

CSIR IN MEDIA



CSIR

NEWS BULLETIN 06 TO 10 JUNE 2021



CCMB to lead consortium to identify COVID variants

CSIR-CCMB, IGIB, NCL

10th June, 2021

A consortium of four city clusters – Bangalore, Hyderabad, New Delhi and Pune – has been established with eight national labs to upscale SARS-CoV-2 coronavirus genomic surveillance and to complement the national efforts led by INSACOG - Indian SARS-CoV-2 Genomics Consortium on Thursday.

Led by Centre for Cellular and Molecular Biology (CCMB) in Hyderabad, the consortium currently includes different partners in three other cities: National Centre for Biological Sciences (NCBS) in Bengaluru - Tata Institute of Fundamental Research (TIFR) in Mumbai; Institute for Stem Cell Science and Regenerative Medicine (InStem-Department of Biotechnology (DBT) - National Institute of Mental Health and Neurosciences (NIMHANS) in Bengaluru; CSIR-Institute of Genomics and Integrative Biology - IGIB in New Delhi; Pune Knowledge Cluster, Indian Institute of Science Education and Research (IISER), Pune and CSIR-National Chemical Laboratory in Pune.

Advisor at CCMB Rakesh Mishra will lead these efforts along with Prof. Satyajit Mayor of NCBS, Prof L.S. Shashidhara, Pune Knowledge Cluster and Dr Anurag Agrawal, CSIR-IGIB. “Our aim is to develop strategies and capabilities to identify ‘variants of concern’ before they spread widely and cause outbreaks. This will also help correlate with clinical symptoms and disease severity, potentially associated with emerging variants,” said the team, in an official press release.

In collaboration with INSACOG, the consortium aims to eventually make this a national effort by expanding to other strategic locations in India by working closely with the respective local governments, hospitals and clinicians. The consortium has been established with generous support and seed funding from Rockefeller Foundation, it said.

The new effort will track the emergence of viral variants correlated to epidemiological dynamics and clinical outcomes. The consortium aims to develop targeted sampling strategies based on granular epidemiological and clinical data.

Coupled with intense environmental surveillance and advanced computational techniques, the consortium will also focus on building capabilities for real-time surveillance and epidemiology. “All the partner institutes have been fighting COVID-19 since its very beginning in the country. This much-needed collaboration will bring all their strengths together in a structured fashion,” observed CSIR-CCMB Director Dr Vinay Nandicoori.

Published in:

[Thehindu](https://www.thehindu.com)

IICT Director gets extension

CSIR-IICT

10th June, 2021

Director of the Indian Institute of Chemical Technology (IICT) S. Chandrashekar has been given extension of tenure till he reaches the age of superannuation, according to an official communiqué on Thursday. He has been functioning as the director since 2015 and has just completed his six year tenure. Dr. Chandrasekhar joined the institute for a Ph.D programme and after completing it in 1991 with the then director Dr. A. V. Rama Rao, moved to USA for a post-doctoral position with Prof. J. R. Falck (1991-94). He joined CSIR-IICT as Scientist 'C' in 1994 and grew up to the level of director.

Published in:

[Thehindu](https://www.thehindu.com)

IICT inks pact with city firm for synthesis of 2-DG drug

2-డీజీ తయారీకి ఐఐసీటీ, లీ ఫార్మా ఒప్పందం

2003లోనే 2-డీజీపై ఐఐసీటీకి పేటెంట్: శ్రీవారి చంద్రశేఖర్

సాక్షి, హైదరాబాద్ కోవిడ్ చికిత్స కోసం రక్షణ పరిశోధన, అభివృద్ధి సంస్థ (డీఆర్డీవో) తయారు చేసిన 2-డీఆక్సీ-డీ గ్లూకోజ్ (2-డీజీ)ని వాణిజ్య స్థాయి ఉత్పత్తి కోసం ఇండియన్ ఇన్స్టిట్యూట్ ఆఫ్ కెమికల్ టెక్నాలజీ (ఐఐసీటీ), హైదరాబాద్కు చెందిన లీ ఫార్మా మధ్య ఒప్పందం కుదిరింది. ఈ మేరకు ఐఐసీటీ బుధవారం ఓ ప్రకటన విడుదల చేసింది. మధ్యమ, తీవ్రస్థాయి కోవిడ్ రోగులకు ఆక్సిజన్ అవసరాన్ని, ఆస్పత్రుల్లో గడిపే సమయాన్ని తగ్గించేందుకు 2-డీజీ ఉపయోగపడుతుందన్న విషయం తెలిసిందే. డాక్టర్ రెడ్డిస్ సంస్థ ఇప్పటికే ఈ మందును పొడి రూపంలో తయారు చేస్తోంది. కాగా, అనుమతుల కోసం త్వరలోనే డ్రగ్ కంట్రోలర్ జనరల్ ఆఫ్ ఇండియాకు దరఖాస్తు చేసుకుంటామని, ఏపీలోని దువ్వాడ ఎస్ఈజెడ్, విశాఖపట్నంలో ఈ మందును తయారుచేస్తామని లీ ఫార్మా వివరించింది. కాగా, డీఆర్డీవో సంస్థ ఇన్మాస్ 2-డీజీని తయారు చేసినప్పటికీ తాము

ఈ మందుపై 2003 మార్చిలోనే పేటెంట్ హక్కుల కోసం దరఖాస్తు చేశామని ఐఐసీటీ డైరెక్టర్ డాక్టర్ శ్రీవారి చంద్రశేఖర్ తెలిపారు. అప్పట్లో 2-డీజీకి ఉపయోగాలు లేకపోవడంతో తయారీ చేపట్టలేదని 'సాక్షి'కి తెలిపారు. అయితే కోవిడ్ చికిత్సలో ఉపయోగపడుతుందని ఇన్మాస్ గుర్తించడం, సీసీఎం బీలో పరీక్షలు నిర్వహించిన నేపథ్యంలో తాము తయారీ పద్ధతిని మరింత మెరుగుపరిచామని వివరించారు.

కేన్సర్ రేడియేషన్ చికిత్స తాలూకా దుష్ప్రభావాలను తగ్గించేందుకు 2-డీజీ ఉపయోగపడుతుందని గతంలో పరిశోధనలు జరిగాయని, ఆశించిన ఫలితాలు రాలేదని పేర్కొన్నారు. సైద్ధాంతికంగా చూస్తే 2-డీజీ అనేది ఇన్ఫ్లమేటరీ వ్యాధుల చికిత్సకు ఉపయోగపడే అవకాశం ఉందని చెప్పారు. ఐఐసీటీతో కలిసి పనిచేయడం చాలా గర్వకారణమని లీ ఫార్మా డైరెక్టర్ ఆళ్ల రఘుమిత్ర తెలిపారు.

CSIR-IICT

10th June, 2021

IICT inks pact with city firm for synthesis of 2-DG drug

It has been approved for use in COVID patients

SPECIAL CORRESPONDENT

HYDERABAD

The Indian Institute of Chemical Technology (IICT) here and city-based Lee Pharma, an integrated pharmaceutical company, have entered into a non-exclusive licensing agreement for the synthesis of 2-Deoxy-D-Glucose (2-DG) on Wednesday. 2-DG developed by DRDO and Dr Reddy's Laboratories has received approval for use in COVID-19 patients.

It has been found to help speed up recovery and reduce oxygen dependence and Dr. Reddy's Laboratories has launched the drug in the form of sachets. Lee Pharma informed that they would file the application for getting the approval from Drug Controller General of In-

dia, said a release. It will manufacture and commercialise the 2-DG sachets from their formulation facility located at SEZ in Visakhapatnam, which has the accreditations, by global regulatory agencies.

“There is role of CSIR in development of 2-DG, as its lab Centre for Cellular and Molecular Biology tested the drug on SARS-CoV-2 viral cultures. CSIR has been engaged in development of drugs for treatment of COVID-19 and has undertaken many clinical trials for repurposed drugs. Additionally, this agreement with Lee Pharma is towards increasing affordable therapeutic options for treatment of COVID-19,” said IICT director S. Chandrasekhar.

Published in:

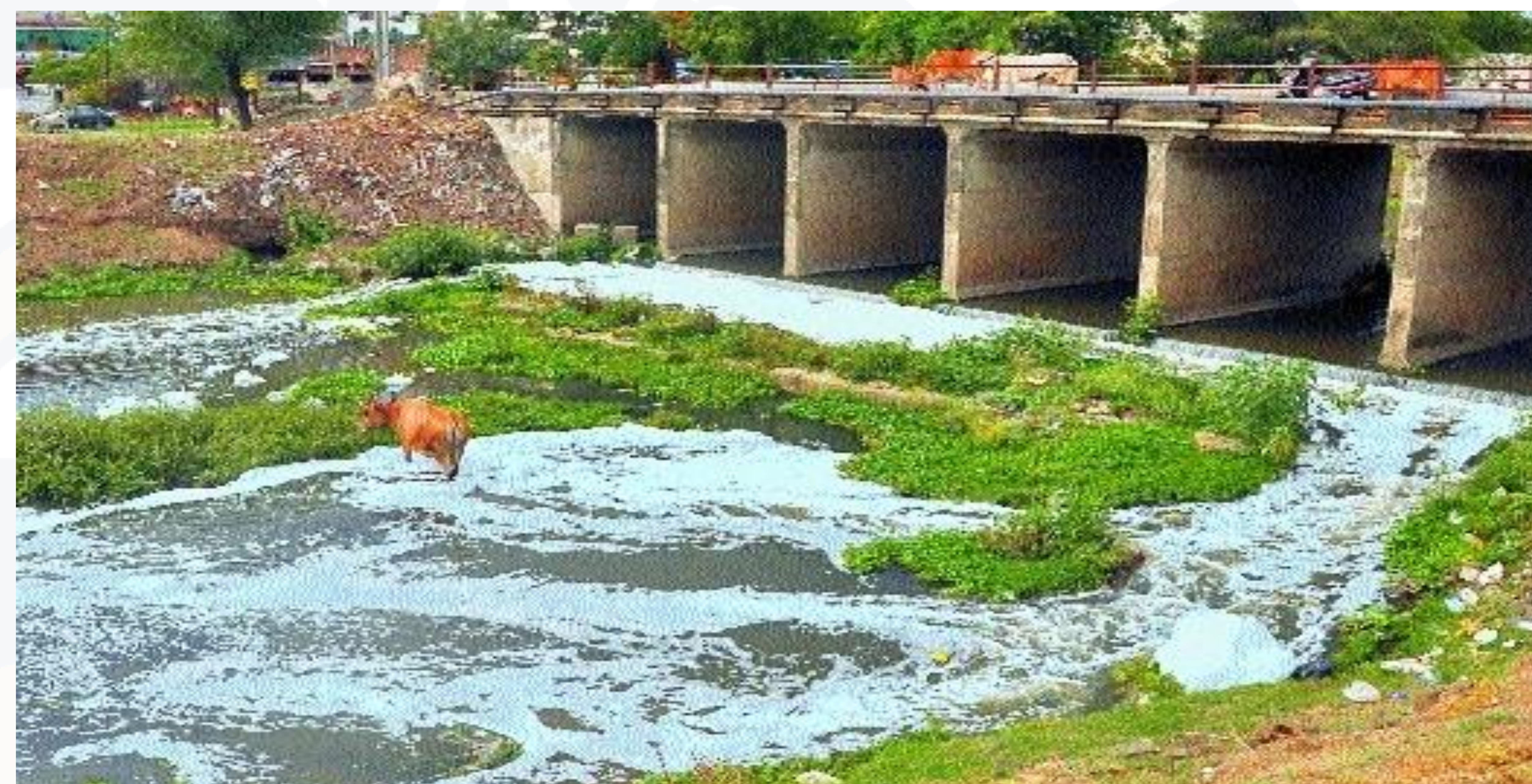
The Hindu, Telangana Today

Nag's tributary Pohra river struggling for its existence

CSIR-NEERI

09th June, 2021

Pohra river is a fine example to narrate the story of the city's unplanned expansion at the cost of natural water streams. Pohra river is the second tributary of the Nag river after Pili river which is also struggling for its existence. Though the river's origin remains untraceable, it flows from Yashoda Nagar in South West Nagpur and confluence with the Nag river after passing through Jaitala Road,



Trimurti Nagar, Khamla, Somalwada, Manish Nagar and Besa. In absence of water flow, sewage is the only source of water in the river that covers the South-West Nagpur flowing parallel to Nag river. Nagpur Municipal Corporation (NMC), every year, initiate cleanliness campaign of all these three rivers before monsoon. Though the cleaning campaign by the civic body is underway in Pohra river, The Hitavada did a fact check and found that sewage was stagnant on many stretches, plastic and other solid wastes are afloat, making the canal not only an eyesore but also a health hazard.

The worst scene was noticed near the Pipla village where toxic froth in Pohra river gave an alarming signal. The same toxic froth was in Pili River near the Sangam in Bharatwada where Pili river is meeting Nag river. The Hitavada did a story with a heading 'Sangam at Bharatwada: A sad tale of two dying rivers' where the scribe spoke to the NMC officials and environmentalists to know the reason behind such frothing in river water. According to NMC, the frothing in the river is happening due to release of industrial effluent in the water body. The Effluent Treatment Plant (ETP) is mandatory for every industry situated near the river. NMC claimed that they had already restricted all industrial activities near the Nag river. But

the frothing in Pili and Pohra rivers is a clear indication that the civic body was just doing superficial work in the name of cleaning.

The frothing in the water body is an indication of mixing of toxic water through industries. According to an environmentalist, “Though detergents can be treated biologically but its presence in higher concentration in any water body will have toxic effect on aquatic and terrestrial ecosystem and may also lead to bio-accumulation and end up in humans.” Talking about its effect, the expert said, “All detergents destroy the external mucus layer that protect the fish from bacteria and parasites. Additionally they can cause severe damage to the gills. Most fish will die when detergent concentration reaches 15 ppm Phosphates.” He also said, “Detergents can lead to fresh water algal bloom that releases the toxins and deplete oxygen in water body. It is really surprising that inspite of excavation work going on at bank of the river, such a huge amount of discharge of detergents remained unnoticed.”

Along with frothing, the sewage water is another major problem for the river. While talking with a former corporator, he said, “The state government had made a provision of Rs 27 crore to lay sewerage pipeline in the river bed itself, which is almost 8 km stretch.” But later the design had been altered to benefit more citizens, he claimed. According to a study by CSIR-National Environmental Engineering Research Institute (CSIR-NEERI), more than 50% wells in the city are abandoned due to sewage and other reasons. The contaminated water of Pohra river is also infecting the nearby wells in which some are abandoned and some are still in use during summer season.

Published in:

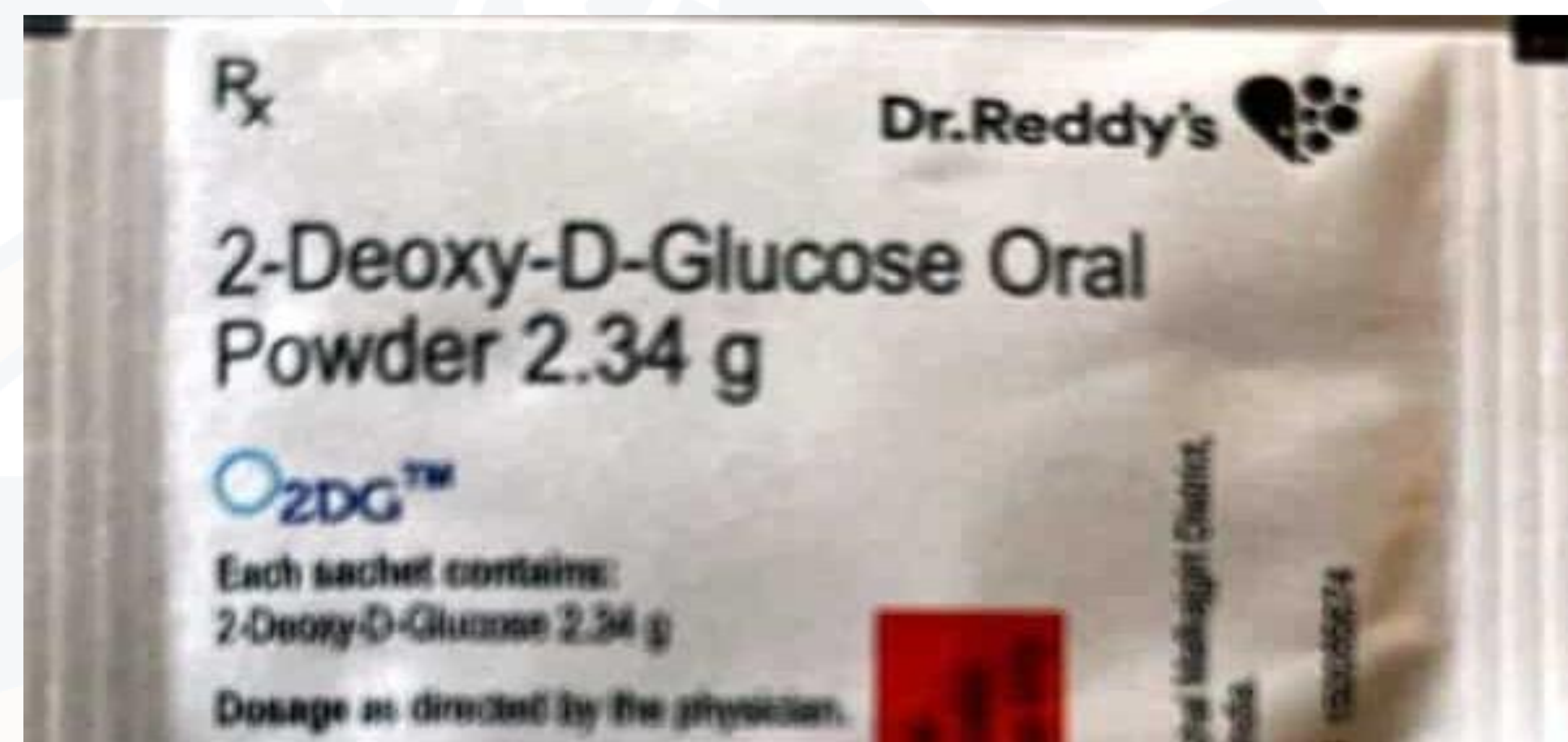
[Thehitavada](http://Thehitavada.com)

Hyderabad-based firm signs agreement for production of 2-DG Covid drug

CSIR-IICT, CCMB

09th June, 2021

Lee Pharma entered into the non-exclusive licensing agreement for the synthesis of 2-DG, recently developed by DRDO and Dr Reddy's Laboratories



Lee Pharma will manufacture and commercialise the 2-DG sachets from their formulation facility located in Visakhapatnam

Hyderabad-based Lee Pharma has entered into an agreement with the Indian Institute of Chemical Technology (IICT), a constituent laboratory of CSIR, to manufacture and commercialise 2-Deoxy-D-Glucose (2-DG) used to treat Covid patients, a statement said on Wednesday. An integrated pharmaceutical company, Lee Pharma entered into the non-exclusive licensing agreement for the synthesis of 2-DG, recently developed by DRDO and Dr Reddy's Laboratories.

The drug has received approval for use in COVID-19 patients. It has been found to help speed up recovery and reduce oxygen dependence, and Dr. Reddy's Laboratories has launched the drug in the form of sachets.

Lee Pharma informed that they would file the application for getting the approval from the drug regulator. Lee Pharma will manufacture and commercialise the 2-DG sachets from their formulation facility located at SEZ, Duvvada, Visakhapatnam, Andhra Pradesh, which has the accreditation by global regulatory agencies, the Council for Scientific and Industrial Research (CSIR) said in a statement.

Srivari Chandrashekar, Director CSIR-IICT said, "There is role of CSIR in development of 2-DG, as CSIR-CCMB tested the drug on SARS-CoV-2 viral cultures".

"The CSIR has been engaged in development of drugs for treatment of COVID-19 and has undertaken many clinical trials for repurposed drugs. Additionally, this agreement with Lee Pharma Ltd is towards increasing affordable therapeutic options for treatment of COVID-19," he said.

Published in:

[Livemint](https://www.livemint.com)

NIO organises webinar on 'Underwater cultural heritage'

CSIR-NIO

09th June, 2021

Panaji, Jun 9 (UNI) On the occasion of World Ocean Day, the activities in the field of Marine Archaeology carried out by CSIR-National Institute of Oceanography (NIO) Goa were highlighted as one of the 80 success stories. In this regard a Webinar on 'Underwater cultural heritage' was organized by CSIR in its campaign as a run-up to CSIR's 80 years' celebrations Azadika Amrit Mahotsav where NIO explained the ongoing and future activities on underwater cultural heritage.

The study of maritime history of India commenced in the first decade of the 20th century that was largely based on literary data particularly, Vedas, Epics, Puranas and other contemporary Sanskrit, Pali and Prakrit literature. In the middle of the last century, the large-scale excavations of several Harappan sites in India and Bronze Age sites in the Gulf countries revealed the evidences on active maritime interaction between these two geographical entities. There are numerous literary references, sculptural and archaeological evidences indicating active maritime traditions during the historical period all along the Indian coast. However, a centre for marine archaeology was established in 1981 at the CSIR-National Institute of Oceanography, Goa, which started underwater explorations at potential sites along the Indian coast. Professor Sunil Kumar Singh, Director, CSIR-NIO, in his opening remarks briefed about the origin of the ocean and its importance to mankind. He mentioned about the trade contacts with Mesopotamia, Egyptian and Indus during the mid-Holocene period, cultural expansion with south east Asian countries, Roman trade, followed by the Arabs. He said underwater heritage in India is a new avenue that can generate huge interest among the public which may be the future focal point of the underwater heritage tourism and sites like Dwarka, Mahabalipuram and a few shipwrecks in Andaman and Nicobar islands and Lakshadweep can served as potential sites for the purpose. He also said that NIO is going to have an important project in marine archaeology.

Sundaresh, Head, Marine Archaeology, highlighted about the importance of underwater cultural heritage and explained the methodology adopted while carrying out the underwater explorations work. He also mentioned that a degree in archaeology and knowledge of diving is required to be a marine archaeologist. This was followed by the presentation by Dr AS Gaur, Principal Technical Officer, at CSIR-NIO who elaborated on the various research work carried out by CSIR-NIO as follows.

Marine archaeological researches during the last two and half decades have brought out a number of potential sites along the Indian coast which include ancient ports, jetties, and shipwrecks. The extensive explorations of the Saurashtra coast revealed several ancient ports and jetties. Interestingly, archaeological discoveries suggest that natural phenomena like tidal variations have been very effectively used in the Gulf of Kachchh and the Gulf of Khambhat in the past. Due to change of coastline a number of sites supposed to be on coast, are now lying far hinterland suggesting the topographical changes. Discovery of a large copper fishhook from the context of the Bronze Age (late Harappan) suggest that Bet Dwarka Island attracted early settler because of the availability of the marine resources such as fishes and variety of shells. The discovery of amphorae sherds and lead anchors from Bet Dwarka suggest that Bet Dwarka Island was the focal point of international trade and commerce during the early centuries of the Christian era. Dwarka, Somnath, Miyani, and Visawada were important port town during the historical and the medieval period. Ghogha in the Gulf of Khambhat was an important Indo-Arab trading point on the Saurashtra coast.

Coastal explorations of the Maharashtra coast yielded stone anchors at Dabhol, Vijaydurg and Sindhudurg, which indicate these are active port town during the medieval period. Interestingly, Dabhol has a temple dedicated to the anchor. Stone anchors continued to be found in Goa, Kerala, Lakshadweep and on Tamil Nadu coast in the context with the historical and the medieval periods.

Published in:

[Uniindia](http://uniindia.org)

MNRE To Conduct Series Of Webinars On Achievements In New & Renewable Energy

CSIR-CECRI,NPL

08th June, 2021

New Delhi: As part of the Government of India's plan to commemorate 75 years of India's Independence (Bharat Ka Amrut Mahotsav) by organizing events to celebrate the achievements of the last 75 years, the Ministry of New and Renewable Energy (MNRE), has been conducting a series of webinars on achievements in new and renewable energy for 75 weeks starting from 15th March 2021. A five week program in this regard has been drawn for Standards and Quality Control activities, during June 2021 to March 2022. The webinars will be addressed by key speakers on the important topics followed by interaction with participants.

The focus of the program on Standards and Quality Control being organized from 7th to 12th June 2021 is on policy and practices in standard development and also measures for quality assurance in the renewable energy sector. This webinar will be followed by technology-wise weekly webinars; SPV Modules in August 2021, SPV inverter and battery storage in November 2021, Solar Thermal Systems and Wind Turbines in Jan 2022 and SHP and Biogas Plant/Power Systems in March 2022.

The objective of these webinars is to share the experiences of participants including international agencies for strengthening standards development and quality infrastructure in the country. Participants include experts from R&D/academic institutions, test labs, Standards Development Bodies (both domestic and international), regulatory agencies, conformity assessment agencies, accreditation agencies, policy makers, industries, project developers, financiers, project implementing agencies, etc.

The First Week of webinars (7th -12th June 2021) will be addressed by key speakers from the Bureau of Indian Standards (BIS), Solar Energy Corporation of India (SECI), National

Institute of Wind Energy(NIWE), Chennai, NABL, New Delhi, British Standards Institute(BSI), UK, CSIR(NPL), Delhi, TUV Rheinland, Bangaluru, PTB Germany, with panellists from NISE, NIWE, IIT Bombay, IIT Chennai, CEA, CSIR(CECRI), CSIR(NPL), SECI, BIS, NABL, UL India Pvt Ltd., BHEL, PTB, Germany.

The participation in these webinars is open to all who are involved in the subject as mentioned above. The link for participation will be shared with registered participants. A total of 200 nos. of participants registered till 7/6/2021(10AM).The link for registration is given below

Event registration link : <https://forms.gle/JKpsbA1B5iQsuWo96>

The Standards and Quality Control activities of MNRE focus on streamlining the process for development of standards and implementation. A Lab Policy on Testing, Standardization and Performance Certification was notified by MNRE in December 2017. Earlier, on 5th September 2017 MNRE has notified Quality Control Order under BIS Act (Compulsory Registration) for quality control of SPV Modules, inverters and battery storage systems used in SPV power projects. The MNRE in November 2020 also recommended to BIS to adopt one standard for one product approach.

Published in:

Indiaeducationdiary

Traces of SARS-CoV2 detected in Pune's wastewater

CSIR-NCL, NEERI, CCMB

08th June, 2021

Scientists of the National Chemical Laboratory (NCL) along with officials of the Pune Municipal Corporation (PMC) have found traces of the SARS-CoV2 virus, which causes Covid-19, in sewage samples collected from different areas in the city. The samples are being collected since December 2020 as part of a pilot project with experts saying testing wastewater could serve as a cost-effective early warning system which could help officials keep track of coronavirus at an early stage, even among asymptomatic persons.

Pune Municipal Commissioner Vikram Kumar told The Indian Express: “Wastewater tracking has been used (even) before the Covid-19 pandemic to monitor for polio. We explored the possibility of using environmental water surveillance to monitor the virus activity and engaged in a small pilot project with NCL for the purpose. The findings have been interesting and we are now waiting for a larger proposal for the institution,” Kumar said.

The civic body has appreciated the work done by scientists at NCL and have recommended that the exercise continue for another year in view of the anticipated third wave. The Pune Knowledge Cluster has sought additional permissions from PMC and also had an MoU with NCL to facilitate the joint efforts.

“We have been able to detect the presence of SARS-CoV2 RNA in sewage samples as part of our pilot study,” Dr Mahesh Dharne, Scientist, Biochemical Sciences Division, CSIR-NCL, and project coordinator, said. An official presentation was made by the scientific team at a meeting chaired by Deputy Chief Minister Ajit Pawar recently and a detailed report will be submitted soon to the PMC.

Besides four Sewage Treatment Plants (STP) that come under the civic body's purview, a

drain that open into a river and another STP plant on NCL campus were selected for the study. Pune-based NGO Ecosan Services Foundation helped in the sampling work.

From December 2020 till date, around 23 wastewater samples from PMC STPs, 17 from open drains entering the river and nine from NCL colony have been processed and assessed for the presence of SARS-CoV-2 nucleic acid by RT-qPCR method.

Sewage samples from the open drain entering the river were also profiled from the period ranging from December 2020 to March 2021 and sequenced by ARTIC V3 protocol on MinION sequencer.

“The idea of Wastewater-Based Epidemiology (WBE) was implemented during the polio pandemic in order to better understand the affected areas and the same is being used to understand the community infection dynamics of SARS-CoV-2. Domestic wastewater with faecal matter containing viral particles/load enters the drainage system (which is why) sewage treatment plants are considered to be hot spots for disease surveillance. The virus is then concentrated from wastewater and monitored through a real-time polymerase chain reaction (RT-PCR) technique, followed by direct meta-sequencing to detect mutations/variants,” Dr Dharne said. Besides Dr Dharne, the NCL team working on the project comprised microbiologist Dr Syed Dastager and chemical engineer Dr Sanjay Kamble.

Karnataka government has introduced a city sewage surveillance system in Bengaluru while CSIR-Centre for Cellular and Molecular Biology (CCMB) scientists are also engaged in similar studies in Hyderabad, Delhi, Kolkata, Chennai, Mumbai, Allahabad and a few cities of Andhra Pradesh. Dr Rakesh Mishra, advisor to CSIR-CCMB, said that samples are flown to the National Environmental Engineering Research Institute (NEERI) at Nagpur where the data is analysed.

“There is a lot of potential in this environmental wastewater surveillance,” Dr Mishra said.

He pointed out the wide-spread transmission of SARS-CoV 2 can make testing every individual a challenging task in densely populated countries.

In their recent study in Hyderabad, CCMB scientists estimated the total number of individuals exposed to SARS-CoV2 based on the detected viral gene copies per litre and viral particle shedding per individual to suggest that sewage-based surveillance can be an effective approach to study the infection dynamics, which can help in the efficient management of the SARS-CoV2 spread.

CFTRI working on probiotic food to protect children during third wave of COVID-19

CSIR-CFTRI

08th June, 2021

The Central Food Technological Research Institute (CFTRI), a CSIR lab in Mysuru, is currently working on developing food that can boost immunity and prevent diseases.

The institute is also working on probiotic food that will protect children prone to the third wave of Covid infection. The probiotic is rich in vitamin A,C,D and E with micro-nutrients necessary to combat infections. The food will keep harmful bacteria and viruses in check.

The institute had distributed spirulina chikki, high protein wrap, mango energy bar, banana cereal bar and spiced water with bio-active and antioxidant ingredients to the migrant workers, frontline workers and Covid patients during the first wave of the COVID-19 pandemic.

Published in:

[Jagranjosh](https://www.jagranjosh.com)

NMPB and CSIR-NBRI sign MoU for promoting cultivation and production of medicinal plants

CSIR-NBRI

07th June, 2021

The National Medicinal Plant Board (NMPB) and the Council of Scientific and Industrial Research-National Botanical Research Institute (CSIR-NBRI) signed a Memorandum of Understanding (MoU) on 4th June, 2021 to extend joint collaborative efforts for boosting the cultivation and production of medicinal plants and herbs in India, the Ministry of AYUSH has said.

In a statement, the ministry said, “The MoU will facilitate the development of Quality Planting Material (QPM) of medicinal plants and herbs identified by NMPB, help in the establishment of their nurseries for QPM, development, promotion, conservation and cultivation of the appropriate medicinal plants in different agro-climatic zones, including the threatened medicinal plant species and plants for the high-altitude regions.”

It added, “Through this collaboration, NMPB will support CSIR-NBRI in carrying out the potential medicinal plant species with high commercial value for germplasm collection/conservation and establishment of nursery and seed banks/gene banks.”

It also stated that NBRI, while undertaking the survey of medicinal plants, will work in coherence with NMPB in the desired direction. The outreaches of NMPB and its implementing agencies like State Medicinal Plants Boards (SMPBs) and regional-cum-facilitation centres will work together under the ambit of this MoU.

Published in:

[Expresspharma](http://www.expresspharma.com)

CSIR India, Laxai Life Sciences Start Clinical Trials of Repurposed Drug Niclosamide for Covid-19 Treatment

CSIR-IIIM, IICT

07th June, 2021

CSIR in collaboration with Laxai Life Sciences Pvt Ltd, has initiated the phase-II clinical trial with anti-helminthic drug Niclosamide for treatment of the Covid-19. The trial is a multi-centric, phase-II, randomised, open label clinical study to evaluate efficacy, safety and tolerability of Niclosamide for the treatment of hospitalized the Covid-19 patients.

Niclosamide has been extensively used in past for treatment of tapeworm's infection in adults as well as children. The safety profile of this drug has been tested over time and has been found safe for human consumption at different dose levels.

Dr Shekhar C Mande, Director General, CSIR expressed his happiness over the SEC recommendations to conduct the phase-II clinical trial using Niclosamide, which is generic, affordable drug and easily available in India and “therefore can be made available to our population.”

Dr Ram Vishwakarma, Advisor to DG-CSIR pointed out that in a screen to identify drugs that can inhibit syncytia formation, Niclosamide was identified as a promising repurposed drug by research group from King's College, London, who collaborated in this project. The syncytia or fused cells observed in the lungs of patients with Covid-19 probably results from the fusogenic activity of the SARS-CoV-2 spike protein and Niclosamide can inhibit syncytia formation.

Dr Vishwakarma added, “Independently, collaborative research between CSIR-IIIM, Jammu and NCBS, Bengaluru has recently demonstrated that Niclosamide is also a potential SARS-CoV2 entry inhibitor blocking the viral entry through pH dependent endocytic pathway. Given these two independent experimental studies, Niclosamide has now emerged as a

promising drug candidate for clinical trial in Covid-19 patients,” he

Dr Srivari Chandrashekhar, Director CSIR-IICT Hyderabad, highlighted that the Active Pharmaceutical Ingredient (API) is being made by Laxai Life Sciences based on improved technology developed at IICT and the lab is a partner in this important clinical trial which could provide cost effective therapeutic options for patients if trial is successful.

Dr Ram Upadhayaya, CEO, Laxai informed, that realising the potential of Niclosamide, efforts were initiated last year itself to undertake clinical trials. Having received approval from drug regulator, the clinical trial has been initiated this week at different sites and is expected that the trial will be completed within 8-12 weeks. “Based on successful clinical evidence generated during clinical trials in Indian studies, emergency use authorization may be sought so that more treatment options are available to Covid-19 patients.”

Published in:

[Ehealth](#)

As new COVID-19 variants emerge, calls intensify to reduce gap between two vaccine doses

CSIR-IGIB

07th June, 2021

There has to be a gap of 12-16 weeks between two doses of the Covishield vaccine in India after the Centre revised its guidelines in the middle of May. Around the same time though the UK cut the gap for jabs for certain populations from 12 to 8 weeks after finding that the newer variants of the novel coronavirus could blunt the effect of vaccines. Here's the latest on the optimum interval between two doses and why some have called for the gap to be reduced.

Why the gap between Doses?

There has been considerable variation witnessed in how the two doses of this vaccine have been spaced by different countries. After earlier going for a 12-week gap between two doses, UK last month said that people who receive a first dose of the Oxford-AstraZeneca vaccine can come back for their second dose within 8, and not 12, weeks. Around the same time, India upped its gap to 12 weeks.

In the early days, the decision by the UK — which was also using the Pfizer-BioNTech mRNA vaccine — to extend the gap between two doses had generated controversy before experts cited data to say that a longer gap of about 3 months was shown to be effective in drawing the best immune response. The extra gap was also seen as being helpful because countries could then vaccinate a larger number of people with at least one dose as they waited for supply chains to free up. However, it is the rise of variants that has forced a review of this gap.

Why UK reduce the gap?

Amid the rise of the B.1.617.2, or Delta, variant in the UK, the country's health authorities decided to prioritise the population aged over 50 years and those with comorbidities for vaccinations with a shortened interval. The decision was based on studies that found the

Oxford-AstraZeneca and Pfizer vaccines were only 33 percent effective against the Delta variant after the first dose, but the effectiveness went up to over 88% after two doses of Pfizer with the Oxford-AstraZeneca vaccine coming in at 60 percent.

What Indian researchers have found

A study by researchers at the National Centre for Disease Control (NCDC) and the CSIR Institute of Genomics and Integrative Biology (IGIB) in New Delhi has found that the second wave surge in cases in the national capital was mainly caused by the Delta variant.

The study reportedly found that the Delta variant is 50 percent more transmissible than the Alpha variant, or B.1.1.7, or the UK variant that had caused an earlier surge in that country. It added that prior infection and partial vaccination were “insufficient impediments” for checking the spread of the Delta variant. Further, the researchers said that the Delta variant was “over-represented”, that is, more common, in post-vaccination breakthrough cases.

A report by the Kolkata-based The Telegraph quoted experts who said that India should reduce the gap between doses in light of evidence on how the new variant behaves.

In the meantime, it was reported that the Centre is looking at studying the effect of mixing shots from two different vaccines and also a single dose of Covishield jab amid a shortage in vaccine supplies.

Published in:

[Firstpost](#)

No scientific design at Polavaram dump site, lacks retaining wall: NGT panel

CSIR-NEERI

07th June, 2021

Hyderabad: A six-member National Green Tribunal (NGT) committee on environmental impact of soil muck dumping at Polavaram Irrigation Project said the dump site at Mulalanka village has no scientific design and lacks a retaining wall to prevent silt from the dump site slipping into the nearby rivulet.

The NGT committee, led by retired high court judge Justice B Seshasayana Reddy, in its report said that as per the data provided by the Polavaram Project Authority (PPA), 14.6 lakh cubic metres of rock muck and 546 lakh cubic metres of soil muck will remain in the dump yard once the project is completed.

The committee visited Mulalanka, other dump sites and a stone crusher unit. Out of 204 acres acquired for disposal of muck at Mulalanka, 173 acres was utilised for dumping while the remaining 31 acres is yet to be used. However, the dumping site did not cause any displacement of families as reported by the revenue divisional officer of Jangareddygudem, it said.

The PPA made a requisition for an additional land of 83.45 cents for expansion of the dump yard and the government passed an award in 2018. “The field verification had revealed that the land owners are still in occupation of the land covered under the award. Dumping of muck generated from the project site is going on at Mulalanka. But, no retaining wall was constructed to prevent silt falling into Kadamma Vagu. No measures were taken to prevent dust storms during dumping and unloading of the muck,” the committee said.

The ground water quality was well within the permissible limits of Bureau of Indian Standards, the committee said. The petitioner was more concerned with the land acquired in

Mulalanka for setting up the additional dump yard and added, “His main grievance appears to be non-payment of compensation.”

The Central Soil and Material Research Station (CSMRS) said the dump contained only native soil. Similarly, a heavy metal analysis carried out by CSIR-NEERI had shown that heavy metals such as arsenic, boron, cadmium, chromium, cobalt, copper, iron, mercury, manganese, nickel, lead and zinc were below response levels, the CSMRS said.

‘Vaccines are working, but social vaccine must for six months’

CSIR-CCMB

07th June, 2021

Adviser to CCMB says indoor spaces with poor ventilation, be it offices, restaurants or cinemas, should be avoided irrespective of vaccination status

The devastating second wave of COVID-19 pandemic appears to be abating, but it does not mean reverting to our normal lifestyles, till a significant section of the population is fully vaccinated and scientists give the clear signal. ‘Social vaccine’ comprising masks, social distancing and hand hygiene should be scrupulously followed for the next six months, asserts former director of CSIR-Centre for Cellular & Molecular Biology (CCMB) and now adviser Rakesh Mishra in this exclusive interview. Excerpts:

We have been noticing fully-vaccinated persons getting infected and hospitalised too. Are our vaccines — Covaxin and Covishield — working?

Both vaccines are pretty good and the data is very strong [in their favour]. They are definitely avoiding severe symptoms or deaths. We should realise vaccines are 70-80% effective, which means 20-30% of those vaccinated are susceptible to any infection. But, these could be mild symptoms and need not require intensive hospital support. Of course, vaccination does not mean immortality!

Do those vaccinated need to go for antibodies and other tests to check immunity levels?

People should not be concerned with the antibodies count, Actually, it does not mean much because having a high count does not mean you are well protected or vice-versa. It has been established that we have cell based immunity within our body which comes into play and responds whenever a virus tries to break our protection system. But, if we allow the virus to play freely by disregarding face masks and allowing clustering of people, we will give scope

for a variant to evolve even after vaccination which could breach the immune system.

Are we doing any follow-up study post-vaccination?

We are doing vaccine follow-up programmes and have already chosen fully-vaccinated volunteers for the exercise. This will go on for about two years. We cannot say if a booster dose will be necessary at this instance as it depends on new variants. But, first, we need to double dose our population as quickly as possible.

What should the people do in the coming months till vaccination programme is completed?

We have burnt our fingers enough so we have to be very careful and socially responsible. Face masking and social distancing should become part of our culture for the next few months, You can get married, but it needs just two individuals! Indoor spaces with poor ventilation should be avoided, be it offices, restaurants, bars or cinemas as you are taking a risk irrespective of your vaccination status. The 25%-50% capacity allowance in restaurants, theatres etc., is dangerous as it has been proven that even a single infected person can transmit the virus in the entire room, especially when there is not enough outside air circulation.

Is it safe for fully vaccinated people to meet socially?

We have to practise something like being in a bio-bubble. We can be sure with our immediate family for care they are taking but when any outsider/house-help comes, we have to put our mask on, as we are not sure where they have been moving around. Maintaining such precautions, you can meet others in COVID secure setting where there is plenty of free air circulation and physical distancing of one metre or more.

Published in:

[Thehindu](https://www.thehindu.com)

IICT scientists who helped in developing Covaxin to pay Rs 1400 per dose

CSIR-IICT

07th June, 2021

Hyderabad: The scientists at Council of Scientific and Industrial Research (CSIR)-Indian Institute of Chemical Technology (IICT) in Hyderabad who played a significant role in the development of COVAXIN, the indigenous COVID-19 vaccine by Bharat Biotech, are asked to pay Rs 1400 to take a single dose of the same vaccine.

IICT was approached by Bharat Biotech to develop the synthetic route for the agonist molecule using indigenous chemicals with the highest purity at an affordable price. This project was completed by IICT in four months, which led to the success of COVAXIN.

After the hard work put in by IICT, their students and staff are being asked to pay for their vaccination. According to a circular issued by the IICT staff club, the employees and the students will have to pay Rs.1400 for COVAXIN and Rs.1000 for COVISHIELD.

The circular said that the vaccination drive is being arranged by the IICT staff club and interested staff members and students are requested to provide their options for necessary arrangements to be made.

COVAXIN is India's first indigenous COVID-19 vaccine. It is developed using Whole-Virion Inactivated Vero Cell derived platform technology. This vaccine is inactive and contains a dead virus that is capable of instructing the immune system to develop a defense mechanism against the virus.

Published in:

[Siasat](#)

'Tiki Mausi Kuhe' comics on Covid Appropriate Nutrition launched by Odisha W & CD Dept

CSIR-CFTRI

07th June, 2021

Bhubaneswar: The Women and Child Development Department of Odisha on Monday launched 'Tiki Mausi Kuhe' on virtual mode. It is a comics that dwells upon Covid Appropriate Nutrition (CAN) / Scaling-up of Complementary Feeding Campaign / IEC materials on Covid. The event was graced by Tukuni Sahu, Minister, WCD&MS Dept, Principal Secretary,



W&CD Dept Smt. Anu Garg, Principal Secretary, I&PR Bishnupada Sethi, Chief of Field Office, UNICEF, Odisha; Director, CSIR – CFTRI, Mysore; Director, ICMR-RMRC, Bhubaneswar; Country Director, UNWFP; Head, Programmes, APPI; Country Representative and others.

The second wave of Covid 19 has been worst of its kind to have hit mankind. This phase has also seen children and adolescents getting affected. If experts are to be believed, the third wave may be knocking the doors in months. It has, therefore, become highly necessary to reach out to the community with correct information through effective messaging.

It is in this pursuit that, the Department has issued several advisories and also oriented field functionaries on basic precautions, Covid Appropriate Nutrition (CAN), continued services such as IYCF, VHSND, immunisation etc and emerging issues such as child protection, domestic violence etc to address Covid centric challenges head on by engaging the community through our FLWs on preventive and curative aspects of Covid.

Tiki Mausi

In order to reach out to the community particularly to the women, adolescent girls & children effectively and to sensitize them about the schemes and programmes of the state Tiki Mausi was created as as a protagonist of the Department.

A catalyst for change, Tiki Mausi is empathetic and positive; she loves to talk to people, engage with them and looks forward to the overall development of her community through conviction, confidence and high power energy. She communicates in simple language and reaches out to the people with ease. She is in the forefront in disseminating key messages on health, nutrition, sanitation & hygiene, women & child safety and on their rights. She is a work in progress.

Published in:

Kalingatv

Nitrate and fluoride in the city groundwater: NGRI

నగర భూగర్భజలాల్లో నైట్రేట్, ఫ్లోరైడ్: ఎన్జీఆర్ఐ

ఈనాడు, హైదరాబాద్

నగరంలో గృహ, వాణిజ్య, పరిశ్రమల ఆవసరాలకు నీటి వినియోగం పెరగడంతో భూగర్భంలో వెయ్యి అడుగులోపల వరకు బోర్లు వేస్తున్నారు. ఈ నీటిలో మోతాదుకు మించి ఫ్లోరైడ్తో పాటు నైట్రేట్, ఇతర హానికారక లోహాలు ఉంటున్నాయి. హైదరాబాద్ చుట్టు పక్కల ప్రాంతాల్లో అధికంగా తోడే భూగర్భజలాల్లో ఫ్లోరైడ్, నైట్రేట్ ప్రమాణాలకు మించి ఉన్నట్లు తాజా అధ్యయనంలో వెల్లడైంది.

15 నీటి నమూనాల సేకరణ.. నగరంలో నీటి నాణ్యత, ఏ మేరకు ఆరోగ్యానికి ప్రమాదకరమో తెలుసుకునేందుకు జాతీయ భూభౌతిక పరిశోధన సంస్థ(ఎన్జీఆర్ఐ) పరిశోధన చేపట్టింది. శామీర్ పేటను అధ్యయనానికి ఎంపిక చేసుకుంది. ఇక్కడ భూగర్భ జలాలను గృహ వినియోగంతో పాటు వ్యవసాయానికి ఉపయోగిస్తున్నారు. భూగర్భజలాల కోసం 350 నుంచి వెయ్యి అడుగుల లోతు



వరకు బోర్లు వేశారు. మొల్లగూడెం, గౌడవెల్లి, రావల్కోల్ ప్రాంతాల్లో గృహ, వ్యవసాయ ఆవసరాలకు తీవ్ర నీటి కొరత ఉంది. రాజబొల్లారం ప్రాంతాల్లో ఆహార నిల్వ గోడౌన్లలో పారిశ్రామిక కార్యకలాపాలు అధికంగా ఉన్నాయి. ఈ ప్రాంతాలలో పాటు తూంకుంట, కండ్లకేయ, మేద్దుల్, ఉప్పరిపల్లి, దుండిగల్, దోమస పోవంపల్లి, శ్రీరంగవరం, అత్వెల్లి, లింగాపూర్ ప్రాంతాల్లో 15 నీటి నమూనాలను సేకరించి నాణ్యతను పరిశీలించారు. కనుమంట, అత్వెల్లి మినహా మిగతా ప్రాంతాల్లో నీటి నాణ్యత తక్కువగా ఉంది. 53 శాతం నీటి నమూనాలు తాగడానికి పనికిరావని పరిశోధనలో తేలింది. 47 శాతం నమూనాల్లో ప్రపంచ ఆరోగ్య సంస్థ నిర్దేశించిన ప్రమాణాల కంటే నైట్రేట్ అధికంగా, 13 శాతం నమూనాల్లో ఫ్లోరైడ్ శాతం అధికంగా ఉన్నట్లు గుర్తించారు.

పరిశ్రమల నుంచి వచ్చే వ్యర్థ జలాలు భూగర్భంలో కలుస్తుండటంతో నీటినాణ్యత చాలా తక్కువగా 27 శాతం మాత్రమే ఉందని తేల్చారు. నీటి కొరతతో అధికంగా భూగర్భజలాలు తోడుతున్న ప్రాంతాల్లో నీటి నాణ్యత 60 శాతంగా ఉన్నట్లు గుర్తించారు. ఈ నీటిలో నైట్రేట్ సాంద్రత 47 శాతం ఉన్నట్లు పరీక్షల్లో తేలింది. ఈ నీళ్లు తాగడం మంచిది కాదని, ముఖ్యంగా పెద్దవారిలో ఆరోగ్య సమస్యలు తలెత్తే ప్రమాదం ఉందని పరిశోధకులు హెచ్చరిస్తున్నారు. నగరంలోని ఇతర ప్రాంతాల్లో ఇటువంటి పరిస్థితులే ఉన్నాయంటున్నారు. 'నైట్రేట్ అధికంగా ఉండటానికి శివారు ప్రాంతాల్లో ఇళ్ల నుంచి వచ్చే మురుగు ప్రదానంగా సబ్బునీరు కలవడం, వ్యవసాయంలో ఉపయోగించే రసాయన ఎరువులు కొంత భూమిలోపలికి ఇంకే ఆవకాశం ఉండటమే. నీటి కాలుష్యంతో నీటి నాణ్యత తగ్గడమే కాదు మనుషుల ఆరోగ్యాలు పాడవుతాయి' అని పరిశోధనకు నేతృత్వం వహించిన ఎన్జీఆర్ఐ శాస్త్రవేత్త కె.రామోహన్ పేర్కొన్నారు.

मंडे पॉजिटिव

ट्यूलिप में आत्मनिर्भर होगा हिमाचल, विदेशों पर निर्भरता होगी कम, लाहौल के तीन गांवों में 50 किसानों को दिया जा रहा प्रशिक्षण

12,500 फुट की ऊंचाई पर लाहौल स्पीति के गांवों में ट्यूलिप गार्डन तैयार

राजेश भट्ट | केलांग

अब ट्यूलिप के सुंदर फूलों को निहारने के लिए किसी को कश्मीर घाटी जाने की जरूरत नहीं है, क्योंकि हिमाचल के लाहौल स्पीति के तीन गांवों में ट्यूलिप की फसल तैयार हो चुकी है। इसका श्रेय सौएसआईआर (कार्गिल ऑफ साइंटिफिक एंड इंडस्ट्रियल रिसर्च) के हिमालय जैव संपदा प्रौद्योगिकी संस्थान (आईएचबीटी) पालमपुर को जाता है जो किसानों को प्रशिक्षण दे रहा है। संस्थान का ये प्रयास

कामयाब रहा तो ट्यूलिप के फूलों के लिए विदेशों पर हमें निर्भर नहीं रहना पड़ेगा। हिमाचल से ही देश के विभिन्न भागों में इसकी सप्लाई हो सकेगी। आईएचबीटी के निदेशक डॉक्टर संजय कुमार ने बताया कि देश में अभी ट्यूलिप कम ही पैदा होता है, अधिकतर इसका बल्ब नीदरलैंड से आयात करते हैं। भारत में इसका बल्ब प्रवर्धन नहीं होता है जिससे इसका बल्ब ज्यादा क्रोमट में लोगों को मिलता है। जम्मू कश्मीर के श्रीनगर में अभी नीदरलैंड समेत अन्य देशों

से फूलों के बल्ब मंगवाए जाते थे। श्रीनगर के ट्यूलिप गार्डन की बात करें तो वहां भी ट्यूलिप के बल्ब 25-30 रुपये में आयात किए जाते हैं। भारत में हर साल करीब 50 करोड़ के बल्ब आयात किए जाते हैं जिनकी फसल को शो केस किया जाता है। अभी हमने ऐसी जगह नहीं देखी जहां इनके बल्ब को हम मल्टीप्लाई कर सकें। पिछले तीन साल से हम लाहौल के तीन गांवों मडग्रां, सैनशां और खिनिंग में ट्यूलिप को पैदा करने और पैदावार को और बेहतर करने में लगे हैं। • शेष पेज ॥

लाहौल के मडग्रां गांव में तैयार है ट्यूलिप गार्डन



पालमपुर से बेहतर ट्यूलिप की पैदावार लाहौल स्पीति में

आईएचबीटी के वैज्ञानिक डॉक्टर भाव्य भागव ने बताया कि हिमाचल में ट्यूलिप के लिए पालमपुर से बेहतर भौगोलिक परिस्थितियां लाहौल स्पीति में हैं। पालमपुर में एक फसल के बाद इसका बल्ब छोटा होता है जिसके कारण फूल का आकार भी छोटा हो जाता है पर

लाहौल में आशा के अनुरूप ही फूल पैदा हो रहा है और बल्ब की संख्या व आकार भी बड़ा हो रहा है। लाहौल के जिन तीन गांवों में ट्यूलिप पैदा किया जा रहा है, उनमें मडग्रां (उदयपुर) में सबसे पहले फ्लोवोरिंग मिलती है उसके बाद शांशा व खिनिंग में फूल खिलते हैं।

20 दिन तक खिला रह सकता है ट्यूलिप का फूल

ट्यूलिप के फूल की आयु 15 से 20 दिन की ही होती है। यह मौसम और तापमान पर निर्भर करता है कि यह

15 दिन तक खिले रहेंगे या 20 दिन तक। वहीं कटने के बाद ये 5 दिन तक बिना मुरझाए रह सकते हैं।

अनुपयोगी जमीन पर लगाएं सुगंधित और औषधीय पौधे

संवाद न्यूज एजेंसी

पालमपुर(कांगड़ा)। सीएसआईआर आईएचबीटी संस्थान में ऑनलाइन माध्यम से पर्यावरण दिवस मनाया गया। संस्थान के निदेशक डॉ. संजय कुमार ने पर्यावरण संरक्षण की आवश्यकता पर जोर दिया। कहा कि समय आ गया है कि इस मुद्दे पर गंभीर होना होगा। पर्यावरण को समृद्ध बनाने के लिए उन्होंने संस्थान के वैज्ञानिकों से आह्वान किया कि अनुपयोगी भूमि पर सुगंधित एवं औषधीय पौधे जैसे जंगली गेंदा, जटामांसी, लवेंडर, स्टीविया, जर्मन कैमोमाइल आदि का रोपण करके क्षेत्र का विकास करना चाहिए।

उन्होंने कहा कि टिकाऊ पर्यावरण पारिस्थितिकी तंत्र के लिए संस्थान के कार्य जैसे कि हींग, कसर, सेब की खेती के लिए पौध

पर्यावरण संरक्षण के लिए गंभीर होना होगा : डॉ. संजय

सामग्री को तैयार करके गैर परंपरागत क्षेत्रों उत्तर-पूर्व, दक्षिण मैदानी में खेती विलुप्त होने वाली पौध प्रजातियों का उत्तक संवर्धन करना जरूरी है। उन्होंने कहा कि हमें अभी अलग तरह से गंभीर होकर सोचने की आवश्यकता है। पर्यावरण के विनाश को बर्दाश्त नहीं किया जा सकता। उन्होंने समारोह में जुड़े युवा शोधार्थियों से भी आह्वान किया कि तकनीकी में नवाचारों के माध्यम से पर्यावरण संरक्षण में महत्वपूर्ण भूमिका निभाने का सतत प्रयास होना चाहिए। समारोह की शुरुआत पर संस्थान के प्रधान वैज्ञानिक डा. शशि भूषण ने विश्व पर्यावरण दिवस को मनाने के उद्देश्य और इस दिवस की भूमिका का संक्षिप्त में विवरण प्रस्तुत किया।

CSIR-NIO

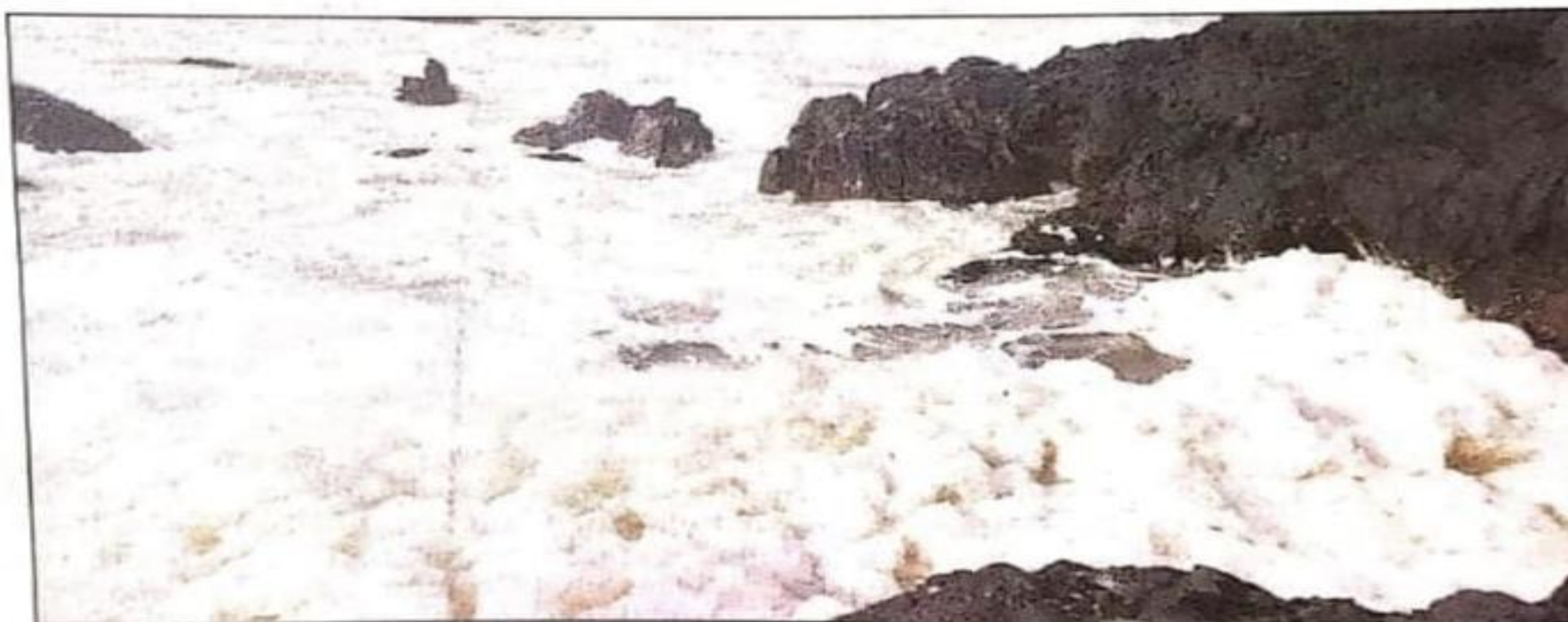
07th June, 2021

Seafoam at Vasco beach hazardous to people: NIO

Nida.Sayed@timesgroup.com

Panaji: The presence of seafoam is an alarming condition in waterbodies in the country due to the adverse impact it can have on marine life and people living at or visiting coastal areas. In Goa during the southwest monsoon of 2019, frothing was noticed at Hole beach, Vasco, prompting the National Institute of Oceanography (NIO) to study the plausible causes and consequences of seafoam in the coastal zone.

In a report published by the NIO, scientists said that the foam formation "must be treated as a serious matter" otherwise, it has the potential "to adversely affect human health" and the tourism industry of Goa.



The NIO has said that unless the foam issue is treated seriously, it could harm the state's tourism industry

"The Hole beach is a hotspot for tourists. The foam formation site was about 100m from the spot where people go

for bathing on the beach. This beach is also connected through the famous Japanese garden which is crowded with

children who often end up visiting the beach. Therefore we need to have better public awareness and foam management

system," the report read.

The occurrence of foam so far has been found in three states of India in 2019 – Goa, Kerala, and Tamil Nadu.

Scientists from the prestigious Goa-based institute led by scientist, Dr Suhas Shetye studied inorganic and organic nutrients, phytoplankton abundance and marker pigments and foam-associated bacteria in the coastal region where the frothing was found at Hole beach in Vasco.

Surface seawater was collected at the site while the mixing point sample was collected at the site where the inlet water meets the swash zone, and the inlet water (source of contamination) was collected at the starting point of the beach.

► Only at Hole beach, P 3

Sea foam found only at Hole beach, no other parts

► From P 1

Agitation of seawater with high organic matter along with the churning action of breaking waves in surf zone causes sea foam. Along with high organic matter this region also experienced strong winds and humid, overcast conditions during the southwest monsoon that are known to facilitate the production of sea foam," the report read. It also states that the sea foam was found only at Hole beach where the inlet from garbage dump yard meets coastal waters whereas "it was not observed in any other parts of coastal Goa".

Incidentally, a garbage dump yard is very close to the beach from where the fresh water reaches coastal sea through gutters, streams and inlet. The scientists observed that this inlet water decreases in the post monsoon season and then dri-

NIO STUDY OF SEAFOAM

Presence of bacterial pathogens & effects on humans



ENTEROBACTER SPP
Cancerogenous known to cause pneumonia, is potential pathogenic microorganism in diseases like bronchial asthma



VIBRIO HARVEYI
Causes eye-lesions, gastroenteritis, vasculitis and luminous vibriosis. Could lead to mortality in penaeid shrimp

VIBRIO PARAHAEMOLYTICUS
Present in marine environments, causes gastroenteritis in humans

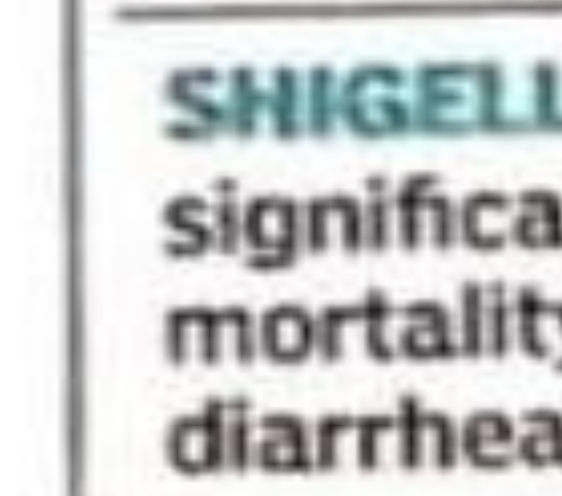


VIBRIO ROTIFERIANUS
An important bacterial pathogen of various aquatic organisms, can cause food-borne infection

SALMONELLA ENTERICA
Food-borne pathogen leading to largest number of deaths, has highest cost burden in USA



PANTOEA SPP | Known to cause infections in humans & plants, reported to be tumorigenic pathogens



SHIGELLA SPP | Causes a significant proportion of mortality associated with diarrheal disease in humans



es off. The report reveals that Hole beach had inlets with high organic nitrogen reaching up to 121 uM and the seawater at the site had lower salinity as compared to normal oceanic seawater. Excess loading of nitrogen in coastal waters can lead to eutrophication (plants growing on the surface of a waterbody) and algal proliferation.

NIO reported an excess of organic nitrogen in coastal waters of Goa coming from fresh water runoff, and aerosol deposition.

"High concentrations of inorganic and organic nitrogen along with sufficient phosphate and silicate might have resulted in a phytoplankton bloom at the study area. From the phytoplankton analysis we found that coastal waters of Hole beach had a bloom of the diatom *Thalassiosira pseudonana*," the report reads.

Thalassiosira pseudonana is known to produce the most stable surfactant (surface-active agent) as compared to most other phytoplankton. More importantly it can produce foam with a decay time that exceeds 24 hours.

Several harmful pathogenic bacteria were associated with the foam and could pose a potential threat for fishermen, swimmers and divers visiting the Hole beach during such foam events.

"Some of the species belonging to the *Vibrio* genus include harmful pathogens of aquatic organisms like crustaceans, mollusks, fish and humans. From the pathogenic bacteria found in this study and from the known effects of these antibiotic-resistant bacteria on marine ecosystem and human health, foam formation can be hazardous in the coastal region," the study states.

Published in:

Time of India

CSIR-NEERI

07th June, 2021

‘Risks related to climate change can be reduced with climate services’

■ **Municipal Commissioner Radhakrishnan B** stressed on the need to create more green spaces in city to increase biodiversity, as urban green spaces act as a component of an ecosystem

■ **Staff Reporter**

CSIR-National Environmental Engineering Research Institute (CSIR-NEERI) conducted a webinar to mark World Environment Day on Saturday. Municipal Commissioner of Nagpur Radhakrishnan B was the chief guest of the webinar. Dr D S Pai, Head, Climate Research and Services, Indian Meteorological Department (IMD), Pune was the keynote speaker of the event.

Addressing the gathering, Radhakrishnan B emphasised on the long term collaboration of Nagpur Municipal Corporation (NMC) with leading research and academic Institutes of the city



Municipal Commissioner Radhakrishnan B addressing the webinar organised by CSIR-NEERI.

including CSIR-NEERI. The knowledge shared by scientists and academicians lays the foundation for effective planning and successful implementation of NMC's development projects, he added.

Municipal Commissioner stressed on the need to create more green spaces in city to increase biodiversity, as urban green spaces act as a component of an ecosystem.

The keynote speaker delivered his speech on 'Climate Services for Society'. Dr Pai expressed concern over the impacts of climate change. He said that the risks

associated with climate change could be reduced through climate services. He informed that India's climate services effectively convey information to users in India and South Asia for decision-making to reduce risks due to climate change. Dinni Lingraj, Group Manager, Corporate Sustainability Programme, Wipro Limited, Bengaluru, in his speech talked on "Citizen-led Eco-restoration: Experiences and Reflections". Lingraj detailed about the eco-restoration activities undertaken by Wipro Ltd to achieve net-zero greenhouse emissions by 2040 and a 55% reduction by 2030.

Dr S Chandrashekhar, Director, CSIR-NEERI, gave the introductory remarks and highlighted the importance of World Environment Day during the programme. Dr Sadhana Rayalu, Senior Most Scientist, CSIR-NEERI also attended the event as guest. Students and teachers from Kendriya Vidyalayas, Navodaya Vidyalayas and other schools also participated in the webinar under the 'Jigyasa' and 'Vigyan Jyoti' schemes of Government of India.

Published in:

The Hitavada

All 5,000 trees of Ajni Vann to be translocated: Gadkari

CSIR-NEERI

06th June, 2021

Amid the protest against the proposed massive tree felling in Ajni Railway Colony for construction of Inter Modal Station, Union Minister for Road Transport and Shipping Nitin Gadkari, on Friday, changed his mind and instructed National Highway Authority of India (NHAI) to translocate all 5,000 trees of Ajni Vann to another place.



Along with this, NHAI will carry out compensatory plantation of 25,000 trees in city limits. Gadkari, chaired a meeting on Friday evening in which all senior officials of various departments were present. In the meeting, while discussing about the Ajni Vann protest, Gadkari instructed NHAI to translocate all 5,000 trees to another place without felling any tree in Ajni area.

“No tree will be chopped in Ajni area for the IMS Project. All 5,000 trees will be translocated to other places in the city and Nagpur Municipal Corporation (NMC) is going to decide the place for translocation,” said Abhijit Jichkar, Project Director, NHAI to The Hitavada. Jichkar also said, “NHAI will take care of survival of all 5,000 trees which will be translocated to other places. Along with this 25,000 trees will be also planted as compensatory plantation beside city roads.” Gadkari emphasised on the survival of the translocated trees after the process. He also instructed that the process of translocation and plantation would start from July end and the authorities must complete all formalities as early as possible. He asked to form a committee under the presidentship of former CSIR-NEERI Director Dr Satish Wate and also include environmentalists in the committee.

The committee will decide all stages of the translocation and plantation process and also take vigil of their survival. NMC will prepare a report of translocation and plantation and it will submit to NHAI for further perusal. However, environment activists of Nagpur called the translocation idea a big flop because the survival rate of translocated tree in Nagpur is very less. “We have so many bad examples of translocation that carried out by Maha Metro in the city. It is just a murder of trees by uprooting them and leave them on different place to die,” said Jaydeep Das, former honorary Wildlife Warden and environment activist. “Instead of killing of such a huge number of trees, NHAI should shift the IMS project at Khapri which will solve many problems easily,” Das added. Kaustav Chatterjee, Founder, Green Vigil Foundation, said, “Nagpur climate is not suitable for translocation of all type of species.

Invasive species like Subabul should not be translocated as they are not environment-friendly. Similarly, indigenous species like Neem, Peepal, Banyan, Tamarind etc., should replace Subabul in compensatory plantation plan.” The meeting was attended by Mayor Dayashankar Tiwari, Municipal Commissioner Radhakrishnan B, MLA Pravin Datke, MLA Mohan Mate, NHAI Regional Director Rajiv Agrawal, Dr Satish Wate, Swanand Soni, Kaustav Chatterjee, Nishant Gandhi and senior officials of different departments.

Published in:

[Thehitavada](http://Thehitavada.com)

Air equally toxic in industrial, residential Lucknow areas: Report

CSIR-IITR

06th June, 2021

LUCKNOW: Two gaseous pollutants—sulphur dioxide and nitrogen dioxide—have been found below the permissible limits in the city's air but the worrisome fact is that both the gases are showing an increasing trend as compared to the levels recorded in April and May (pre-monsoon period) last year.



Also, the level of both the pollutants in a residential area is almost equal to industrial and commercial areas.

The facts were revealed in the 'Assessment of ambient air quality of Lucknow city', Pre-Monsoon 2021 report, released by the CSIR-Indian Institute of Toxicology Research (IITR) on the eve of World Environment Day on Friday. The gaseous pollutants were monitored in one residential area, Aliganj, and three commercial areas – Charbagh, Alambagh and Aminabad. The ultrafine PM₁₀ and PM_{2.5} pollutants were found to be 10-40% high than permissible limits in various parts of the city by the study, as reported by TOI on Saturday.

In all the localities, pollution levels were below the permissible limits of 80 micrograms set by the National Ambient Air Quality Standards (NAAQS) but higher than the permissible limits set by the World Health Organization (which has stricter norms) of 20 and 40 micrograms set for sulphur dioxide and nitrogen dioxide, respectively.

Diesel vehicles are the major source of the two gaseous pollutants in the city. If inhaled, these pollutants may lead to respiratory problems like bronchitis and may cause coughing,

wheezing, phlegm and asthma attacks.

“The IITR report reflects that there is an increase in consumption of diesel by 13.5% which may be one of the reasons behind the increasing trend,” said IITR chief scientist GC Kisku.

‘Plants that can tolerate high temp, UV rays need of the hour’

CSIR-IITR, NBRI

06th June, 2021

LUCKNOW: There is a need for developing sustainable strategies for food security due to an increase in global warming that is impacting the productivity of plants. Also, the development of environmentally sustainable technologies should be ensured so that both economy and ecology can grow. Environment experts spoke during webinar



organized by the different scientific institutes of the city during the World Environment day celebration held on Saturday.

“With the increase in global warming, there is a need to design sustainable strategies for food security and develop such plants that can tolerate rising temperature, ultraviolet radiation along with increased greenhouse gases,” said Professor Agepati S. Raghavendra of the Institution of Eminence Research Chair, University of Hyderabad while speaking at a webinar organized jointly by the CSIR-NBRI and the International Society of Environmental Botanists (ISEB). He further discussed the effects of increased carbon dioxide and said that high carbon dioxide levels adversely affect the net productivity of plants.

At the IITR webinar, Padma Bhushan and the founder of Himalayan Environmental Studies and Conservation Organization (HESCO) Anil Prakash Joshi, said that need of the hour is to ensure growth of environmentally sustainable technologies.

CBMR, Lucknow in association with UP Academy of Sciences also organised a webinar in which former director of IISB, Padma Bhushan Prof P Balaram spoke on how our

understanding of life evolved over time . He also said that how the formation of carbon itself is a consequence of a very rare coincidence of three helium atoms coming together inside some star. Prof. Balaram highlighted the role of Haber Bosche process and said that this chemical reaction was extremely important in evolution.



Published in:
[Timesofindia](https://timesofindia.com)

Chamba farmers to take to Hing cultivation

CSIR-IHBT

06th June, 2021

Chamba: For the first time, farmers of Chamba will cultivate hing (asafoetida) on the higher reaches. This is expected to give farmers an alternative to diversify from traditional crops and multiply their income.

Chamba deputy commissioner (DC) D C Rana told TOI on Friday that they had received 500 hing plants and another 1,000 would arrive in the near future.

A senior scientist of the Council of Scientific and Industrial Research (CSIR) -Institute of Himalayan Bioresource Technology (IHBT) said they had sent 500 seedlings of hing for farmers of Holi and Bharmaur regions of Chamba while another 1,000 seedlings would be sent for farmers of Pangi region. The seedlings were prepared through either tissue culture or direct sowing of seeds and farmers were given a year old plants.

He said hing production begins after five years and fetches anything around Rs 8 lakh to Rs 9 lakh net profit per hectare for the farmer. He said they would also set up hing processing units in Chamba. Earlier, the department had started hing production in Lahaul Spiti, Kinnaur and Mandi districts of Himachal.

Pic: Team CSIR-IHBT, Palampur, handing over 500 hing plants to agriculture department, Chamba

Published in:

[Timesofindia](https://www.timesofindia.com)

Can earthquakes be detected in advance?

భూకంపాలను ముందే గుర్తించవచ్చా?

- సాధ్యమేనంటున్న శాస్త్రవేత్తలు
- కృత్రిమ మేధ, మిషన్ లెర్నింగ్ సాంకేతికతతో మరింత కచ్చితత్వం
- 'ఈనాడు'తో ఎన్జీఆర్ఐ ప్రధాన శాస్త్రవేత్త డాక్టర్ ఎన్.పూర్ణచంద్రరావు

భూకంపాలను ముందే గుర్తించవచ్చా? ఈ ప్రశ్నకు ఔననే సమాధానమిస్తున్నారని జాతీయ భూభౌతిక పరిశోధన సంస్థ(ఎన్జీఆర్ఐ)లోని భూకంపాల అధ్యయన కేంద్రం శాస్త్రవేత్తలు, భూమి లోపల నీటిమట్టంపై ఒత్తిడి, వాతావరణంలోని ఐనోస్ఫియర్లో మార్పులు, భూకంపాలకు ముందు వచ్చే చిన్నచిన్న ప్రకంపనలు, భూమి పగుళ్లలోంచి వచ్చే రెడాన్ వాయువులను అధ్యయనం చేయడం ద్వారా భూకంపాలను ముందే గుర్తించవచ్చని చెబుతున్నారు. అయితే ఎప్పుడు వస్తుందనే విషయాన్ని కచ్చితంగా చెప్పలేకపోతున్నామని, ఇప్పటివరకు అందుబాటులో ఉన్న సమాచారాన్ని కంప్యూటరీకరించి కృత్రిమమేధ, మెషిన్లెర్నింగ్ సాంకేతికతను ఊపిరిపెట్టే కచ్చితత్వం వస్తుందని ఎన్జీఆర్ఐ భూకంప అధ్యయన కేంద్రం ప్రధాన శాస్త్రవేత్త డాక్టర్ ఎన్.పూర్ణచంద్రరావు అన్నారు. ఎన్జీఆర్ఐ ఏర్పాటై 60 ఏళ్లు పూర్తయిన సందర్భంగా సంస్థ అధ్యక్షులలో చర్చలు, కార్యకలాపాలు జరుగుతున్నాయి. భూకంపాలపై జరిగిన సరికొత్త పరిశోధనలు, ప్రకంపనలను ముందే గుర్తించే విధానాలపై జరిగిన చర్చల సారాంశాన్ని ఆయన 'ఈనాడు'కు వివరించారు.



నీటిమట్టంలో తేడాలు ఇలా

భూకంపం రావడానికి ముందు భూమి లోపలి పొరల్లోని నీటిమట్టంలో మెను మార్పులు సంభవిస్తాయి. ప్రకంపనల తాకిడికి నీటి వనరులు తీవ్ర ఒత్తిడికి గురవుతాయి. ఆ ప్రాంతంలో బోర్లు ఉన్న పక్కలో అందులోంచి ఒళ్ళిసారిగా నీరు పైకి ఉబికి వస్తుంది. భూమిలోపల ఏదో జరుగుతుందనేందుకు ఇదో సంకేతం. ఈ తరహా అధ్యయనాన్ని ఎన్జీఆర్ఐ మహారాష్ట్రలోని కోయా ప్రాంతంలో చేపట్టింది. అక్కడికి 20 కి.మీ. పరిధిలో ఉన్న టోర్వెల్స్కు పరికరాలు అమర్చి శాటిలైట్, ఇంటర్నెట్ సాయంతో పర్యవేక్షించింది. బోర్ల నుంచి ఉబికి వచ్చిన నీరు ఆధారంగా కొన్ని ప్రాంతాల్లో భూకంపం వచ్చే అవకాశం ఉందని ముందే హెచ్చరించింది. ఆ తర్వాత అక్కడ భూ ప్రకంపనలు వచ్చాయి.

రెడాన్ గ్యాస్ వాయువులు..

భూకంపాలకు ముందు భూమి లోపల ఏర్పడే ఒత్తిడికి వగుళ్ళు ఏర్పడుతాయి. ఇందులోంచి రెడాన్ వాయువులు బయటికి వస్తాయి. వాటిని గుర్తించే పరికరాలను ఎన్జీఆర్ఐ వేర్వేరు చోట్ల ఏర్పాటు చేసి నమోదు చేస్తుంది. వీటిని విశ్లేషించడం ద్వారా భూకంపం ముందే వచ్చే అవకాశాలను అంచనా వేస్తుంది.

ఐనోస్ఫియర్లో ఛార్జ్ లో తేడాలు..

వాతావరణంలో ఉండే పొరల్లో మార్పుల్ని గమనించడం ద్వారా కూడా భూకంపాలను అంచనా వేయవచ్చు. ఐనోస్ఫియర్లో విద్యుదయస్కాంత తరంగ శక్తి ఉంటుంది. ప్రకంపనలు సంభవించినప్పుడు తరంగాల శక్తిలో మార్పులు సంభవిస్తాయి. భూకంపం వచ్చే ప్రాంతాల్లో ఈ తేడాలను గతంలో ఎన్జీఆర్ఐ రికార్డు చేసింది. ఈ మార్పులను గుర్తించేలోపే భూకంపాలు వచ్చేస్తుండటంతో ఇది పెద్దగా ప్రయోజనం ఇవ్వడం లేదు. అప్రమత్తం చేసేందుకు గంట కూడా సమయం ఉండడం లేదు. అందుకే దీనిపై మరిన్ని పరిశోధనలు చేస్తున్నాం.

చిన్న ప్రకంపనలతో మొదలై..

భూకంపాలు ఏర్పడటానికి ముందు భూమిలో చిన్నచిన్న ప్రకంపనలు ఏర్పడతాయి. వీటిని పోర్ షాక్స్ క్లస్టర్స్ అంటారు. గుంపుగా, తక్కువ సమయంలో అవి వచ్చిపోతుంటాయి. వీటిని పర్యవేక్షించడం ద్వారా భారీ భూకంపాలను ముందే పసిగట్టవచ్చు.

కృత్రిమ మేధ తోడైతే

భూకంపాల ముప్పు పొంచి ఉన్న ప్రాంతాల సమాచారం ఇప్పటికే అందుబాటులో ఉంది. వీటిని కంప్యూటరీకరించి కృత్రిమ మేధ, మిషన్ లెర్నింగ్ సాయంతో పర్యవేక్షణకు అవసరమైన ప్రాంతాలను గుర్తించి భూకంప లేఖనాలు, ఇతరత్రా పరికరాల అమర్చగలిగితే కచ్చితమైన సమాచారం రాబట్టేందుకు అవకాశం ఉంటుంది. ప్రస్తుతం మనం ఈ విధానంలో ఆరంభ దశలో ఉన్నాం. మరింత పరిశోధనలు జరగాల్సి ఉంది.

లాక్డౌన్ తో అధ్యయనానికి అనువుగా..

భూకంపాల అధ్యయనానికి లాక్ డౌన్ కాలం బాగా ఉపయోగపడింది. సాధారణ రోజుల్లో ట్రాఫిక్, పరిశ్రమల శబ్దాలతో భూకంప లేఖనాల్లో సంకేతాలను వేరు చేసేందుకు చాలా శ్రమించాల్సి వచ్చేది. శబ్దాన్ని పడగట్టేందుకు వాడే ఫిల్టర్ల విశ్లేషణలోనూ కొన్నిసార్లు సుష్టత ఉండేది కాదు. లాక్డౌన్ తో శబ్దాలు స్పష్టంగా నమోదవుతున్నాయి.



- ఈనాడు, హైదరాబాద్

विकास से अधिक महत्वपूर्ण है समृद्धि



आइआइटीआर में आयोजित वेबिनार को संबोधित करते अनिल प्रकाश जोशी, वायु प्रदूषण पर एनवायरमेंट रिपोर्ट जारी करते निदेशक प्रो. एसके वारिक व अन्य • सौजन्य : संस्थान

जासं, लखनऊ : संक्रमण काल में लोग जिस तरह से आक्सीजन के लिए छटपटा रहे थे, उससे हमें यह समझ लेना चाहिए कि हरियाली हम सबके लिए कितनी अहम है। ऐसे में शायद हम अपनी नासमझी को सुधार सकें। ये बातें भारतीय विष विज्ञान अनुसंधान संस्थान (आइआइटीआर) में आयोजित वेबिनार में हिमालय पर्यावरण अध्ययन एवं संरक्षण संगठन के संस्थापक पद्मभूषण से अलंकृत डा. अनिल प्रकाश जोशी ने कहीं। वहीं, इस दौरान निदेशक प्रो. एसके

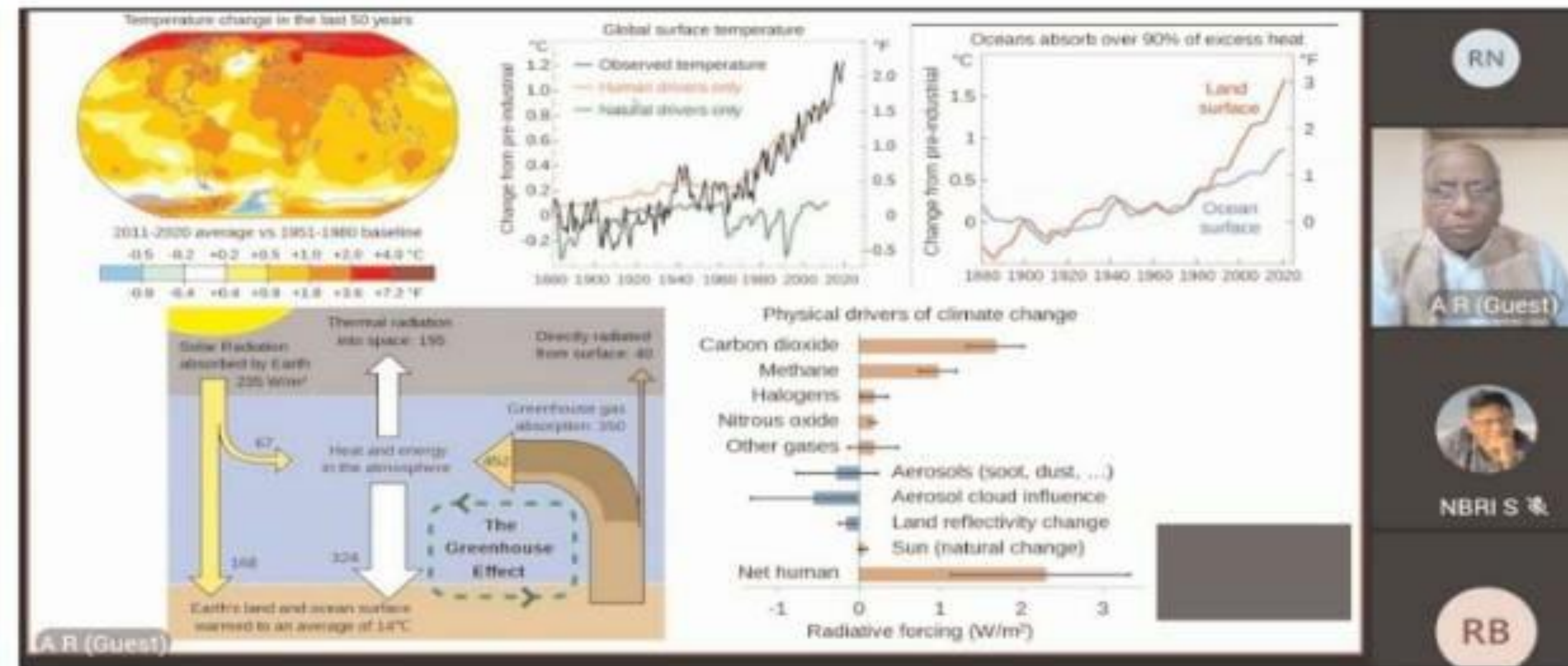
वारिक ने कोरोना संक्रमण में सीएसआइआर-आइआइटीआर के योगदान पर प्रकाश डाला। कार्यक्रम में लखनऊ की वायु गुणवत्ता रिपोर्ट भी जारी की गई।

उधर, राष्ट्रीय वनस्पति अनुसंधान संस्थान में वेबिनार आयोजित हुआ। कार्यक्रम में एनबीआरआइ और राष्ट्रीय औषधीय पादप बोर्ड के बीच औषधीय पौधों के विभिन्न पहलुओं, व औषधीय पौधों की सामग्री की मोबाइल परीक्षण इकाइयों के विकास पर सहयोगात्मक शोध के लिए समझौते पर हस्ताक्षर किए गए।

विश्व पर्यावरण दिवस पर वेबिनार का आयोजन किया गया

लखनऊ, (यूएनएस)। सीएसआईआर-एनबीआरआई एवं इंटरनेशनल सोसाइटी ऑफ एनवायरनमेंटल बॉटनिस्ट्स (आईएसईबी), लखनऊ द्वारा संयुक्त रूप से आज विश्व पर्यावरण दिवस पर एक वेबिनार का आयोजन किया गया, वेबिनार में हैदराबाद विश्वविद्यालय के स्कूल ऑफ लाइफ साइंसेज, डिपार्टमेंट ऑफ प्लांट साइंसेज के प्रोफेसर ए. एस. राघवेन्द्र मुख्य वक्ता के रूप में मौजूद थे, प्रो. राघवेन्द्र ने ग्लोबल वार्मिंग के प्रति प्रकाश संश्लेषण की प्रतिक्रिया और फसल विकास को बनाए रखने के लिए संभावित रणनीतियाँ विषय पर चर्चा की।

प्रो. राघवेन्द्र ने बताया कि पर्यावरण परिवर्तन के चलते पृथ्वी की जलवायु सबसे ज्यादा प्रभावित हुयी है, जिससे ग्रीन हाउस गैसों का



बढ़ना, वैश्विक तापमान में वृद्धि, ग्लेशियर का पिघलना जैसी घटनाएं विगत वर्षों में देखी गयी है छ इस परिवर्तन से हमारे पारिस्थितकी तंत्र पर भी बुरा प्रभाव देखने को मिला है, प्रो. राघवेन्द्र ने कार्बन डाई ऑक्साइड, जो कि मुख्यतः ग्रीन हाउस गैसों में पायी जाती है, की मात्रा में वृद्धि एवं उसके प्रभावों पर चर्चा करते हुए बताया कि उच्च कार्बन डाई ऑक्साइड से पौधों में प्रकाश संश्लेषण की क्रिया कुछ

समय के लिए बढ़ जाती है लेकिन इसके चलते पौधों की कुल उत्पादकता पर उलटा असर पड़ता है, कुछ पौधों में यह भी देखा गया है कि उनकी पत्तियों एवं फलों में आवश्यक खनिज एवं पोषक तत्वों का अभाव हो जाता है जिसका सीधा असर उनके उपभोक्ताओं पर पड़ेगा, प्रो. राघवेन्द्र ने इस वैश्विक तपन के बढ़ने के कारण हमें खाद्य सुरक्षा के लिए कुछ सतत रणनीतियां बनाने पर बल दिया, उन्होंने कहा कि हमें ऐसे पौधों

का विकास करना होगा जो ग्रीन हाउस गैसों की बढ़त के साथ-साथ बढ़ते तापमान, अल्ट्रा वायलेट विकिरण को भी सहन कर सके, जलवायु परिवर्तन से निपटने के लिए जीनोमिक्स, प्लांट मॉलिक्यूलर फिजियोलॉजी, क्रॉप ब्रीडिंग एवं एकीकृत फसल-मृदा-जलवायु मॉडलिंग को मिलाकर एक अनुसंधानिक रणनीति बनाना बहुत प्रभावी होगा, इससे पूर्व, सभी प्रतिभागियों एवं गणमान्य अतिथियों का स्वागत करते हुए प्रो. एसके बारिक ने इस वर्ष की थीम -पारिस्थितिकी पुनर्स्थापन- के बारे में बताया, उन्होंने बताया कि एनबीआरआई कई दशकों से पर्यावरण सुरक्षा एवं सुधार पर शोध कार्य कर रहा है, वेबिनार के अंत में आईएसईबी के सचिव डॉ. आर डी त्रिपाठी ने धन्यवाद प्रस्ताव दिया।

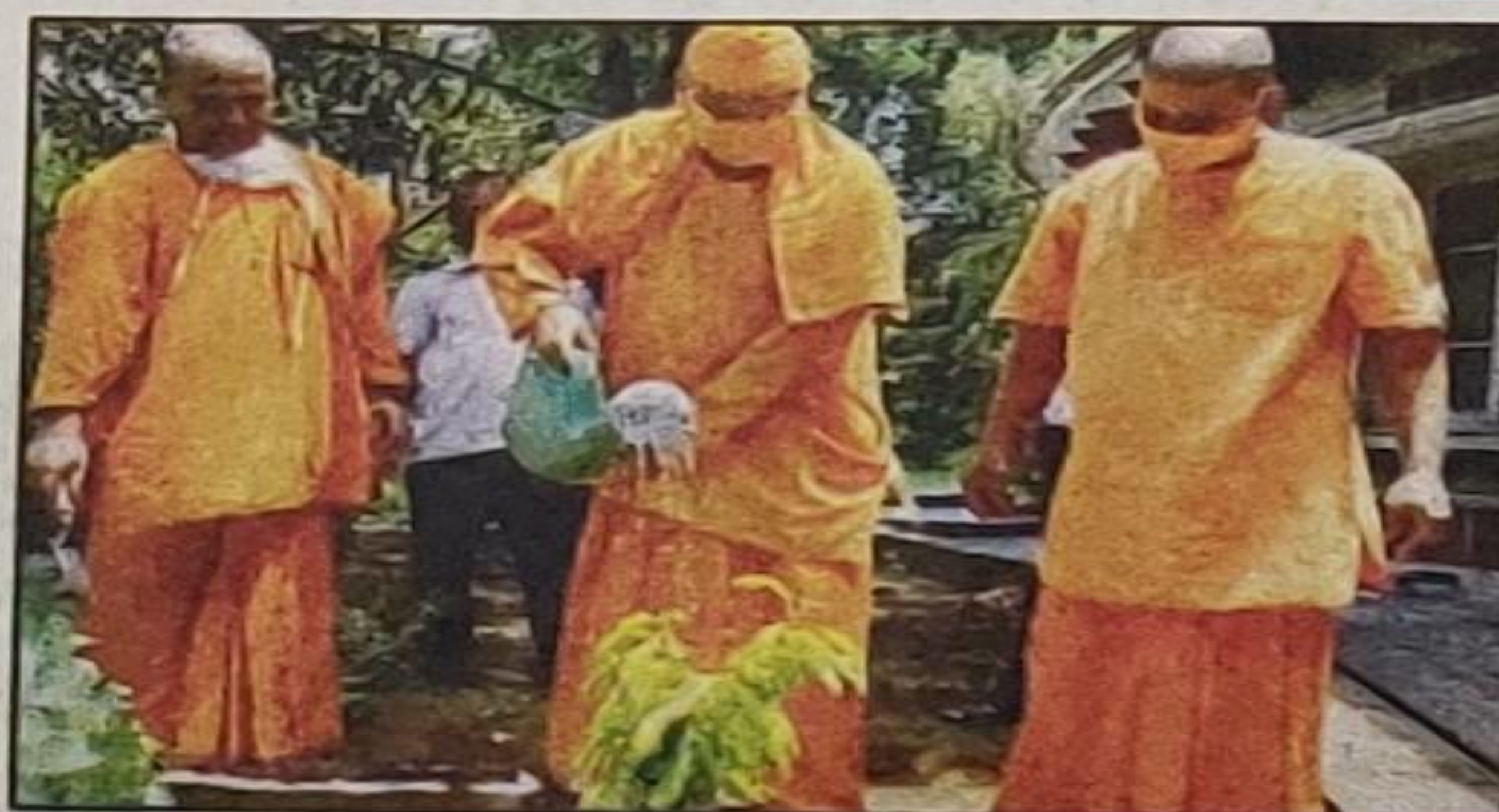
‘Plants that can tolerate high temp, UV rays need of the hr’

TIMES NEWS NETWORK

Manoj Chhabra

Lucknow: There is a need for developing sustainable strategies for food security due to an increase in global warming that is impacting the productivity of plants. Also, the development of environmentally sustainable technologies should be ensured so that both economy and ecology can grow. Environment experts spoke during webinar organized by the different scientific institutes of the city during the World Environment day celebration held on Saturday.

“With the increase in global warming, there is a need to design sustainable strategies for food security and develop such plants that can tolerate rising temperature, ultraviolet radiation along with increased greenhouse gases,” said Professor Agepati S. Raghavendra of the Institution of Eminence Research Chair, University of Hyderabad while speaking at a webinar organized jointly by the CSIR-NBRI and the International Society of Environmental Botanists (ISEB). He further discussed the effects of increased carbon dioxide and said that



Plantation drives were held at KGMU and Ramakrishna Math. ADCP Chiranjeev Nath Sinha gave plants to food delivery partners to distribute among people to mark the occasion

high carbon dioxide levels adversely affect the net productivity of plants.

At the IITR webinar, Padma Bhushan and the founder of Himalayan Environmental Studies and Conserva-

tion Organization (HESCO) Anil Prakash Joshi, said that need of the hour is to ensure growth of environmentally sustainable technologies.

CBMR, Lucknow in association with UP Academy of Sciences also organised a

webinar in which former director of IISB, Padma Bhushan Prof P Balaram spoke on how our understanding of life evolved over time. He also said that how the formation of carbon itself is a consequ-

WORLD ENVIRONMENT DAY

ence of a very rare coincidence of three helium atoms coming together inside some star. Prof. Balaram highlighted the role of Haber Bosche process and said that this chemical reaction was extremely important in evolution.

Published in:

Times Of India, Pioneer

CSIR-CMERI

06th June, 2021

Jammu & Kashmir now shows interest about WB CSIR-CMERI OEU Technology

KOLKATA, June 4:

After several other States in the plains, MSME DI Jammu along with Federation Chamber of Industries Kashmir (FCIK) has now shown its interest in the CSIR-CMERI, Durgapur developed Oxygen Enrichment Unit (OEU) technology, which is capable of serving as a ready means of solution to the oxygen supply crisis in the rugged mountainous region.

Today, MSME DI, Jammu along with FCIK, SIDBI, the representatives of several MSME stakeholders along with start-ups joined a webinar on the Oxygen Enrichment Unit technology, where the CSIR-CMERI, Durgapur Director, Prof (Dr.) Harish Hirani was the main speaker. Prof. (Dr.) Hirani focussed on the indigenously developed technology of Oxygen Enrichment Unit (OEU) by the Institute and said that this may be the most effective available solution for Oxygen Therapy.

Speaking about the different masks being used for the therapy through concentrators, he mentioned that there may be potential risk of spreading of infection from the open mouth and nose during the exhaling and coughing of patients to the surroundings. This situation may be available even at an Isolation Centres. As such, using N95

Masks or NIV Masks may be the better option to save others from infection during such therapy.

Along with proper masks appropriate level of flow and right percent of Oxygen (FiO₂) are also necessary.

CSIR-CMERI developed indigenous technology may prove to be very much effective.

The comparison of the Institute developed OEU shows significant results on several parameters against the standard concentrators available in the market in terms of Higher Flow Rate, FiO₂ level, consistent performance for a longer period, ability to work on High Altitude. This would be extremely helpful in enclosed spaces such as Isolation Wards. In coming days OEU will be required as a domestic household item for every home.

The technology has already been transferred to 13 Business Enterprises and they are steadily rolling their product into the market. Saheel Allaqband, Assistant Director, MSME DI, Jammu appreciated the efforts of CSIR-CMERI for developing the indigenous technology and spreading the awareness to all stakeholders of the society. Applauding the indigenous technology developed by CSIR-CMERI, he stressed upon the futuristic perspective as he found the technology containing

the potential to fulfil the needs of the people of Jammu & Kashmir. He also requested Prof. (Dr.) Hirani to attend similar programmes which may be arranged by them with the medical fraternity of the territory in the coming days.

Dr. Ashwani Kumar, Dy. Director MSME- J&K said, the webinar has been very fruitful and thanked Prof. (Fr.) Hirani for sharing very valuable information to the MSME people and the industries of the J&K State and requested him for exploring the possibilities of on boarding the maximum number of MSMEs through the Institute developed technology for the benefit of the society as well as for mutual prospects of all stakeholders. Sanjeet Verma, Incharge, SIDBI-J&K explained the financial assistance under the new schemes of SIDBI particularly SHWAS & AROG for containing the spread of the pandemic through healthcare equipment and pharmacy products for the MSME sectors. (UNI)

Published in:

Daily excelsior



CSIR-CSCMRI

05th June, 2021

Water purification/desalination vans developed by CSIR-CSCMRI, Bhavnagar, serve people affected by cyclone “Tauktae” for providing safe drinking water in Rajula and Jafrabad”

સેન્ટ્રલ સોલ્ટે જાફરાબાદના 10,000 લોકોને પાણીની જરૂરિયાત સંતોષી 2 વોટર પ્યુરીફિકેશન વાન દ્વારા વાવાઝોડાગ્રસ્ત વિસ્તારમાં પીવાના પાણીની અછતના પગલે મદદ

ભાવનગર | 4 જૂન

ભાવનગર સ્થિત સેન્ટ્રલ સોલ્ટ દ્વારા તાજેતરમાં આવેલ વાવાઝોડા દરમિયાન સૌથી વધુ અસરગ્રસ્ત વિસ્તાર એવા રાજુલા અને જાફરાબાદ માં શુદ્ધ પીવાના પાણીની વ્યવસ્થા કરવામાં આવી હતી. સેન્ટ્રલ સોલ્ટની વોટર પ્યુરીફિકેશન વાન મોકલીને 10 હજાર લોકોને રોજિંદા 35 હજાર લિટર પીવાનું પાણી મળી રહે તેવી વ્યવસ્થા કરવામાં આવી હતી. હાલમાં આવેલા સાયકલોન માં ભાવનગર સહિત સૌરાષ્ટ્ર નાં બીજા વિસ્તારોમાં પણ નુકસાન થવા પામ્યું હતું.

અમરેલી નાં રાજુલા અને જાફરાબાદ માં ઘણા બધા વીજળી નાં થાંભલા પડી જવાથી ઈલેક્ટ્રિક તંત્ર ખોરવાયું હતું અને પીવાના ચોખ્ખા પાણીની ખૂબ અછત સર્જાઈ હતી. સેન્ટ્રલ સોલ્ટ દ્વારા વિકસિત થયેલ વોટર પ્યુરીફિકેશન/ ડીસેલીનેશન વાન આ વિસ્તારોમાં મોકલવામાં આવી હતી. આ વાન ની ખાસિયત એ છે કે તેને શુદ્ધ પાણી તૈયાર કરવા માટે કોઈ પણ પ્રકારનાં બાહ્ય વીજ

ભૂતકાળમાં પણ કુદરતી આફતો દરમિયાન મદદ

ભૂતકાળમાં પણ પશ્ચિમ બંગાળમાં ચક્રવાત આઈલા (2009), ઉત્તરાખંડમાં પૂર (2013), ઓડિશામાં ચક્રવાત ફેલિન (2013), મહારાષ્ટ્રના લાતુરનું વાવાઝોડું (2016), કેરળમાં પૂર (2018), અને ઓડિશામાં ચક્રવાત ફણી (2019) દરમિયાન આ વાનનો ઉપયોગ થયેલો છે.

પુરવઠા ની જરૂર નથી કેમ કે વાહન નું એન્જિન જ જાતે જ જરૂરી વીજળી ઉત્પન્ન કરે છે. આ વાન મેડ ઈન ઈન્ડિયા અને મેમ્બ્રેન ટેકનોલોજી થી બનેલી છે. સ્થાનિક અધિકારીઓ ની મદદ થી, આ વાન સતત અસરગ્રસ્ત લોક વિસ્તાર ને શુદ્ધ પાણી પ્રદાન કરી રહી છે અને ત્યાં સુધી કરશે કે જ્યાં સુધી હાલનો પાણી પુરવઠો સંપૂર્ણ રીતે પુનઃસ્થાપિત ન થાય. એક વાન “રાજુલા મેજિસ્ટ્રેટ ઓફિસ” પાસે રાખવા માં આવી છે જેથી સમગ્ર રાજુલા તાલુકા માં પાણી પહોચાડી શકાય. આશરે દરરોજ 30,000 લિટર પાણી ટેન્કર દ્વારા પુરૂ પાડવામાં આવતું હોય છે. બીજી વાન જાફરાબાદ ના સૌથી વધારે અસરગ્રસ્ત વિસ્તાર માં મૂકવામાં આવી છે કે જ્યાં નગર-પાલિકાના ચીફ ઓફિસર અને સીએસઆઈઆર-

સીએસએમસીઆરઆઈની ટીમ સાથે લોકોને પીવાનું પાણી આપી શકે.

હવે તો બ
વૃક્ષ-છોડ
એર-
વિચારો જ
વૃક્ષ-છો

Published in:

Saurashtra Samachar

Delta the most common virus variant in the country

CCMB-BHU study details seven major variants found in Varanasi

SPECIAL CORRESPONDENT
HYDERABAD

The Centre for Cellular and Molecular Biology (CCMB) here and Benaras Hindu University (BHU) have collaboratively sequenced genomes of coronavirus variants in Varanasi and adjoining areas and have come across at least seven major strains of coronavirus circulating in these regions, including B.1.617 and B.1.617.2 or the 'Delta variant'.

The multidisciplinary research unit at BHU collected samples from Varanasi and areas around the city, mostly in April earlier this year and the CCMB team sequenced 130 samples. "The most predominant variant we found in our study was B.1.617 among the Variants of Con-



People waiting for their turn at a special vaccination drive at Gandhi Nagar in Hyderabad, on Friday. •RAMAKRISHNA G.

cern (VoC). This variant was also reported to be one of the major drivers of the second COVID-19 wave in India," said Royana Singh, who heads the research unit.

"Just as in most of India, the B.1.617.2 variant (aka Delta variant) was the most common one in the samples we studied. They were found among 36% of the total samples. Other VoCs such as the B.1.351, detected in

South Africa for the first time, were also found in this area," said Rakesh Mishra, adviser to CCMB.

"This study confirms yet again that the Delta variant is the most widespread one in the country right now. But at the same time, it is imperative for us to keep an eye on the other emerging variants to prevent another unprecedented surge of cases," he added, in a press release.

Published in:

The Hindu, Telangana Today, Economic Times

आईआईटीआर ने जारी की प्री-मॉनसून रिपोर्ट

कोरोना कर्फ्यू में भी हवा का निकला दम

परेशानी

26.10% बढ़ा पीएम-10 तो पीएम-2.5 में 16.57% की बढ़ोतरी, नाइट कर्फ्यू से आवासीय इलाकों में शोर 'गुल'

राहत

Sandeep Rastogi

विकासनगर और गोमतीनगर में सबसे ज्यादा ध्वनि प्रदूषण

प्री मॉनसून एयर क्वालिटी एनालिसिस रिपोर्ट के मुताबिक प्रदूषण के साथ-साथ आवासीय क्षेत्रों में ध्वनि प्रदूषण का स्तर भी बढ़ा है। आवासीय क्षेत्र में दिन के समय शोरगुल 67 से 70.7 डेसिबल और रात के समय 55.4 से 60 डेसिबल के बीच रहा। यह निर्धारित सीमा से अधिक है। व्यवसायिक और औद्योगिक क्षेत्र में 67.2 से 79 डेसिबल और 52.3 से 61.3 डेसिबल दर्ज किया गया।

विकासनगर और गोमतीनगर में दिन में ध्वनि प्रदूषण 70.5 और 70.7 डेसिबल रहा। वहीं रात में सबसे ज्यादा शोरगुल विकासनगर में 60 डेसिबल रहा। साल 2020 में अलीगंज और इंदिरानगर सबसे अधिक शोरगुल वाले क्षेत्र दर्ज हुए थे। वहीं, चौक और चारबाग 79 और 72.2 डेसिबल ध्वनि प्रदूषण दर्ज हुआ। रात के समय भी चारबाग इलाके में गाड़ियों का शोर सबसे अधिक रहा। ध्वनि प्रदूषण 61.3 डेसिबल दर्ज हुआ। अमीसी इलाके में दिन और रात दोनों समय शोर मानक से कम दर्ज हुआ।



एनबीटी, लखनऊ: कोरोना कर्फ्यू के असर से आवासीय क्षेत्रों मसलन अलीगंज, गोमतीनगर, इंदिरानगर और विकासनगर में शोरगुल कम हुआ है। इसके उलट हवा में मौजूद प्रदूषक तत्व नहीं घटे हैं। इंडियन इंस्टिट्यूट ऑफ टैक्सिकॉलॉजी रिसर्च (आईआईटीआर) की ओर से शुक्रवार को जारी प्री-मॉनसून रिपोर्ट के मुताबिक, प्री-मॉनसून 2020 के मुकाबले इस बार हवा में पीएम-10 की सांद्रता में 26.10% की बढ़त हुई है। वहीं, पीएम 2.5 की सांद्रता 16.57% बढ़ी है। सल्फर डाई ऑक्साइड और नाइट्रोजन डाई ऑक्साइड में 113.90 और 23.13 फीसदी की वृद्धि हुई है।

2017 के मुकाबले घटा प्रदूषण: आईआईटीआर के कार्यवाहक निदेशक प्रो. एसके बारिक का कहना है कि शहर में प्रदूषण का स्तर पिछले साल की तुलना बढ़ा है। साल 2020 में पूर्ण कर्फ्यू और इस बार आंशिक लॉकडाउन के दौरान छूट के कारण ऐसा है। हालांकि साल 2017 की तुलना में प्रदूषण के स्तर में काफी गिरावट हुई है। अप्रैल और मई के दौरान शहर के नौ स्थानों पर वायु गुणवत्ता का आंकलन किया गया है। इसमें पीएम 10, पीएम 2.5, सल्फर डाईऑक्साइड, नाइट्रोजन डाई ऑक्साइड और ध्वनि स्तर का देखा गया। 24 घंटे के दौरान पीएम 10 का औसत स्तर 127.1 माइक्रोग्राम प्रति घनमीटर और पीएम 2.5 का स्तर 64.5 माइक्रोग्राम प्रति घनमीटर रहा जो मानकों से अधिक है। वहीं एसओ₂ की सांद्रता 10.1 से 18.5 माइक्रोग्राम प्रति घनमीटर और एनओ₂ की मात्रा 13.4 से 31.8 माइक्रोग्राम प्रति घनमीटर यानी मानक से कम पाई गई।

पेड़-पौधे लगाने के प्रयास धीरे-धीरे रंग लाने लगे हैं। गोमतीनगर विस्तार में बने जनेश्वर मिश्र पार्क और इसके आसपास के इलाकों में कुछ साल पहले तक कंक्रीट के जंगल दिखते थे, वहां अब हरियाली दिखने लगी है। पेज-6 भी देखें

पीएम 10 और पीएम 2.5 का औसत स्तर (माक्रोग्राम प्रति घनमीटर)

साल 2020			साल 2021		
लॉकडाउन पहला (25 मार्च-14 अप्रैल)	पीएम 10	पीएम 2.5	क्षेत्र	पीएम 10	पीएम 2.5
दूसरा (15 अप्रैल-3 मई)	75	44	अलीगंज	119.9	60.7
तीसरा (4 मई-17 मई)	88.3	51.8	विकासनगर	117.3	62.5
चौथा (18 मई)	87	56.1	इंदिरानगर	124.5	67.6
			गोमतीनगर	128.7	68.2
			चारबाग	143.8	71.1
			आलमबाग	133.9	64.5
			अमीनाबाद	109.8	62
			चौक	121.1	62.5

सल्फर डाई ऑक्साइड और नाइट्रोजन डाई ऑक्साइड का औसत

लॉकडाउन पहला	पीएम 10	पीएम 2.5	क्षेत्र	एसओ ₂	एनओ ₂
दूसरा	5.4	19.2	अलीगंज	12.5	33.4
तीसरा	6	20.3	चारबाग	18.5	32.8
चौथा	6.6	22	आलमबाग	10.1	31.8
	6.6	30	अमीनाबाद	11.2	28.7

इन बिंदुओं पर अमल का सुझाव

- सड़कों किनारे ऐसे पेड़ लगाए जाएं वायु प्रदूषण कम करने में मदद करें।
- वाहनों में पार्टिकुलेट मैटर फिल्टर की रेट्रोफिटिंग और बीएसए 6 मॉडल के इस्तेमाल को अनिवार्य किया जाए।
- औद्योगिक क्षेत्र में पार्टिकुलेट प्रदूषण कम करने के लिए बैग फिल्टर और स्क्रबर का इस्तेमाल हो।

विकासनगर और गोमतीनगर में दिन में ध्वनि प्रदूषण 70.5 और 70.7 डेसिबल रहा। वहीं रात में सबसे ज्यादा शोरगुल विकासनगर में 60 डेसिबल रहा। साल 2020 में अलीगंज और इंदिरानगर सबसे अधिक शोरगुल वाले क्षेत्र दर्ज हुए थे। वहीं, चौक और चारबाग 79 और 72.2 डेसिबल ध्वनि प्रदूषण दर्ज हुआ। रात के समय भी चारबाग इलाके में गाड़ियों का शोर सबसे अधिक रहा। ध्वनि प्रदूषण 61.3 डेसिबल दर्ज हुआ। अमीसी इलाके में दिन और रात दोनों समय शोर मानक से कम दर्ज हुआ।

Even Covid curfew failed to rein in air pollution

IITR Assessment For April & May Shows You Did Not Breathe Clean Air

Mohita Tewari | TNN

Lucknow: Despite restrictions on movement in April and partial curfew in May during the second Covid-19 wave, air pollution levels were above permissible limits in the city in both months, reveals a study by Indian Institute of Toxicology Research (IITR).

The 'assessment of ambient air quality of Lucknow city: pre-monsoon 2021 report' was released by the CSIR Institute on the eve of World Environment Day.

The reason is that while many preferred to stay indoors, vehicles continued to ply to provide health services. There was also a mad rush of people for hospital care, besides increase in crematorium fires due to surge in Covid-19 deaths. Other major contributors include domestic cooking, baking/firing in hotels, crop combustion and some industries which were operating, said the report prepared by a team of senior scientists.

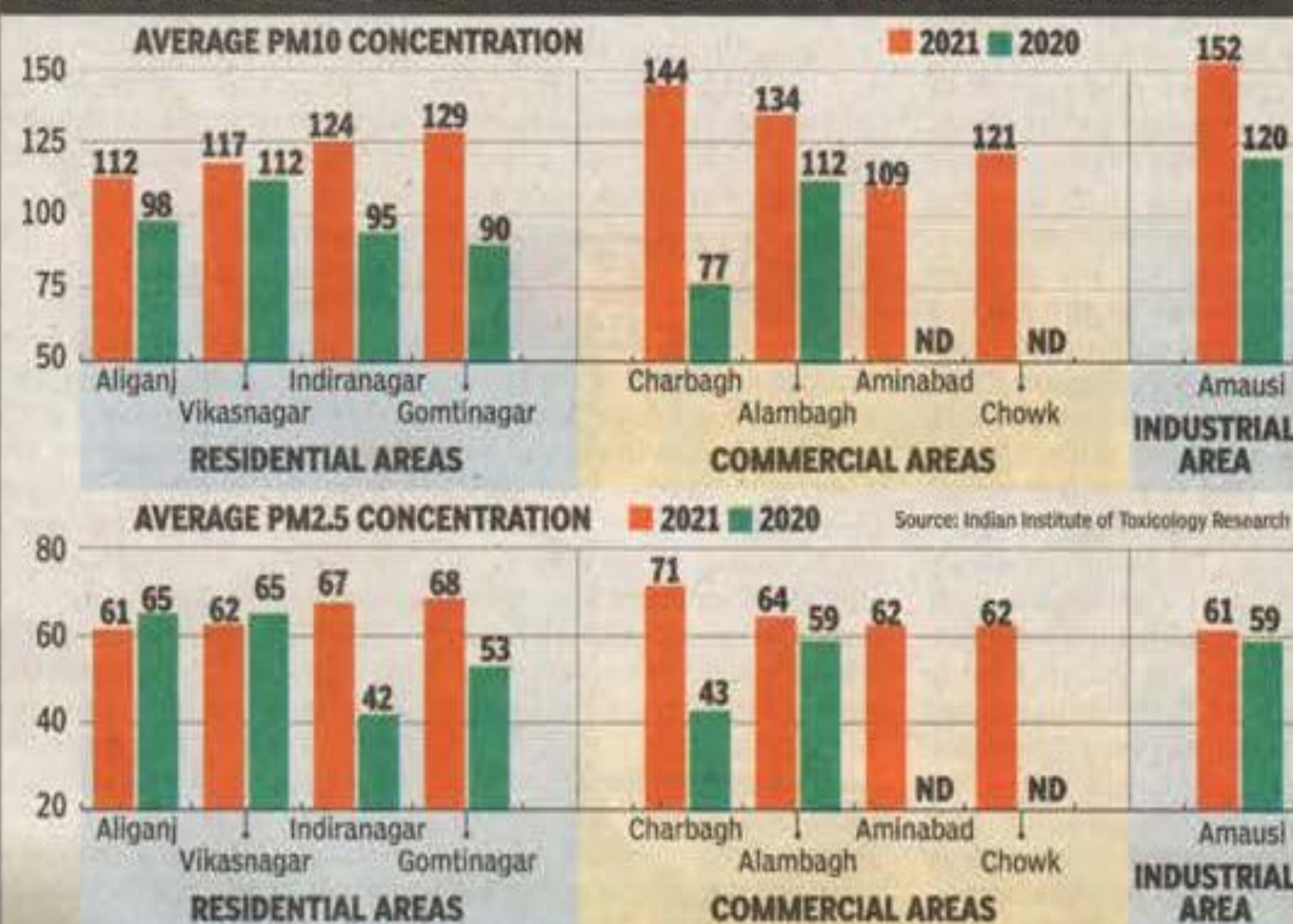
The monitoring of nine locations—four each residential and commercial and one industrial—by IITR found that concentration of fine and superfine pollutants PM10 and PM2.5 was higher than permissible limits, which are 100 micrograms for PM10 and 60 micrograms for PM2.5, set by National Ambient Air Quality Standard.

"The mean values of PM10 and PM2.5 concentration in the air recorded at all locations increased by 26% and 16% respectively as compared to last year. The reason is that last year, it was a complete lockdown during the Covid-19 first wave, but this time, during the second wave, there were limited restrictions in movement in April and a partial curfew in May," said chief scientist GC Kisku, who led the team.

The report also found that Gomtinagar and Charbagh were the most polluted localities in the city. Among residential areas, a 24-hour high PM10 concentration of 128.7 micrograms per cubic metre of air was recorded in Gomtinagar followed by Indiranagar (124.5), Vikasna-

NO CURFEW ON POLLUTION

Values of PM10 and PM2.5 are average concentration of the pollutant in the areas for April and May. They show that air pollution level remained high despite corona curfew



ND | Not Done / * Permissible limits / PM10 | 100 micrograms per cubic metre of air / PM2.5 | 60 micrograms per cubic metre of air

RECOMMENDATIONS TO MAKE AIR CLEANER

- ▶ Plant dense foliage along roadside, especially species tolerant or resistant to air pollution
- ▶ Synchronize consecutive traffic signals to facilitate smooth traffic flow and prevent bottlenecks at signals
- ▶ Phase out older vehicles and encourage timely improvement in vehicle standards, encourage car pooling and public transport
- ▶ Use energy-efficient gadgets/equipment and techniques in industries, households and transport
- ▶ Switch to greener air conditioning to reduce greenhouse gas emissions and conserve energy
- ▶ Install proper construction nets/meshes at construction and demolition sites
- ▶ Avoid burning crop residue in field by using in-situ technologies such as crop diversification
- ▶ Avoid burning trash and other material. Prevent and minimize open air burning of plastic/garbage
- ▶ Avoid frequent digging/cutting road and construction activities

Chowk most cacophonous during day, Charbagh at night

TIMES NEWS NETWORK

Lucknow: Chowk was the noisiest place during daytime and Charbagh during night in the pre-monsoon period, reveals IITR report for April and May.

The noise pollution levels were monitored in nine areas and were found above the prescribed limit by the National Ambient Air Quality Standards (NAAQS).

"Like air, the noise pollution levels also witnessed an increasing trend as compared to the last year. Of the nine locations, only two commercial areas—Alambagh and Aminabad—had noise pollution levels during the night below the prescribed limit of 55 decibels," said IITR chief scientist GC Kisku.

Among the industrial areas, Amausi was the noisiest, both during the day and night.

In residential areas, Gomtinagar was the most cacophonous during day, followed by Vikasnagar, Aliganj and Indiranagar, against the permis-

CITY OF NOISE Noise levels in decibel (db)

Residential	2021		2020	
	Day	Night	Day	Night
Aliganj	67	58	62	44
Vikasnagar	70	60	58	46
Indiranagar	67	55	60	42
Gomtinagar	70	57	54	NA
Commercial	Day	Night	Day	Night
Charbagh	72	61	68	48
Alambagh	67	52	60	NA
Aminabad	71	53	NA	NA
Chowk	79	57	NA	NA



sible limit of 55 decibels while during night, Vikasnagar was the noisiest with 60 decibels pollution levels recorded followed by Aliganj, Gomtinagar and Indiranagar.

In commercial areas, Chowk with 79 decibels was the most noise polluted during day, followed by Charbagh (72.2dB), Aminabad (71.6dB) and Alambagh (67.2dB) against the prescri-

bed limit of 65 decibels, while Charbagh was noisiest at night with 61.3 decibels, followed by Chowk (57.4dB), Aminabad (53.1dB) and Alambagh (52.3dB) against the prescribed limit of 55 decibels.

Chief scientist GC Kisku suggested that lesser use of loudspeakers, horns and smooth traffic management should be ensured to reduce noise pollution levels in the city.

Times View

The suggestions given by IITR scientists to curb air and noise pollution are not difficult to implement. While the government can take the lead, we all can contribute in the effort by taking small steps like car pooling, adopting solar energy and not throwing garbage in the open, among others. It's the responsibility of all the citizens to protect the environment and make the city a better place to live in for the coming generations.

Charbagh (117.3) and Aliganj (111.9).

Similarly, PM2.5 concentration was highest in Gomtinagar with 68.2 micrograms followed by Indiranagar (67.6), Vikasnagar (62.5) and Aliganj (60.7 micrograms).

Among commercial areas, the highest average PM10 concentration of 143.8 micrograms was recorded in Charbagh followed by Alambagh (133.9), Chowk (121.1) and Aminabad (109.8 micrograms). Similarly, PM2.5 concentration was also highest in Charbagh, with 71.1 followed by Alambagh (64.5), Chowk (62.5) and Aminabad (62 micrograms).

The industrial area of Amausi also recorded high

PM10 and PM2.5 values of 152.5 and 61.5 micrograms respectively.

The report said that the concentration of gaseous pollutants, SO2 and NO2, was well below the prescribed NAAQS limit (80mcg/m3) at all locations, but higher in comparison to last year.

"High level of air pollutants and their effects on human health are serious issues. To resolve the issue, a comprehensive study is required with respect to present status of different pollutants and their trends, sources of pollutants and public health risk assessment for future planning on safer urban areas," the report said.

All is not lost: Better traffic management, hygiene has made a difference over the yrs

TIMES NEWS NETWORK

Lucknow: Although a decline in air pollution levels has been recorded in the last two years in April and May due to Covid-19 restrictions but even without restrictions, there has been an overall decreasing trend in air pollution le-

WORLD ENVIRONMENT DAY

vels in the city, according to an IITR report.

Termining it to be a positive sign, scientists at the Indian Institute of Toxicology Research (IITR) said the decline might be due to an efficient traffic management system and Lucknow Metro.

"There is a decreasing

trend in air pollution levels from 2017 to 2020 in ambient air indicating that the city's air pollution in the past was more than the current levels. This decrease may be attributed to significant improvements in traffic management like installation of traffic signals, widening and making of

paved/concrete road that has led to fewer traffic jams. Also, sweeping of road dust, ban on trash burning and proper disposal of municipal solid waste has improved air quality," said chief scientist GC Kisku.

Also, the report highlighted that more diesel automobiles were used, hence increa-

CONGESTION GOES UP

COMPARISON OF INCREASE IN NUMBER OF VEHICLES IN LUCKNOW

Vehicle	2020-21	2019-20	Increase
Taxi	37,993	30,362	20%
Bus	4,383	4,291	2.5%
Car	3.3 lakh	3.1 lakh	5%
2-wheeler	18.6 lakh	18 lakh	3%
Total no. of vehicles in city on Mar 31, 2021	25 lakh		
Vehicular growth in 2020-21 over 2019-20	4.5%		

FUEL CONSUMPTION

Type	2021	2020	% change
Petrol (kilo litre)	1.91 lakh	1.98 lakh	-4
Diesel (kilo litre)	1.7 lakh	1.5 lakh	13
CNG (in kg)	268 lakh	778 lakh	-65
Increase in no. of CNG vehicles 32,646 in 2019-20 to 36,017 in 2020-21			

sing consumption of diesel by 13.5% as compared to last year, while CNG and petrol consumption witnessed a drop of 65.5% and 3.8%, respectively.

To cover longer distances,

people prefer diesel vehicles hence the rise in diesel consumption may be due to coming up of cab services and use of commercial vehicle for transportation, experts said.

They added that petrol and CNG drop showed that people were venturing out less in public transports as well as personal vehicles due to the pandemic.

Delta variant of coronavirus predominates in Varanasi

ఆ వేరియంట్ వల్లే భారీగా కేసులు

న్యూఢిల్లీ: దేశంలో రెండు నెలలుగా భారీగా కోవిడ్ కేసులు పెరగడానికి బి.1.617 వేరియంట్ ప్రధాన కారణమని ఇండియన్ సార్స్-కోవ్-2 కన్సార్షియం ఆన్ జెనోమిక్స్ (ఇన్సాకాగ్) స్పష్టం చేసింది. ఏప్రిల్, మే నెలల్లో దేశవ్యాప్తంగా ఒక్కసారిగా భారీగా కేసులు పెరిగిన విషయం తెలిసిందే. మొట్టమొదటిసారిగా యూకేలో బయటపడిన వైరస్ వేరియంట్ బి.1.1.7 లేదా ఆల్ఫా కేసులు ఇప్పుడు దేశంలో ఒకటిన్నర నెలలుగా తగ్గుముఖం పట్టాయని దేశంలోని 10 జాతీయ స్థాయి ప్రయోగశాలల ఉమ్మడి వేదిక ఇన్సాకాగ్ తెలిపింది. కోవిడ్ వేరియంట్ బి.1.617 కేసులు మొదటిసారిగా మహారాష్ట్రలో బయటపడగా ఇప్పుడు పశ్చిమబెంగాల్, ఆంధ్ర ప్రదేశ్, ఢిల్లీ, గుజరాత్, తెలంగాణల్లోనూ పెరిగినట్లు తెలిపింది. గడిచిన 2 నెలలుగా కొన్ని రాష్ట్రాల్లో భారీగా కేసులు పెరగడానికి బి.1.617 వేరియంట్ కు సంబంధం ఉందని ఇన్సాకాగ్ పేర్కొంది. ఈ వేరియంట్ ఇప్పుడు బి.1.617.1, బి.1.617.2, బి.1.671.3 అనే వేరియంట్లుగా మారినట్లు తెలిపింది. ఇందులోని బి.1.617.2 వేరియంట్ వ్యాప్తి ఎక్కువగా ఉందని గుర్తించిన ప్రపంచ ఆరోగ్య సంస్థ ఇటీవల దీనికి డెల్టా వేరియంట్ గా నామకరణం చేసినట్లు గుర్తు చేసింది.

వారణాసి ప్రాంతంలో 7 వేరియంట్లు సాక్షి, హైదరాబాద్: ఉత్తరప్రదేశ్ లోని వారణాసి



ప్రాంతంలో కనీసం 7 కరోనా వేరియంట్లు వ్యాప్తిలో ఉన్నట్లు బెనారస్ హిందూ యూనివర్సిటీ, (బీహెచ్ యూ) సెంటర్ ఫర్ సెయ్యూలర్ అండ్ మాలిక్యులర్ బయాలజీ (సీసీఎంబీ) సంయుక్త అధ్యయనంలో తెలిసింది. వారణాసి పరిసర ప్రాంతాల్లోని పలు వేరియంట్ల జన్యుక్రమాలను విశ్లేషించి పరిశీలించినప్పుడు ఈ ఏడు రకాలు ఆ ప్రాంతంలో ఎక్కువ వ్యాప్తిలో ఉన్నట్లు తెలిసిందని సీసీఎంబీ తెలిపింది. దేశంలో రెండో దఫా కోవిడ్ కేసులు పెరిగేందుకు కూడా ఈ వేరియంట్ కారణమని బీహెచ్ యూ శాస్త్రవేత్త ప్రొఫెసర్ సింగ్ తెలిపారు. దేశంలోని ఇతర ప్రాంతాల్లో మాదిరిగానే బి.1.617.2 లేదా డెల్టా వేరియంట్ కూడా ఈ

యూకేలో 'డెల్టా' ప్రమాద ఘంటికలు

లండన్: భారత్ లో మొదటిసారిగా గుర్తించిన కోవిడ్ డెల్టా వేరియంట్ లేదా బి.1.617.2 కేసులు భారీగా పెరుగుతుండటంపై యూకే ప్రభుత్వం ఆందోళన చెందుతోంది. వారం వ్యవధిలోనే ఈ వేరియంట్ బారిన 5,472 మంది పడగా, మొత్తం బాధితుల సంఖ్య గురువారానికి 12,431కు చేరుకుందని ఆరోగ్య శాఖ తెలిపింది. ఈ వేరియంట్ బాధితుల్లో ఈ వారంలో 278 మంది, గత వారం 201 మంది ఆస్పత్రుల్లో చేరారని పేర్కొంది. వీరిలో చాలా మంది కోవిడ్ టీకా వేయించుకోని వారేనని వివరించింది. బోల్డ్స్, బ్లాక్ బర్న్ ప్రాంతాల్లోనే అత్యధిక కేసులు బయటపడ్డాయని పేర్కొంది.

ప్రాంతంలో చాలా సాధారణంగా కనిపించిందని ఆయన వివరించారు. సేకరించిన నమూనాల్లో 36 శాతం ఈ వేరియంట్ వేసని తెలిపారు. వీటితో పాటు దక్షిణాఫ్రికాలో గుర్తించిన బి.1.351 వేరియంట్ ను తొలిసారి వారణాసి ప్రాంతంలో గుర్తించామని సీసీఎంబీ గౌరవ సలహాదారు డాక్టర్ రాకేష్ మిశ్రా తెలిపారు.



Please Follow/Subscribe CSIR Social Media Handles



[CSIR INDIA](#)



[CSIR_IND](#)



[CSIR India](#)



[CSIR India](#)



[csirindia](#)