CSIR-NEERI
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(JANUARY-MARCH 2025)

CONTENTS

From the Director's Desk

I am pleased to present the January–March 2025 issue of the CSIR-NEERI News Letter, which captures the significant strides we have made in scientific research, technology development and societal outreach during this quarter. This period has been marked by impactful research outcomes, new technological solutions, and continued collaboration with national and international partners to address pressing environmental challenges.

Our research teams have contributed substantially in peer-reviewed publications and patents, highlighting the translational value of our research. We take pride in the awarding of multiple Ph.D. degrees to our scholars, reinforcing our commitment to nurturing the next generation of environmental scientists and engineers. CSIR-NEERI is committed to aligning its efforts with national priorities.

Dr. S. Venkata Mohan
Director, CSIR-NEERI

DR. S. VENKATA MOHAN TOOK OVER AS DIRECTOR, CSIR-NEERI

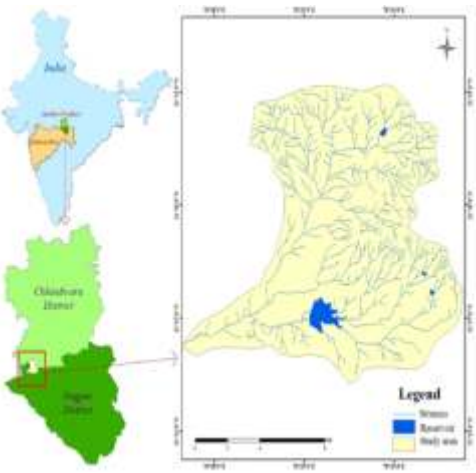
Dr. S. Venkata Mohan is serving as the Director of the CSIR-National Environmental Engineering Research Institute (CSIR-NEERI), Nagpur, since January 2025. Prior to this role, he was a Scientist at the CSIR-Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad, from 1998. He holds a B.Tech in Civil Engineering, an M.Tech in Environmental Engineering, and a Doctorate from Sri Venkateswara University, Tirupati. His academic and research credentials are further distinguished by international engagements, including as a Visiting Professor at Kyoto University, Japan, and an Alexander von Humboldt Fellow at the Technical University of Munich, Germany.

Dr. Mohan's scholarly research centers on addressing anthropogenic environmental challenges through an integrative, sustainability-oriented paradigm, grounded in the principles of environmental bioengineering. His work is characterized by a nexus-based approach to biomanufacturing, wherein he advances the development of low-carbon energy systems, bio-based chemical platforms, and sustainable material production. His interdisciplinary expertise encompasses advanced waste valorization, integrated biorefineries, bioelectrochemical systems, life cycle assessment (LCA), and circular bioeconomy transitions. Over the course of his career, Dr. Mohan has been instrumental in pioneering several impactful technologies, including the conceptualization and deployment of pilot- and full-scale systems for wastewater treatment, acidogenic biohydrogen production, resource-integrated biorefineries, hybrid CO_2 biosequestration, and bioelectro-catalytic platforms for environmental remediation and renewable energy generation.

Dr. Mohan has authored more than 450 peer-reviewed scientific articles, a monograph, a book, 60 book chapters, and five edited volumes. He holds 16 patents and has mentored 42 doctoral scholars. His research has garnered over 37,000 citations and an h-index of 103.

Dr. Mohan has been the recipient of numerous honors, including the Shanti Swarup Bhatnagar Prize, the INAE-SERB Abdul Kalam Technology Innovation National Fellowship, the DBT-Tata Innovation Fellowship, the VASVIK Industrial Research Award, the Kyung Hee International Fellowship, the ProSPER.NET-Scopus Young Researcher Award in Sustainable Development, the NASI-Scopus Young Scientist Award in Earth, Oceanographic & Environmental Sciences, and the NDRF-IEI Environmental Engineering Design Award, among others.He is an elected Fellow of several esteemed scientific academies, including the National Academy of Sciences, India, the Indian National Academy of Engineering, the Telangana and Andhra Pradesh Academy of Sciences, and the Biotech Research Society of India (FBRSI). Dr. Mohan serves on the editorial boards of multiple scientific journals and is Editor-in-Chief of Bioresource Technology Reports.

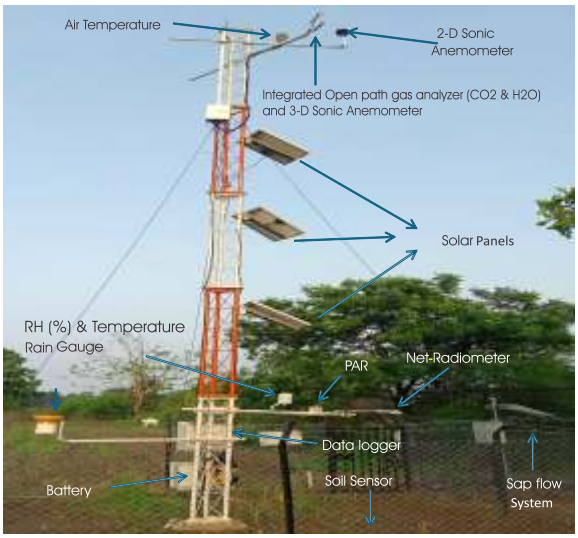
CSIR-NEERI'S NARKHED-PANDHURNA CRITICAL ZONE OBSERVATORY (N-P CZO)



NP-CZO study area

The Narkhed-Pandhurna Critical Zone Observatory (N-P CZO) was initiated by CSIR-NEERI in 2017. It was later supported as a Niche Creation Project (NCP) under the E3OW theme during the period 2020–2023. The CZO is located within the watershed of the Madar River, covering an area of approximately 137 km^2. The study area lies within the Deccan Traps, where groundwater occurrence and movement are controlled by the presence and interconnectivity of fractures.

The watershed is agro-horticulture intensive, and there is extensive extraction of groundwater, leading to a very high stage of groundwater development (100.26%). The CZO is equipped with an Eddy Covariance Flux Tower installed at Dadhimeta village in Pandhurna Taluka, and sap flow sensors. Besides, a network of groundwater monitoring wells, soil moisture measurement stations, and a discharge measurement station has been set-up for long-term monitoring.



Eddy Covariance Tower at CSIR-NEERI's Narkhed-Pandhurna Critical Zone Observatory (CZO)

The CZO is focused on addressing the following research questions:

- What is the impact of vegetation on groundwater recharge?
- What is the water demand of phreatophytes and non-phreatophytes?
- What is the source and sink potential of the ecosystem in terms of H_2O and CO_2 fluxes?
- To what extent is the ecosystem dependent on groundwater?

CSIR-NEERI has estimated the water demand of phreatophytes and non-phreatophytes and has suggested irrigation schedules to farmers. Based on these recommendations, many farmers have adopted drip irrigation. The carbon stock of the forest area has also been assessed.

TECHNOLOGICAL DEVELOPMENTS

Dry Toilet System with Faeces - Urine Separation and Treatment (DToi-FUrST) for cold and arid regions

CSIR-NEERI has designed, developed and demonstrated an innovative dry toilet system—DToi-FUrST (Dry Toilet with Faeces-Urine Separation Technology)—featuring a uniquely designed toilet seat, faeces–urine separators, a dry flush mechanism, mobile collection bins, and a turbo-turbine. This system has been specifically developed for cold and arid regions, particularly in the Himalayas.

The system enables the separate collection, containment, and treatment of human excreta (faeces and urine) using locally available materials to support the decomposition of faeces and nutrient absorption from urine. The dry flush unit ensures uniform and controlled distribution of dry organic powder to cover the faeces, enhancing degradation through effective insulation of the faeces bin.

The mobility of the faeces and urine bins ensures ease of operation and eliminates the need for manual scavenging. The newly designed DToi-FUrST units have been demonstrated at the CeHAB Lab of CSIR-IHBT in Lahaul and across five gram panchayats—Mooling, Keylong, Thorang, Marble and Gondla—of Lahaul district, Himachal Pradesh.

DToi-FUrST is a compact, detachable and retrofittable system offering a robust alternative to conventional dry toilets. It ensures odour-free operation, requires minimal maintenance, and improves sanitation infrastructure. Moreover, it promotes resource recovery by converting human excreta into nutrient-rich organic manure, contributing to a circular sanitation economy in alignment with the Sustainable Development Goals (SDGs).

This patented and innovative dry toilet system is well-suited for implementation in high-altitude military and strategic camps, hill stations, homestays, hotels catering to tourists, and eco-tourism ventures across the Himalayan region. This initiative is a key component of the FTC Project "ComSan-DT" (Compost-Sanitation Dry Toilet) under MLP-208, jointly implemented by CSIR-NEERI and CSIR-IHBT. The project focuses on the utilization of compost boosters in newly designed dry toilets and the recovery of fertilizer from human urine, supporting sustainable sanitation practices and circular economy principles in the Himalayan region.

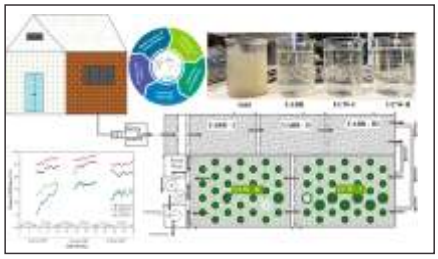
Patent –202311006904; Trade Mark - 6680656

Demonstration of dry toilets at CeHAB, CSIR-IHBT, Lahaul and 5 gram panchayats (Mooling, Keylong, Thorang, Marble, Gondla) of Lahaul district, Himachal Pradesh

R&D HIGHLIGHTS

Greywater treatment using up-flow compact constructed wetland

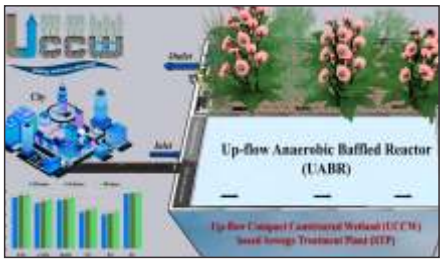
Dr. Ritesh Vijay
Sr. Principal Scientist &
Incharge Waste Water
Management



- Developed a unique Up-flow Compact Constructed Wetland (UCCW) system for greywater treatment
- Integrates preliminary, primary, secondary, and tertiary treatments within a compact setup
- Utilizes up-flow movement to enhance treatment efficiency
- Hydraulic Retention Time (HRT) optimization improves pollutant removal Achieved high removal efficiencies at a 36-hour HRT: Total Suspended Solids (TSS): 95%; Chemical Oxygen Demand (COD): 89.5%; Total Nitrogen (TN): 74%; Total Phosphorus (TP): 75%
- Meets discharge standards except for Fecal Coliforms (FC), requiring disinfection
- Offers affordable and sustainable greywater treatment for households and communities
- Small footprint, minimal energy consumption and low operation & maintenance costs.

Ritesh Vijay and Satyendra, Greywater treatment using up-flow compact constructed wetland: An innovative design and demonstration, Process Safety and Environmental Protection (2025): https://doi.org/10.1016/j.psep.2025.106978

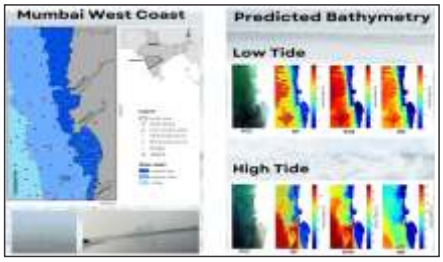
Up-flow compact constructed wetland for sewage treatment



- Patented UCCW-STP integrates all units in a single system for community-level treatment
- Achieved TSS, COD, BOD, TN, TP, and FC removal: 96%, 86%, 90%, 70%, 65%, and 99% respectively
- Evaluated over 720 days, showing robust performance across seasons and Hydraulic Retention Times (HRTs)
- Cost-effective, nature-based solution superior to conventional methods.

Satyendra and Ritesh Vijay, An innovative design and development of up-flow compact constructed wetland for sewage treatment, Environmental Research, Volume 264, Part 1(2025) https://doi.org/10.1016/j. envres.2024.120350

Bathymetric estimation of Mumbai coast using landsat OLI imagery and machine learning models



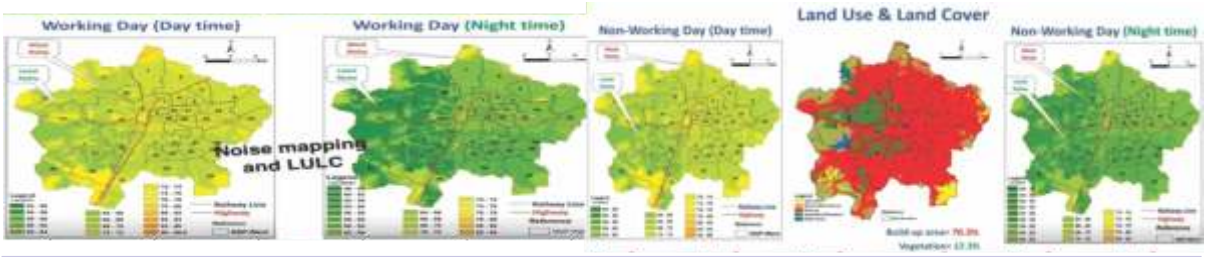
- Developed an advanced approach for coastal bathymetry estimation using Landsat imagery and chart datum (CD) depths, reducing reliance on manual surveys
- Applied machine learning (ML) models—Random Forest (RF), Support Vector Regressor (SVR), and Neural Network (NN) to predict water depths along Mumbai's west coast
- Assessed the impact of tidal fluctuations and sewage discharges on depth prediction using cross-sectional depth analysis
- Identified the blue band as the most informative for bathymetry estimation, yielding lower error metrics across models
- Support Vector Regressor: Captures bathymetry patterns but faces challenges in replicating full depth range
- Demonstrated the significance of band selection & tidal considerations for enhancing bathymetricaccuracy
- Findings contribute to improved coastal management and environmental protection through better-informed bathymetric assessments

Hanisha Mamidisetti and Ritesh Vijay, Bathymetric estimation of Mumbai coast using landsat OLI imagery and machine learning models, Earth Science Informatics, Volume 18, article number 147, 07 (2025); https://link.springer.com/article/10.1007/s12145-024-01619-6#citeas

Noise mapping and impact of land use land cover on urban soundscape

- Conducted comprehensive monitoring and geospatial analysis of urban noise pollution in Nagpur city for both working and non-working days
- Assessed noise levels from various sources (highways, railways, major & minor roads) and receptors (residential, silence, commercial & industrial zones) based on land use land cover (LULC) patterns.
- Performed noise mapping on a GIS platform, using multiple noise indices to identify hotspots during day and night
- Higher annoyance levels recorded during daytime on working days
- Residential and silence zones, along the highways & railways experienced the most significant noise pollution
- Highlighted the need for noise limits in mixed land-use areas to minimize adverse impacts
- Emphasized strategic noise mapping and mitigation measures for effective urban planning and noise management.

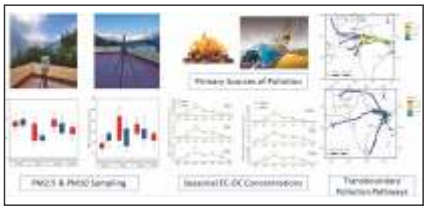
Chaitanya Thakre, Komal Kalawapudi and Ritesh Vijay, 'Noise Mapping and Impact of Land Use Land Cover on Urban Soundscape, MAPAN, Volume 40, pages 59-75 (2025)
https://link.springer.com/article/10.1007/s12647-024-00782-x



Deciphering aerosol carbon fractions in $PM_{2.5}$ & PM_{10} and their possible sources in Eastern Himalaya region

Dr. Anirban Middey
Principal Scientist
Kolkata Zonal Centre

- $PM_{2.5}$ and PM_{10} levels exceeded NAAQS at all sites, indicating poor regional air quality
- Winter showed higher OC and EC, especially in Gangtok, due to vehicles and biomass burning
- SOC formation was significant in winter (OC/EC > 2), pointing to biomass and coal combustion
- Air mass analysis reveals transboundary pollution from Afghanistan and the Indo-Gangetic Plains



Sweta Kumari and Anirban Middey, 'Deciphering Aerosol Carbon Fractions in $PM_{2.5}$ & PM_{10} and Their Possible Sources in Eastern Himalaya Region', Atmospheric Environment (2025)
https://doi.org/10.1016/j.atmosenv.2025.121165

Non-essential use of benzotriazole ultraviolet stabilizers in single-use plastics manufactured in India: An avoidable class of plastic additives

Dr. A Ramesh Kumar
Principal Scientist

- Six major Benzotriazole ultraviolet stabilizers (BUVs) were analyzed in plastic debris from Indian water bodies
- UV-P had the highest concentration, especially in high-density polyethylene
- PCP sachets had UV-329, while UV-320 was not detected in any plastic debris
- Leaching experiments revealed low to moderate ecological risks to planktons
- FCMs contained the highest BUV levels, raising human health and safety concerns.

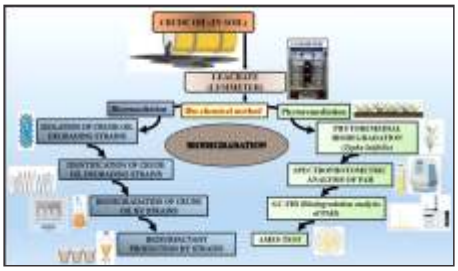
Ankur Khare, Pradip Jadhao, Atul N Vaidya and A Ramesh Kumar, 'Non-essential use of benzotriazole ultraviolet stabilizers in single-use plastics manufactured in India: An avoidable class of plastic additives', Science of the Total Environment Volume 968, (2025); https://doi.org/10.1016/j.scitotenv.2025.178916

Tailor-made bioremediation regime for the specific recalcitrance posed by crude oil leachate

Dr. Rajesh Biniwale
Sr. Principal Scientist

Dr. Amit Bafana
Sr. Principal Scientist

- Comparative evaluation of crude oil leachate treatment using bioaugmentation, phytoremediation (Typha latifolia) and microbe-assisted phytoremediation
- Microbe-assisted phytoremediation achieved the highest leachate removal efficiency (86.86%), demonstrating a synergistic effect between microbes and plants.
- GC-FID analysis confirmed significant reduction in recalcitrant crude oil components, validating the effectiveness of different reatments
- Mutagenicity bioassay showed complete loss of mutagenicity in microbe-assisted phytoremediation, ensuring environmental safety.
- Proved the superiority of combined plant-microbe treatment over individual bioaugmentation or phytoremediation methods for crude oil leachate remediation.



Sameera Siddiqui, Shraddha Dorlikar, Vijay Nimkande, Shwetha Acharya, Rajesh Biniwale & Amit Bafana, Tailor-made bioremediation regime for the specific recalcitrance posed by crude oil leachate, Bioremediation Journal (2025); https://doi.org/10.1080/10889868.2025.2480098

Characterization of a novel Tequatrovirus phage from pristine stretch of the Ganges River, India, in reducing bacterial load from sewage water

Dr. Krishna Khairnar
Principal Scientist

- Isolation of a novel phage ϕ ERS-1 from a pristine stretch of the Ganges River
- Antibiofilm activity against E. coli $>8\log_{10}$ inhibition, $>3\log_{10}$ disruption
- Biofilm inhibition of >50% against P. aeruginosa and S. boydii
- $2\log_{10}$ and $4\log_{10}$ reduction of bacterial counts in phage-treated raw sewage.

Rachel Samson, Ameya Pawar, Krishna Khairnar & Dr. Mahesh Dharne, Characterization of a novel Tequatrovirus phage from pristine stretch of the Ganges River, India, in reducing bacterial load from sewage water, Journal of Environmental Chemical Engineering (2025); https://doi.org/10.1016/j.jece.2025.116315

Mitigation of tar and dust emissions from the Akhand Dhuni ritual at Sai Temple, Nagpur

M/s Sai Temple, Nagpur requested CSIR-NEERI to provide expert advice on mitigating dust and tar emissions resulting from the AkhandDhuni ritual, which has been continuously performed at the Maa Dwarkamai Kaksh of the Sai Temple since its establishment. In response, CSIR-NEERI conducted a reconnaissance survey of the Dhuni Kaksh and the associated flue duct units to assess combustion and emission-related issues.

During the survey, it was observed that the upper sections of the walls in the Kaksh, where the Dhuni is burned, had been significantly damaged by tar and smoke emissions, resulting in a visibly deteriorated environment. As a follow-up, emission monitoring and control studies were conducted at the DhuniKaksh on 10th March 2025.

The study revealed elevated tar emissions and the accumulation of smoke within the room. These issues were attributed to the Dhuni's open burning system, which includes a hood and a 9-meter-tall L-shaped chimney installed outside the room. The presence of multiple open windows allowed excessive air inflow, contributing to smoke and

tar deposition on upper surfaces both inside and outside the Kaksh. Detailed emission monitoring and control studies were conducted under different combustion durations and structural conditions (open and closed). The results were encouraging, and the findings were discussed with temple authority Shri Shegaokarji and Dr. Satish Wate, former Director of CSIR-NEERI, Nagpur.

Based on the findings, the following recommendations were made:

- Enclose the Dhuni fireplace with metal sheets.
- Incorporate a small glass window to allow devotees to perform darshan.
- Designate a separate fuel-loading section, to be opened only during the loading of wood or fuel.
- Enhance the area aesthetically to maintain traditional sanctity while improving environmental conditions.

MAJOR PROJECTS

Principal Investigator:
Dr. K.V. George,
Chief Scientist & Co-Chair, Environmental Resource Planning and Management
Team:Dr. Neelkamal Mandal
Dr. Asha Lalwani
Dr. Rahul Vyawahare
Dr. Vaishali Khaparde
Sponsor: Northen Coalfields Limited (NCL), Singrauli.

Source apportionment study at Singrauli region and capacity building of environmental monitoring and management of Northern Coalfields Limited, Singrauli, Madhya Pradesh

The National Clean Air Programme (NCAP) in India was launched by the Ministry of Environment, Forest and Climate Change (MoEF&CC) in January 2019 to improve air quality in cities across the country. The program follows a collaborative approach involving central ministries, state governments, and Urban Local Bodies (ULBs). Under this program, CSIR-NEERI has been entrusted with conducting emission inventory and source apportionment studies in eighteen cities of Maharashtra, as well as several cities in states such as West Bengal, Odisha, Meghalaya, Andhra Pradesh, and Madhya Pradesh. CSIR-NEERI carried out these studies across various cities in India. While these studies were in progress, other agencies also approached CSIR-NEERI to extend these studies beyond the limited scope of non-attainment cities. Northern Coalfields Limited (NCL), Singrauli, sponsored a source apportionment (SA) study in its coal mining area, spanning 25 km $\times$ 15 km, which is very large area and is a challenging problem considering spatially and temporally varying emission rate.

Principal Investigator:
Dr. Nidheesh P V
Principal Scientist
Sponsor:
Maharashtra Pollution Control Board (MPCB), Mumbai

Carrying capacity study for critically polluted areas (CPAs), severely polluted areas (SPAs) & other polluted areas (OPAs) listed under CEPI in Maharashtra, namely Chandrapur, Dombivali, Chembur, Pimpari-Chinchwad and Mahad

This project aims to assess the carrying capacity of critically and severely polluted areas listed under the Comprehensive Environmental Pollution Index (CEPI). This involves evaluating environmental resource availability and the assimilative capacity of air, water, biodiversity, land, surface temperature, and drainage patterns. The study seeks to determine sustainable population and industrial activity levels that prevent environmental degradation while maintaining long-term ecological balance. By using remote sensing, GIS mapping, and carrying capacity indicators, the project aims to provide data-driven insights for sustainable urban and industrial planning.

Principal Investigators:
Dr. Rakesh Kadaverugu,
Principal Scientist and
Dr. Nidheesh P V,
Principal Scientist

Catchment area treatment plan of Ratle Hydro-Electric Project, Kishtwar

The aim of the Catchment Area Treatment (CAT) Plan for the 850 MW Ratle Hydro-Electric Project is to protect the ecological health of the catchment area by preventing soil erosion, conserving water, rehabilitating degraded forests, and mitigating landslides. The plan ensures sustainable forest and land management, reduces sedimentation in the river and reservoir, and aligns with environmental regulations to support long-term hydroelectric power generation and regional sustainability.

Sponsor: Ratle Hydroelectric Power Corporation Limited

Principal Investigators
Dr. Krishnamurthi Kannan,
Chief Scientist & Co-Chair,
Waste Management
Dr. Sadanand Sontakke
Dr. Gajanan K. Khadse
Co-PIs:
Dr. Saravanadevi Sivanesa
Dr. Amit Bafana,Dr. S.Y. Bodkhe
Dr. H. V. Singh, Dr.Suvha Lama
Dr. Shilpa Paranjape
Dr. Pankaj M. Kulurkar and
Dr. Prashanti Niwant

Centre of Excellence on Climate Change: Preparation of national action plan for water and human health for health care sectors

The project aims to develop National Health Action Plan (HAP) for all the states of the country and to prepare Standard Operating Procedures (SOP) and Monitoring System for water and health. The project will also conduct periodic trainings of the trainers and Information, Education & Communication (IEC) campaign for generating awareness in the community.

Sponsor: National Centre for Disease Control (NCDC), Ministry of Health and Family Welfare, New Delhi

Principal Investigator:
Dr. Hemant Bherwani,
Sr. Scientist
Team:
Dr. Rajesh Biniwale,
Dr. Amit Bansiwal,
Dr. Ankit Gupta,
Dr. Yogesh Pakade,
Dr. Rakesh Kadaverugu,
Dr. Ashutosh Kumar,
Dr. Prasad Ghorpade

Assessment of the conventional and nano precipitated calcium carbonate industry through life cycle assessment: midpoint analysis based approach

- Study the manufacturing process of PCC and nano PCC
- Obtain Lifecycle Inventory (LCI) to detail inputs and outputs of each activity in the product lifecycle, essential for LCA
- Understand the key impacts of nano and conventional products
- Conduct environmental modelling to understand the extent of impact
- Suggest policy changes with respect to nano products in the country

- Sponsor:
  Ministry of Environment, Forest & Climate Change (MoEF&CC)
- Industry Partner:
  Dr. Marcus Knight,
  Ministryof Environment Forest &
  Climate Change (MoEF&CC)

Project Coordinator:
Dr. Mahendra P Patil,
Chief Scientist & Chair,
Waste Management
Principal Investigators:
Dr. Anil Bhanarkar,
Dr. Saravana Devi,
Er. Jowin Joseph Co-PI:
Dr. Kavita Gandhi

Environmental monitoring in and around integrated common hazardous waste treatment, storage and disposal facility (ICHWTSDF) at Pithampur during incineration of hazardous wastes generated by M/s Union Carbide India Ltd.

The Pithampur Industrial Waste Management Private Limited (PIWMPL) is operating an Integrated Common Hazardous Waste, Treatment, Storage and Disposal Facility (ICHWTSDF) at Pithampur, Dhar District, Madhya Pradesh. This is the only Facility in Madhya Pradesh which has both incinerator and secured landfill for hazardous waste management. The Govt. of Madhya Pradesh has engaged PIWMPL for the incineration of 337 Metric Tons of hazardous Wastes generated and stored by the defunct M/s Union Carbide India Limited, Bhopal. PIWMPL had proposed to incinerate the waste starting with 3 trial runs at 135 kg/hr, 180 kg/hr and 270 kg/hr, followed by a full scale incineration.

Sponsor: Pithampur Industrial Waste Management Private Limited

In view of this, PIWMPL had approached CSIR-NEERI, Nagpur to carry out monitoring in 5 phases during pre-incineration (baseline data), 1st trial run, 2nd trial run, 3rd trial run and full scale incineration for AAQ, Stack Emission, Soil, Water and Incinerator Ash for several parameters including Mercury, Pesticides and Aromatic Hydrocarbons. Accordingly, the project' detailed scope of work was finalized and CSIR-NEERI has taken up this study on project bound manner and the study report shall enable the industry to closely monitor and improve its activities.

Assessment of water and sediment quality and preparation of remediation plan for 11 lakes of Hyderabad City

Principal Investigators:
Dr. Ramya Sanam &
Dr. Morami Kalita

Team:
Dr. Shaik Basha
Dr. P.R. Meganathan
Mr. H. R. Samudrala
Ms.Jyothi Veligeti

The Division Bench of Hon'ble High Court of Telangana has passed the orders dated 06/04/2024 in WP No. 1472 of 2017 by appointing two advocate Commissioners Committee for ascertaining the works carried out by the respondents in 11 numbers of lakes in GHMC and HMDA limits. As per the report submitted by the appointed advocate committee, most of the lakes are polluted and needs testing of water quality and sedimentation studies for the 11 lakes. In view of this, HL & WBM Circle, Greater Hyderabad Municipal Corporation (GHMC), approached CSIR-NEERI to undertake the study to assess the contamination status and prepare a remediation plan for each lake (11 nos.). The project aims to characterize the nature and extent of environmental contamination of the lake body (surface water and sediment) and based on primary and secondary data and its analysis, a suitable and cost-effective remediation action plan will be prepared for each lake.

Sponsor: HL & WBM Circle, Greater Hyderabad Municipal Corporation (GHMC)

CSIR-NEERI IN FOCUS

Ganga's natural purification: Insights from CSIR-NEERI's landmark study

Leading national media outlets, including India TV, NDTV, TV9 Marathi, ABP News, Lokshahi News and articles from Divya Marathi and The Times of India have featured CSIR-NEERI's groundbreaking study on the Ganga River's self-cleansing properties. Led by Dr. Krishna Khairnar, the study reveals how bacteriophages, high dissolved oxygen, and sediment interactions aid water purification. It emphasizes maintaining river flow while mitigating pollution and dam-related disruptions.


TIMES CITY

Purifying Millions, Ganga Cleanses Self With Its Natural System: Neeri Experts

DAMS POSE THREAT TO SELF-CLEANSING


दिव्य मराठी

गंगेतच शुद्धतेची क्षमता म्हणून ती पवित्र; नीरीचा अभ्यास

CSIR-NEERI turns 2-acre wasteland into Bamboosetum, plants 89 Bamboo species

In a groundbreaking initiative, CSIR-NEERI has successfully transformed a 2-acre barren wasteland into a thriving Bamboosetum, planting 89 diverse bamboo species collected from across 17 states. This pioneering project, led by Dr. Lal Singh, Principal Scientist in the Solid and Hazardous Waste Management Division, aims to conserve rare and indigenous bamboo species while promoting sustainable land use and biodiversity. The CSIR-NEERI Bamboosetum serves as a living repository for bamboo genetic diversity and a research hub for studying bamboo productivity, root systems, tensile strength, and rhizome ecology. The project also

explores bamboo's potential for carbon sequestration, soil erosion control and sustainable construction materials, making it a model for agroforestry and rural development. The Bamboosetum has become a biodiversity hotspot, attracting students, researchers, and tourists. It has also contributed to conserving 48 bird species, including 16 peacocks, enhancing the ecological value of the area.

NEERIs findings cast shadow on construction work along Kumbalgarhs Lakhela lake catchment area

Lakhela lake's catchment area in Rajasthan's Kumbhalgarh Wildlife Sanctuary has witnessed a surge in construction activity over the past decade, a survey conducted by the CSIR-NEERI has revealed. In a report submitted to the Supreme Court, CSIR-NEERI presented the findings of its "change-detection study" of the eco-sensitive zone, indicating that the built-up portion in the lake's eco-fragile area constitutes close to three percent of the total area of the catchment zone. According to the report, the total catchment area spans approximately 13.662 square kilometres. Under the River Conservation Zone (RCZ) Regulations, 2015, and the Environment Protection Act (EPA), construction activity is prohibited in the catchment zone to prevent pollution of the water body, reduce the risk of flooding in the region, and, in turn, avoid damage to the local ecosystem. While the NEERI report says that the built-up portion constitutes about three percent of 13.662-square-kilometre catchment area, it also reveals that less than one percent of the zone is occupied by the water body, indicating "a minimal presence of water". More than 44 percent of the total area comprises barren land, while agriculture is practised on 6.86 percent, suggesting moderate cultivation and farming activity around the water body. Vegetation covers approximately 45 percent of the land.

Source: Theprint

PMC proposes CSIR-NEERI appointment for environmental monitoring of Bio-CNG plant following supreme court directive

In compliance with the Supreme Court's directive, the Pune Municipal Corporation (PMC) has proposed appointing the National Environmental Engineering Research Institute (NEERI) for environmental monitoring of the 200 metric ton per day wet waste processing plant at Sus road, Baner. The PMC's Standing Committee has been approached for approval of this appointment under Section 5.2.2 of the Maharashtra Municipal Corporation Act. The Bio-CNG plant was developed to process wet waste and generate biofuel, contributing to sustainable waste management in the city. The project was executed by Mail Exchange Environment Solutions LLP and is considered one of PMC's key initiatives to address urban waste management challenges.

Source: Punemirror

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1) Compact Hinged Baffle Wall for Drain / Nala Treatment, application No. 446433-001, 23 January 2025
2) Compact Hinged Flood Gate with Flow Measurement for Drain / Nala Treatment, application No. 446434-001, 23 January 2025
3) Compact Green Noise Barrier (CNoBar), application No. 447057-001, 27 January 2025
4) Compact Household Composter with Processing Shaft, application No. 450362-001, 24 February 2025
5) Pico Hydro Turbine for Renewable Energy from Drain/ rivulet, application No. 450228-001, 28 February 2025
6) Compact Hinged Air Diffuser System for Drain / Nala Treatment, application No. 450228-001, 28 February 2025

Ph D AWARDED

1) Mr. Ashish Kumar Singh (Enrolment No. 10BB19J27005), under Dr. Anshuman A. Khardenavis, defended his viva on Feb 13, 2025, for research on denitrifying methanotrophs, which help reduce landfill methane and nitrate pollution.
2) Mr. Varun Shukla (Enrolment No. 10CC21J27002), under the guidance of Dr. Sukdeb Pal (Supervisor) and Dr. Rita S. Dhodapakar (Co-supervisor) successfully defended his Ph.D. viva on Feb 25, 2025. research foes on converting waste biomass into functionalized materials for environmental applications.

3) Ms. Wankhede Utkarsha Uttamrao (Enrolment No. 10CC21A27008) under the guidance of Dr. Sadhana Rayalu (Supervisor) and Dr. R. J. Krupadam (Co-supervisor) successfully defended her Ph.D. viva-voce examination on March 5, 2025. for research focuses on eco-friendly pyrotechnics with cost-effective additives to reduce emissions.
4) Mr. Abhishek Raj (Enrolment No. 32EE18A27009) under the guidance of Dr. Avneesh Anshul (Supervisor) and Dr. Manish Kumar, ARSD College, D.U, New Delhi (Co-supervisor) successfully defended his Ph.D. viva-voce examination on 26-03-2025, for his research on lead-free perovskite solar cells.

EVENTS

Symposium on Environmental Biotechnology and Health

Organized a Symposium on "Environmental Biotechnology and Health" on 16 January 2025. Experts discussed antimicrobial resistance, stressing a holistic approach to safeguard health and promote sustainability in agriculture, pharmaceuticals and livestock.

Dr. Shekhar Mande, Former Director General, CSIR addressing in the inaugural session

Brainstorming Session on Carrying Capacity of Water Resources

CSIR-NEERI hosted a Brainstorming Session on Carrying Capacity of Water Resources on March 21, 2025, bringing together experts to address water sustainability challenges. Speakers emphasized the multidimensional nature of carrying capacity with their perceptions on carrying capacity, along with CSIR-NEERI's contributions and experiences in this domain. The deliberations led to a roadmap for developing methodologies and approaches for carrying capacity studies in water resource management.

Dr. S. Venkat Mohan, Director, CSIR-NEERI delivering the welcome address

National Science Day

CSIR-NEERI celebrated National Science Day on 28th February 2025, with a lecture by Dr. Pratik N. Sheth from BITS Pilani, emphasizing the role of biomass gasification in green hydrogen production. He highlighted various hydrogen production methods, stressing the significance of agro-residue-based hydrogen as a sustainable energy solution under the National Green Hydrogen Mission. Dr. Sheth shared insights on thermochemical processes, bio-oil production from jatropha residue, and Refuse-Derived Fuel (RDF) gasification, advocating waste-to-energy approaches for clean hydrogen. The event reinforced the need for scientific innovation and entrepreneurship in advancing green energy solutions.

Dr. Pratik N. Sheth, BITS Pilani delivering the National Science Day Lecture

Republic Day Celebration

CSIR-NEERI celebrated Republic Day with great zeal and enthusiasm. Dr. M.P. Patil, Chief Scientist and Chair, Waste Management, CSIR-NEERI hoisted the national flag on the campus. In his address, Dr. Patil encouraged the staff to contribute to the nation's progress by enhancing scientific output in the field of environmental research. A cultural program followed his speech, and CSIR-NEERI staff actively participated in the Republic Day celebrations.

Dr. M.P. Patil, Chief Scientist and Chair, Waste Management, CSIR-NEERI addressing the staff of CSIR-NEERI

International Women's Day Celebration

As part of the International Women's Day celebrations, a series of events were organized at CSIR-NEERI to promote women's empowerment and well-being. On March 10, 2025, a yoga session was held to highlight the importance of mind-body wellness, featuring activities aimed at enhancing physical health and mental balance. This was followed by an informative talk on March 11, 2025, by an eminent dietitian, focused on raising awareness about healthy dietary practices. The main programme was conducted on March 12, 2025, with Dr. P. L. Patel, Director of VNIT Nagpur, as the Chief Guest, and Mrs. Pranita Umredkar, General Manager of Smart City Nagpur, as the Guest of Honour. The event concluded with an engaging panel discussion that emphasized the role of women in shaping a sustainable and inclusive future.

The event concluded with an engaging panel discussion

QCI-NABET Stage III accreditation

The Institute organized the QCI-NABET Stage III accreditation assessment from March 3 to 7, 2025. During this period, a total of 35 scientists and technical staff were evaluated in their respective functional areas and sectors. The assessors, Mr. M.K. Kutiappan and Mr. Debipriya Sen from QCI-NABET, conducted the evaluations. QCI-NABET accreditation plays a crucial role in achieving the highest standards in Environmental Impact and Risk Assessment studies, contributing significantly to the continuous improvement of EIA reports. In addition to the assessments, the assessors reviewed two EIA reports and provided valuable guidance to all the candidates for further enhancement. The QCI-NABET assessment is a comprehensive evaluation process aimed at strengthening the skills, competencies, and professional capabilities of personnel within the organization.

CSIR-NEERI scientists participating in QCI-NABET Stage III accreditation assessment

RECOGNITIONS

- Dr S K Goyal, Chief Scientist and Chair, CSIR-NEERI Delhi Zonal Centre participated as a Panelist in the Plenary Session on 'Urban Air Pollution Management in Delhi & NCR' during Industrial Decarbonization Summit – Road to Net Zero 2025 (IDS 2025)' jointly organized by Indian Association for Air Pollution Control (IAAPC), and PHCCI, New Delhi on January 15, 2025, at Hotel Le Meridian, New Delhi.

- Ms. Radhika Sood, an INSPIRE Fellow and AcSIR Ph.D. Scholar guided by Dr. Shalini Dhyani, Principal Scientist at CSIR-NEERI received the Best Oral Presentation Award at the International Conference on Ecosystem Functioning and Sustainability in a Changing Environment (ESCE 2025), held at the Department of Botany, Banaras Hindu University (BHU), Varanasi, India from February 6-8, 2025. Her presentation, titled "Understanding the Urban Foraging Concept in Fast-Expanding Urban Areas in the Indian Himalayan Region: Lessons from Himachal Pradesh, India," provided insights into urban foraging practices for biodiversity conservation and their role in promoting sustainable urban development.

● Dr. Shalini Dhyani, Principal Scientist, CSIR-NEERI was invited to the BioConserve Summit 2025, organized by Infosys Technologies Limited in Bengaluru. She presented her decade-long work and the knowledge products on biodiversity developed for the CSIR-NEERI Urban Campus in Nagpur, aimed at supporting biodiversity conservation. The CSIR-NEERI kiosk was visited by Nandan Nilekani, Co-Founder of Infosys and Mrs. Rohini Nilekani, who envisioned the urban campus as a significant space for conserving and restoring biodiversity. Nandan Nilekani encouraged scaling up these long-term research, monitoring, conservation and restoration efforts to other CSIR laboratories. The BioConserve Summit 2025 served as a collaborative platform for knowledge sharing among experts from academia, research organizations, government bodies and industry.

● Dr. S.K. Goyal, Chief Scientist & Chair, CSIR-NEERI Delhi Zonal Centre moderated a Thematic Panel discussion in 2nd Edition of 'National Conclave on Indoor Environmental Quality (IEQ 2025) on Starting with Schools' organized by Society for Indoor Environment (SIE) during February 14-15, 2025, at Research and Innovation Hub, IIT, Delhi.

● Ms. Prabhojit Kaur, Project Associate working in IPR Cell at CSIR-NEERI, has been awarded the 'Best Oral Presentation Award' at the National Conference on Sustainable Practices for Environmental Remediation (NCSPER 2025), held on February 19-20, 2025, at Thapar Institute of Engineering & Technology, Patiala. She presented a paper on"Management of Waste PV Solar Panel with Recourse to Recycling and Recovery of Valuable Materials.

● Mr. Prakash Kumbhare, Sr. Principal Scientist, CSIR-NEERI has secured the first position in the order of merit with the highest CGPA in LL.M. (Environmental Law). In recognition of this achievement, he has been awarded the Merit Certificate for securing the top rank at the Post-Graduate Teaching Department of Law, RTM Nagpur University.

● Ms. Punam Pinjarkar, an M.Sc. (Biotechnology) student from Atash College of Management and Technology, Pandhurna, currently pursuing her dissertation at CSIR-NEERI under the guidance of Dr. Lal Singh, Principal Scientist, has received the "Best Poster Presentation Award" at the National Conference on Sustainable Science and Technology for Viksit Bharat, held at CSIR-IMMT Bhubaneswar on March 6-7, 2025. She presented her research on the "Role of Mycorrhizal Diversity in Enhancing Bamboo Productivity," co-authored by Ms. Gayatri Tijare and Dr. Lal Singh. Ms. Pinjarkar received the award from Shri Sudhanshu Mani, the creator of the Vande Bharat Express.

● Dr. Raman Sharma, Principal Scientist, CSIR-NEERI Delhi Zonal Centre was conferred with the 'Climate Champion Award' during the Climate Conference - India's Journey Towards Green and Sustainable Future organized by Earthy Green Foundation on February 13, 2025, at Constitution Club of India, New Delhi.

● Dr. Deepanjan Majumdar nominated as a member of joint team (MoEF&CC, ZSI, BSI, NEERI, WISA and SWA) to inspect and assess the proposed area under the submitted proposal for construction of One Underground Reservoir, Two Overhead Reservoirs and One Health Centre at DhapamanpurMouza in East Kolkata Wetlands (EKW) by Bidhannagar Municipal Corporation.

● Dr. Deepanjan Majumdar was invited as an expert member of the judging committee in the technical session on 'Environmental Sciences including Climate Change' in the 32nd West Bengal State Science and Technology Congress held at Biswa Bangla Convention Centre on March 2, 2025

● Dr. Deepanjan Majumdar is a member of the expert committee on 'Environment, Ecology and Disaster Management' in Department of Science and Technology and Biotechnology of Govt. of West Bengal.

OUTREACH

● CSIR-NEERI played a pivotal role at the 12th Science Expo at Raman Science Centre, engaging students and the general public with its research and innovations. As one of the 16 participating R&D institutes, CSIR-NEERI's exhibition stall, inaugurated by Dr. Shekhar Mande, FormerDG of CSIR, showcased significant scientific achievements through live demonstrations and interactive sessions with scientists. Over the course of the event, nearly 12, 234 students from 89 schools explored its contributions to environmental science and technology. The exhibition received an overwhelming response, highlighting CSIR-NEERI's commitment to science communication and inspiring young minds toward scientific exploration. In recognition of its efforts in popularizing science, CSIR-NEERI was honored during the concluding ceremony of the Science Expo and Innovation Festival 2025.

● CSIR-NEERI played a crucial role at Advantage Vidarbha – An Industrial Expo 2025, showcasing its scientific and technological achievements that benefit both industry and society. The exhibition highlighted R&D in water, air and waste management, drawing significant interest from budding entrepreneurs, start-ups, industry professionals and students. The event served as a dynamic platform for fostering collaborations between research institutions and the business community, driving innovation-driven growth in the Vidarbha region. CSIR-NEERI's pioneering technologies were recognized for their potential to support sustainable industrial development and environmental conservation. In acknowledgment of its contributions, CSIR-NEERI received a token of appreciation for advancing science and technology for societal and industrial progress.

● CSIR-NEERI' Chennai Zonal Centre participated in the Chennai Science Festival 2025, organized by Science City, Department of Higher Education, Government of Tamil Nadu, from March 26-28, 2025, at the Periyar Science and Technology Centre Campus (Birla Planetarium), Chennai. Significant R&D achievements were showcased through interactive exhibits and instruments, engaging students and the general public inspiring young minds to explore environmental science and sustainability.

CSIR-INTEGRATED SKILL INITIATIVE

Under the CSIR-Integrated Skill Initiative, CSIR-NEERI organized a series of Green Skill Training Programmes to enhance capacity building and skill development across various domains of environmental science. The first in the series was the Skill Training Program on "Soil Quality Assessment and Land Management"(January 8–9, 2025) at CSIR-NEERI, Nagpur, which featured expert lectures, hands-on sessions in NABL - accredited labs,and field

excursions to land restoration sites near mining and thermal power plant areas. This was followed by the Skill Training Programme on "Water and Waste Water – Monitoring, Analysis and Treatment"(January 23, 2025) held at the Mumbai Zonal Centre, where participants gained practical exposure to wastewater monitoring and emerging pollutants through technical demonstrations and expert interactions. The third programme, "Analytical Instrumentation Techniques for Measurement of Environmental Contaminants" (February 19–20, 2025) conducted at CSIR-NEERI, Nagpur, equipped participants with advanced analytical skills using state-of-the-art instruments such as GC-MS, ICP-MS, FTIR, and TOC analyzers, accompanied by lab visits and expert-led demonstrations.The most recent training, "Environmental Impact Assessment (EIA)" (March 5–7, 2025), brought together participants from 11 states and featured in-depth sessions on EIA methodology, regulatory frameworks, pollution modeling, biodiversity, and socio-economic considerations. This three-day programme also included site selection surveys and technical visits. Across these programmes, participants from rural and urban areas of over 14 states received hands-on training, attended technical lectures, and interacted with CSIR-NEERI experts. These initiatives not only facilitated knowledge transfer and capacity building but also strengthened environmental stewardship among diverse stakeholders from academia, industry and government organizations.

COLLABORATION

● Dr. R. Madhan, Director, Indo-German Science & Technology Centre (IGSTC), visited CSIR-NEERI to facilitate and promote Indo-German bilateral collaborations in basic and applied sciences, research, and technology, particularly in environmental science and engineering. CSIR-NEERI scientists, research scholars and project staff learned about IGSTC's funding opportunities, fellowships and networking possibilities, and received support for strengthening linkages with Germany.

Dr. R. Madhan, Director, Indo-German Science & Technology Centre (IGSTC) interacting with CSIR-NEERI scientists

● CSIR-NEERI hosted a strategic discussion with NIT Puducherry to advance environmental studies on mangrove ecosystems led by Dr. S. Venkata Mohan, Director, CSIR-NEERI. The discussions focused on conservation strategies, climate change adaptation and sustainable resource management.The experts emphasized the role of mangroves in blue carbon sequestration, ecosystem services, and climate resilience. They also explored future research on Environmental Impact Assessments (EIA) for coastal resource extraction and the potential of protein-based plants in saline environments.Key action points include development of a joint project proposal for MoEF&CC, DBT and DST funding, collaborative research on EIA, resource extraction, and mangrove ecosystem services and exploration of protein-based plant cultivation in saline environments with global startups. This collaboration aims to support coastal conservation efforts, sustainable development and ecosystem-based climate solutions.Key participants were Dr. M MGhangrekar, Director, NIT Puducherry; Dr. V.A. Mhaisalkar, Former Professor, VNIT Nagpur; Er. Padma Rao, Chief Scientist CSIR-NEERI; and Dr. ShaliniDhyani, Principal Scientist,CSIR-NEERI.

Dr. S. Venkata Mohan, Director, CSIR-NEERI in discussion with Dr. M. M. Ghangrekar, Director, NIT Puducherry and Dr. V.A. Mhaisalkar, Former Professor, VNIT Nagpur

● Shri Mahesh Mehendale, Executive Director of the Western Regional Load Dispatch Centre, GRID-INDIA Mumbai visited CSIR-NEERI along with four executives to learn about the R&D activities of CSIR-NEERI, particularly in the area of air pollution control. Dr. K. V. George, Chief Scientist and Co-Chair of Environmental Resource Planning and Management at CSIR-NEERI briefed them on the S&T interventions required for air pollution control from various sources. They expressed eagerness to collaborate with CSIR-NEERI.

Dr. K. V. George, Chief Scientist and Co-Chair of Environmental Resource Planning and Management at CSIR-NEERI briefing on the S&T interventions

● CSIR-NEERI hosted inductee IAS officers from across the country as part of their study tour conducted by the Lal Bahadur Shastri National Academy of Administration (LBSNAA). During their visit, the officers discussed air and water quality management, waste management, and environmental conservation. This interaction highlighted the critical role of science-policy integration in achieving a sustainable future. They also gained insights into environmental challenges, research, and sustainable solutions relevant to policymaking. Dr. S. Venkata Mohan, Director, CSIR-NEERI, assured them of the institute's support in addressing environmental issues they may encounter in their respective regions, in the interest of society.

Dr. S. Venkata Mohan, Director, CSIR-NEERI in discussion with IAS officers

● 63 newly recruited AE-II & JE of WRD & PWD, Govt. of Maharashtra, were introduced to relevant R&D areas and potential collaboration with CSIR-NEERI for various projects on water resources and public works in the state.

● Health workers from the Health and Family Welfare Training Centre, Govt. of Maharashtra, visited CSIR-NEERI to understand the impact of the environment on public health. Through hands-on sessions, they explored CSIR-NEERI's initiatives in improving air and water quality, managing waste and promoting sustainable practices. The visit highlighted practical solutions to address pollution-related health issues

TECHNOLOGY EVALUATION COMMITTEE (TEC) MEETING

CSIR-NEERI has conducted a third party evaluation of CSIR-NEERI's technologies on February 18-19, 2025 at CSIR NEERI. An External Expert Committee under the Chairmanship of Dr. Sukumar Devotta, Professor of Eminence (Hon), Anna University &Former Director, CSIR-NEERI, Nagpur, Prof. V.A. Mhaisalkar, Emeritus Professor, VNIT, Nagpur and Prof. Akhilendra Gupta, MNIT, Jaipur evaluated the technologies of CSIR-NEERI including Renewable Hydropower from Drain Rivulet Outlet (ReHyDRO), Compact Faecal Sludge Separation and Treatment (CFSST), Compact Organic Manure Processing Output (CNCOMPO), Upflow Compact Constructed Wetland (UCCW), Low Temperature Adapted, Methanogenesis (LTAM) process, The Himalayan STP (Him-STP) and Himalayan Dry Toilet or DToi-FUrST developed by Dr.Ritesh Vijay, Sr. Principal Scientist &Incharge and Dr. Rima Biswas, Sr. Principal Scientist of Waste Water Management Subvertical.

The Committee visited the pilot demonstration plants in CSIR-NEERI campus and also field demonstration plants at Go Vigyan Kendra, Deolapar near Nagpur. Dr Sunita Shastry, Er. Satish Dabe and Dr. P.R Salve coordinated the Evaluation Meeting.

LECTURES DELIVERED

● Dr. Debishree Khan, Sr. Scientist, CSIR-NEERI delivered a lecture on "Transforming Waste Management: The Role of Circular Economy in Building a Sustainable Future" at the IWWA Hall. The event was organized by the Indian Water Works Association (IWWA), Nagpur Centre.Dr. Khan emphasized the importance of adopting a circular economy model to revolutionize waste management practices.

● Dr. Patrizio Arrigo, a former researcher from CNR SCITEC, Italy delivered a lecture on "The influence of exposome analysis in air pollution management" on March 25, 2025, at CSIR-NEERI. The lecture covered the experimental and modeling approaches to be considered when conducting exposome studies for health risk assessment. He also discussed the computational tools for predicting health risks associated with environmental exposure.

● Dr. S.K. Goyal, Chief Scientist & Chair, CSIR-NEERI Delhi Zonal Centre delivered invited talk in the Symposium on "Achieving Sustainable Development for Viksit Bharat" organized by J.C. Bose University of Science & Technology, YMCA, Faridabad, Haryana under the aegis of DST-Promotion of University Research and Scientific Excellence (PURSE) on February 20, 2025. His topic of talk was "Achieving Sustainable Development Goals for Viksit Bharat – Through Mission LiFE".

● Dr Ankit Gupta, Principal Scientist, CSIR-NEERI Delhi Zonal Centre delivered an expert lecture during technical session on "Decarbonization Efforts in Major Industries: Oil&Gas, Steel and Cement"during Industrial Decarbonization Summit – Road to Net Zero 2025 (IDS 2025)' jointly organized by Indian Association for Air Pollution Control (IAAPC), and PHCCI, New Delhi on January 15, 2025, at Hotel Le Meridian, New Delhi.

● Dr. Kanchan Kumari, Principal Scientist, Kolkata Zonal Center addressed the scientific concerns in a 'Stakeholder Consultation on Nonylphenol and Its Ethoxylates' organized by Toxics Link in collaboration with Gujarat Chamber of Commerce & Industry, Confederation of Indian Textile Industries, Gujarat Cleaner Production Centre (GCPC, Ministry of Industry, Gujarat) & Industry and ParyavaranMitra, on 28th February, 2025 organized at Gujarat Chamber of Commerce & Industry, Ahmedabad

● Dr Sunil Gulia, Senior Scientist, CSIR-NEERI Delhi Zonal Centre delivered an expect lecture on 'Emission Inventory and Source Apportionment Studies' in a Training Programme for SPCB Nodal Officers on "Effective Implementation of the National Clean Air Programme (NCAP), organized by iFOREST with support of GIZ and Bloomberg Philanthropies during February 20-22, 2025.

● Dr Rachna Jain, Senior Scientist, Kolkata Zonal Center delivered an expert lecture on "Navigating Water Sustainability Challenges in Small and Isolated Islands" in a webinar organised on 10th February, 2025 by CSIR-NEERI in association with IHE, Delft, Netherlands.

● Dr. Meganathan P. R., Senior Scientist from CSIR-NEERI Hyderabad Zonal Centre was invited as the chief guest in the Student Congregate, organized by VignanaBharathi Institute of Technology, Hyderabad on March 8, 2025 and addressed the students gathering.

JIGYASA

CSIR-NEERI engaged and educated students through interactive learning experiences that fostered a deeper understanding of environmental science and sustainability. Over 680 students from high schools and colleges participated in hands-on demonstrations, laboratory sessions, and expert interactions at CSIR-NEERI. High school students from Gayatri High School & Junior College, PitaleShastri High School, Mahatma Gandhi English Medium High School, ZillaParishad High School (Gondia), and PM Shri Manohar Municipal High School, along with tribal students from Gurukul Ashram Schools, explored crucial environmental topics such as air pollution control, water management and eco-restoration. These experiential learning activities, conducted under the JigyasaProgramme, provided students with practical insights into research-driven solutions for environmental challenges, encouraging them to think creatively about sustainability.

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