr. Chakraborty said NorthEast India being one of the Agri-Bio-diversity hotspots in the country has enormous potential to develop Entrepreneurship and Industry in the area of Plant Tissue Culture through NCSTCP programme.

**Published in:**

[Sentinlassam](http://Sentinlassam)



## Kerala youth's novel device to ensure clean water in hinterland

CSIR-NIIST

06<sup>th</sup> January , 2023

Bacteria-free drinking water remains a distant dream for many people, especially those living in rural and remote parts of the country. But this could soon be a thing of the past, thanks to 26-year-old Adarsh P Kumar, who has developed a cost-effective, solar-powered device that can be affixed to water pipelines and taps to distribute purified drinking water. He launched his startup, Hydronest, in August 2023 to supply drinking water to the hinterlands.



The startup has signed a memorandum of understanding (MoU) with Thiruvananthapuram-based Central government institution CSIR-NIIST (Council of Scientific and Industrial Research-National Institute for Interdisciplinary Science and Technology) to co-develop the device.

In Kerala, drinking water is to be distributed with the support of the Kerala Water Authority (KWA) and respective local self-governments.

The pilot project will be held in April in three panchayats: Ambalapuzha North, Ambalapuzha South, and Punnapra in the Alappuzha district. The startup identified the places as suffering from acute shortage of drinking water due to their proximity to the coast.

The startup is already in talks with panchayat officials, and discussions with KWA officials are expected this month. The technology has impressed KWA, which has assured its support for the startup. In the second phase, the project will be implemented in some panchayats in



Palakkad. It will later be implemented in eastern states, including West Bengal, Assam, and Odisha. “One key feature of the technology is that it can generate potable water from tap or river with arsenic, excess iron, and pathogens and supply it to the rural population in India.

The startup also supplies clean water to hydrogen valleys — which according to the Department of Science and Technology is defined as a geographical area where hydrogen serves more than one end sector or application in mobility, industry, and energy.

Using the device, we can remove arsenic, excess iron, E.coli, and coliform from raw water. Our company has signed an agreement with CSIR-NIIST to produce purified drinking water for rural people,” says Adarsh, who hails from Tiruvalla.

“Our target is to provide the rural population in India with arsenic and pathogen-free drinking water,” says Adarsh. A civil engineer, Adarsh works as an assistant coordinator with the state Suchitwa Mission.



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