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NIO completes study of 4 rivers for sand mining

CSIR-NIO

05th October , 2023

The National Institute of Oceanography (NIO), Dona Paula, has completed geological, geophysical and biological study of four rivers of the state and a report has been submitted to the government. According to sources, the rivers whose geological, geophysical and biological study has been completed are Mandovi, Zuari, Chapora and Tiracol.



“We are studying all the major rivers of Goa. Till now we have completed study of Mandovi, Zuari, Chapora and Tiracol. Pre-monsoon study has been done while post-monsoon study is yet to be undertaken. We are trying to do geological, geophysical, biological study so that we can know where the sediment is getting deposited or withered, and what is the suitable place for sand extraction. The report has been submitted to the Goa government,” a source said.

The premier institute has also been assigned to undertake study of other rivers like Mapusa, Valvanti, Khandepar, Siquerim and Cumbarjua over the course of time.

“Most of the sand comes in the river during monsoon period while sand also shifts from one place to another. Therefore, there is a need to conduct study in two seasons that too pre and post monsoon,” the source said.

Last year, the National Institute of Oceanography (NIO) had identified 13 regions- eight along River Mandovi and five along the River Zuari estuary, covering a total area of 67.45 hectares, as feasible sand mining sites.

While recommending sand extraction only by traditional (manual) method, the NIO in its report had recorded approximately 11.17 lakh cubic metres of sand volume along these zones.

The NIO in its report had classified all the 13 regions into 20 zones, 10 each along Mandovi and Zuari rivers.

In 2019, the government had entrusted NIO with the task of undertaking a study of all the rivers in the State to identify its level of contamination, sources of pollution and recommend measures to revive the water bodies.

NML celebrates 82nd CSIR Foundation Day, focus on decarbonization

CSIR-NML

05th October , 2023

National Metallurgical Laboratory (NML) marked the 82nd CSIR Foundation Day with a grand celebration held at the NML Auditorium. The event was graced by esteemed dignitaries, including Nirbhik Banerjee, Executive Director, RDCIS, SAIL, Ranchi; Dr. N.C. Murmu, Director, CSIR-NML; and Aditya Mainak, Administrative Officer, CSIR-NML.

The festivities commence with the ceremonial lighting of the lamp, symbolizing the illumination of knowledge and progress. Dr. N.C. Murmu, Director, NML, extended a warm welcome to the dignitaries, NML retirees, scientists, and other invitees present, setting the tone for an eventful day.

The Chief Guest, Nirvik Banerjee, delivered the CSIR Foundation Day lecture, addressing the pertinent topic of "Challenges towards Decarbonization of Indian Steel Industry." His insights shed light on crucial aspects of sustainable practices within the steel industry.

As part of the CSIR Foundation Day celebrations, essay and quiz competitions were organized for employees, fostering a spirit of intellectual engagement. Nirvik Banerjee presented awards for the outstanding performances in these competitions, recognizing the talent and knowledge within the NML community.

Special recognition was accorded to meritorious students, with one-time lump sum cash awards for exceptional achievements in Senior Secondary Examinations. Notable awardees included Abhishek Kumar Sahu, Soumyajit Ghosh, and Debjit Ghosh, who excelled with scores of 95.33%, 95.0%, and 94.0%, respectively.

CSIR-NML took a significant step forward on this auspicious day by signing an agreement with RDCIS, SAIL, focusing on the "Development of Zn-Al-Mg Based Hot Dip Coating for

Steel Strips." This collaboration aims to advance technologies in the metallurgical domain.

In a gesture of knowledge transfer and technological dissemination, two CSIR-NML technologies were transferred to external entities. The technology "Zincometer: A sensing device for Real-time Zinc coating weight measurement of steel wires in Galvanized line" found a new home in Gamharia-based MSME company M/S Refosteel Instruments. Additionally, the technology for the development of 98-99% pure Ti_3AlC_2 MAX phase was transferred to M/S Global Nanotech, Mumbai.

The day concluded with the presentation of awards for the essay and quiz competitions. Notable winners included Somnath Das, Amit Prakash, Shashikant Choudhary, Ellife Kumbhar, Chandan Kr. Chowdhary, and Dr. Mrs. Minati Kumari Sahu.

Aditya Mainak, Administrative Officer, CSIR-NML, expressed gratitude in the vote of thanks, acknowledging the collective efforts that made the 82nd CSIR Foundation Day celebration a resounding success. The day's events not only highlighted the scientific achievements of CSIR-NML but also underscored the institute's commitment to knowledge sharing, collaboration, and fostering a culture of excellence in metallurgical research and development.

Lecture on artificial intelligence marks CSIR's foundation day

CSIR-IMTECH

05th October , 2023

The 82nd Foundation Day of the Council of Scientific and Industrial Research (CSIR) was observed at the Institute of Microbial Technology (IMTECH) here today with a lecture on “Education and Research in the Age of AI” by Prof Rudra Pratap, Vice Chancellor, Plaksha University, Mohali, marking the occasion.

Prof Pratap made some observations on how the first two decades of the 21st century had ushered in tectonic shift in how the world operated through rapid changes brought by the digital technologies.

Calling for preparedness for radical changes in education and research in the face of enormous possibilities due to AI, he said the coming decade should be powered by breakthrough technologies in artificial intelligence, which should be the dominant force in all aspects of research.

Dominican Republic V-P discusses with Dhankhar enhanced cooperation in diverse sectors

CSIR-NIO

04th October , 2023

Vice-President Jagdeep Dhankhar on Wednesday met his Dominican Republic counterpart Raquel Peña Rodríguez and discussed enhancing cooperation in sectors such as trade, pharmaceuticals and agriculture. Two cooperation memorandums of understanding (MoUs) were signed after the meeting, an official statement said.



The first MoU was signed between India's CSIR-NIO (National Institute of Oceanography) and the Dominican Republic's National Institute of Maritime Affairs for scientific cooperation in ocean sciences.

The second MoU was signed between the Union Health Ministry's Central Drugs Standards Control Organisation and the Drug Regulatory Authority of Dominican Republic on medical product regulation.

Rodríguez and Dhankhar had a detailed and fruitful discussion on enhancing cooperation in diverse sectors, including trade, pharmaceuticals, ICT, agriculture, food processing, space, higher education, capacity building, Ayurveda and yoga, the statement said.

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[Zeebiz](https://zeebiz.com)

‘CSIR strengthening its patent portfolio to carve out a global niche’

CSIR-IITR

04th October , 2023

The Council of Scientific and Industrial Research (CSIR) – Indian Institute of Toxicology Research (IITR) organised the CSIR foundation day lecture on its campus on Tuesday.



Ajit Kumar Shasany, director, CSIR – National Botanical Research Institute, who was present as the chief guest, said that in addition to contributing to a wide spectrum of science and technology driven innovations, CSIR has also pioneered the intellectual property movement in the country. “CSIR today is strengthening its patent portfolio to carve out a global niche for the country in select technology domains,” he said.

“CSIR is ranked 37th among 1,587 government institutions worldwide and is the only Indian organisation among the top 100 global government institutions, according to the SCImago Institutions Ranking World Report. CSIR holds 7th rank in Asia and leads the country at the first position,” said Prabodh Kumar Trivedi, director, CSIR – Central Institute of Medicinal and Aromatic Plants in his address.

Bhaskar Narayan, director, CSIR–IITR presided over the function and launched the CSIR-IITR-JIGYASA-EPIC Competition. On the occasion, the institute was kept open for visitors to interact with the scientific community and get first-hand experience of the cutting-edge research being conducted. Several students from local schools and colleges also visited the institute.

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Lavender Hued Hills

CSIR-IIIM

03rd October , 2023

In the picturesque valleys of Jammu and Kashmir, a fragrant revolution is underway as Lavender cultivation takes root and blooms, transforming the lives of farmers and empowering local communities.

Introduced to the region decades ago as an experimental crop, Lavender has emerged as a promising profit-making opportunity, thanks to the efforts made by CSIR-Indian Institute of Integrative Medicine, Jammu under various societal and farmers oriented Missions and Projects like CSIR Aroma Mission, Project K-5000 and JAAG.

Lavender was first brought to India in the 1970s by Dr. Akhtar Hussain and introduced at the Field Stations of Manasbal and Pulwama. Now, more than 1000 acres of land in the Kashmir Valley and hilly areas of Jammu division is now used for lavender cultivation.

According to experts, the lavender oil production averages around 50 litres per hectare per year. It contributes a net annual income of Rs. 3,50,000-Rs. 4,00,000, per hectare.

The CSIR-IIIM's efforts have empowered 2,000 farming families and the region has embarked upon a flourishing ecosystem of startups.

Officials said that CSIR-IIIM under Aroma Mission has “installed distillation units across J&K, enabling farmers to process their produce and market high-quality lavender essential oil, hydrosol, and dried flowers.”

However, challenges remain in maintaining competitive prices amid international market fluctuations. The Institute is collaborating with the UT J&K authorities to establish effective market linkages for the farmers.

Shaheena Shandhaar, said she began her “lavender journey in 2013”. “Being a woman, it was also difficult for me, but my efforts never went to waste, as today I employ eight people at my lavender orchard,” Shandhaar said, adding that the lavender industry “can be a game changer for the farmers if the government too can be more serious about taking this business to the next level.”

Gulshana Akhtar, another farmer, said that those who own land can earn more profit than those who buy land or take land on lease. She too said that the government is “providing plants and other assistance, however, their intervention in marketing can play an important role in boosting this business to a large extent.”

According to farmer Adnan Ali Khan, from south Kashmir's Shopian, his lavender business has flourished remarkably over the years. Khan now has his own brand, which he proudly distributes not across India but also exports to international markets.

Dr. Sumeet Gairola, Principal Scientist & Nodal Scientist (Aroma Mission), at the CSIR-Indian Institute of Integrative Medicine, Jammu said that their team have introduced the "RRL12" Lavender variety, ideally suited for the region's rain-fed conditions, and gave more than 30 Lakh lavender plants free to farmers in various districts of Jammu and Kashmir.

"Over 600 acres of land in the Kashmir Valley have been transformed into lavender fields, where previously traditional crops struggled to cope with climate change and wildlife interference. Small and marginal maize farmers have found a new ray of hope with Lavender, witnessing a significant increase in profitability," Dr. Gairola said.

Mysore, Malabar Slender Lorises separate species: CCMB

CSIR-CCMB

03th October , 2023

For the first time in the country, researchers from the Hyderabad-based Centre for Cellular and Molecular Biology (CCMB) have sequenced the entire genome of lesser-known but critically endangered species of Mysore Slender Loris and Malabar Slender Loris. In the process, they have concluded that both, due to their genetically diverse nature, must be treated as separate species from the Grey Slender Loris.



The study conducted by senior CCMB researcher Dr Govindhaswamy Umapathy's lab was published in the peer-reviewed journal, *The Journal of Threatened Taxa* (September 2023).

In the study, Umapathy's lab found that the Mysore Slender Loris and Malabar Slender Loris, which are currently considered as sub-species of the Grey Slender Loris, differ by about 2 per cent genetically and diverged from each other about 1.09 million years ago. Senior geneticists from the CCMB have said treating both the lorises as distinct species is very important for conservation measures of the critically threatened genus of animals.

Recently, recognising the need to protect the species, the Centre notified exclusive conservation reserves for the threatened Slender Loris. "Slender lorises are a threatened genus of small and nocturnal primates confined to India and Sri Lanka. The Grey Slender Loris is divided into several subspecies based on morphological variation and geographical distribution but not supported by molecular data," the CCMB researchers said, adding that the study was an attempt to investigate the phylogenetic (evolutionary development and diversification) of the two sub-species from the Grey Slender Loris in South India.

Phylogenetic analysis has clearly shown that the Mysore and Malabar Slender Lorises form distinct monophyletic clades that diverged about 1.049 million years ago, shortly after the divergence of the Red Slender Loris *Loris tardigradus*.

“As a result of the genetic variation, evolutionary divergence, already established morphological differences and geographically distinct habits, we propose to recognise the Mysore and Malabar Slender Lorises as two distinct species,” the researchers led by Umapathy said.

Union Minister Dr Jitendra Singh Flags Off "Recycling on Wheels Smart-ER" to Promote Cleanliness and Environmental Responsibility under Swachhata Hi Seva (SHS) campaign from CSIR Headquarters in Delhi

CSIR

02nd October , 2023



In alignment with the Swachhata Hi Seva (SHS) campaign, celebrated from September 15th to October 2nd this year, Union Minister of State (Independent Charge) Science & Technology, MoS PMO, Personnel, Public Grievances and Pensions, Atomic Energy and Space, Dr Jitendra Singh inaugurated the revolutionary "Recycling on Wheels Smart-ER" at Anusandhan Bhawan, New Delhi.

During the flag-off ceremony, Dr. Jitendra Singh stated, "The 'Recycling on Wheels Smart-ER' project aligns perfectly with the Swachhata Hi Seva campaign's objective of fostering a cleaner India" He said, it not only bolsters transportation efficiency and cost reduction but will also efficiently extract precious metals from shredded e-waste in its later phase, making a significant contribution to the circular economy, thus aligning with the Swachh Bharat mission.

Dwelling on the Swachhata Hi Seva theme, Dr Jitendra Singh said, "Mahatma Gandhi gave us the virtue of Swachhata, while Prime Minister Narendra Modi made it a part of life". The Minister elaborated that soon after taking charge in May, 2014, PM Modi has declared Swachh Bharat Mission on 15th August, 2014 to make India Open Defecation Free Country. He said,

the cleanliness mission got institutionalized within few years and it has become a way of life, a true mass movement (Jan Andolan). Dr Jitendra Singh said, the swachhata campaign is not restricted to 2nd October even, but it has assumed a new dimension of continuity and the process is on. He added that Bapu Ji's Birth Anniversary is only a reiteration of the cleanliness resolve.

Referring to "Recycling on Wheels Smart-ER" Dr Jitendra Singh said, "This project recognizes SafaiMitra's crucial role in cleanliness, preserving both the environment and their health through responsible e-waste disposal. It stands out by offering skill development, aligning with Extended Producer Responsibility (EPR), and promoting sustainability, contributing to the motto of Training, Transport, and Technology, empowering the informal sector with skills, efficient transportation, and technology for a better future."

Dr. Jitendra Singh also acknowledged the strategic partnership between the Technology Development Board (TDB) and M/s Eco Recycling Limited, a Mumbai-based public limited company, in response to Prime Minister Modi's call for heightened awareness regarding proper e-waste disposal. This groundbreaking e-waste management project has received a generous financial support of Rs 6.00 crore from TDB.

Speaking about "Recycling on Wheels Smart-ER," he emphasized, "This project introduces a pioneering approach to e-waste management in India, with no comparable counterpart in the country to date. It sets an entirely new benchmark for sustainable e-waste practices, characterized by a unique design and implementation that amalgamates efficiency, accessibility, and environmental responsibility."

He concluded, "As we embark on this transformative journey of 'Recycling on Wheels Smart-ER,' we actively contribute to the Swachhata Hi Seva campaign and reinforce the significance of cleanliness, environmental responsibility, and the well-being of our dedicated SafaiMitras. Together, we are creating a cleaner and greener India, in line with Prime Minister Narendra Modi's visionary call."

In her address, Secretary, DSIR, Dr N. Kalaiselvi said, Bapu rightly mentioned that “Cleanliness is next to Godliness” and narrated about Gandhiji’s contribution for three vital and basic components of food, shelter and clothing in alignment with environmental and climatic norms.

Dr Kalaiselvi said that all the 37 CSIR labs across the country are engaged with both physical cleaning and e-cleaning that processing and weeding out of the obsolete files. She also promised to fasten the file movement in DSIR and CSIR from coming week.

CSIR-IIIM launches Swachhta Hi Seva campaign with cleanliness drive

CSIR-IIIM

02nd October , 2023

CSIR-Indian Institute of Integrative Medicine (IIIM), Jammu, commenced the Special Campaign 3.0 from October 2nd to October 31st, 2023, with the aim of enhancing cleanliness and minimizing pending work in government offices. The campaign, launched on Mahatma Gandhi's 154th Birth Anniversary, began with Dr. Zabeer Ahmed, Director of CSIR-IIIM, paying floral tributes to the Father of the Nation. Scientific, technical, administrative staff members, students, and other workers also paid their respects to Mahatma Gandhi.



Dr. Zabeer Ahmed, Director, CSIR-IIIM, addressed the staff during the campaign launch, highlighting its objectives. Special Campaign 3.0 is designed to improve the overall cleanliness of government offices and enhance the public's experience when interacting with these offices. It coincides with Mahatma Gandhi's Birth Anniversary and will continue until the end of the month. Throughout the campaign, various events related to Swachhta Shramdaan (cleanliness volunteer work) will be organized.

The Director emphasized the significance of "Swachhata" (cleanliness) and encouraged staff members and students to maintain cleanliness in their workplaces and surroundings diligently. As part of the Special Campaign, a cleanliness drive was conducted today at the main campus of IIIM, its Branch Lab in Srinagar, and the Field stations to provide a clean and healthy working environment for employees and visitors. The program included lab cleaning, waste disposal, cleaning of the institute premises, and beautification.

The Special Swachhta Campaign 3.0 began with great enthusiasm under the leadership of the Director, CSIR-IIIM, Jammu, and the guidance of the "Swachh Bharat Mission Committee," which included various members. The Director appreciated the active participation of all heads of departments, different stakeholders, students, sanitation section, and the engineering department on the first day of this special campaign 3.0.

Bilikere Women Entrepreneurs Shine At CSIR Foundation Day Expo In Delhi

CSIR-CFTRI

02nd October , 2023

Women entrepreneurs of Asare Sanjeevini Food Products 'We Mill' displayed their millet products at the two-day comprehensive convention and CSIR Decade Achievement Mega Expo, organised at Pragati Maidan in New Delhi, as part of Council of Scientific and Industrial Research (CSIR) Foundation Day on Sept. 26 and 27.



Minister of Science and Technology and Vice-President of CSIR, Dr. Jitendra Singh; Secretary of Space Department and ISRO Chairman S. Somnath and Principal Scientific Advisor to the Government of India Prof. Ajay Kumar Sood were present at the event.

'We Mill,' located at Santhe Mala Gaddige Road, Bilikere, Hunsur taluk, Mysuru, has been instrumental in women entrepreneurship for the past three years, with the efforts of 14 women, under the guidance of Grassroots Research and Advocacy Movement (GRAAM), Mysuru, Wuerth Elektronik India Pvt. Ltd. and CSIR-Central Food Technological Research Institute (CSIR-CFTRI), Mysuru.

The product range displayed included Ragi Malt, Ragi Mudde Mix, Ragi Sari (Shishu Poshan), and various types of Ragi Cookies manufactured at 'We Mill.'

"It was such an honour for me to be here; as a woman from a village, this was my first trip in an aircraft," said an excited woman entrepreneur Parvathi and thanked the organisations supporting them in selling traditional millet products locally, nationally and internationally.

“Women from ‘We Mill’ are a motivation to other rural women aspiring to be entrepreneurs. Despite lack of adequate marketing resources, the quality of products itself is making them sell, through word-of-mouth advertising. Products are manufactured, keeping the standards given by CFTRI. The support from people across India would greatly benefit not just these 14 women, but also empower many such rural initiatives, in line with Mahatma Gandhi’s Gram Swaraj and Prime Minister Modi’s ‘Make in India Initiative’,” said Dr. Basavaraju R. Shreshta, Executive Director of GRAAM.

‘We Mill’ product is a model developed by bringing together the government, local community, civil society and corporate for rural wealth creation. There are 14 rural women working as proud partners of their own venture.

Following the hub and spoke model, ‘We Mill’ products are processed and manufactured from premium quality millet, procured locally from farmers.

Ragi Malt, Ragi Mudde Mix, Ragi Sari (Shishu Poshan), and a variety of Ragi Cookies are available on major e-commerce platforms, supermarkets and organic shops.

For more information contact Janardhan from GRAAM on Mob:73378-44633.

CSIR-NEERI

02nd October, 2023

CSIR-NEERI holds Science Model Competition for students

■ Staff Reporter

JIGYASA' team of CSIR-National Environmental Engineering Research Institute (CSIR-NEERI) organised the Science Model Competition for students to mark the 82nd CSIR Foundation Day under the Jigyasa: Student-Scientist Connect programme. The students from classes 5 to 12 of various schools participated in this event to display their science models based on environmental science and engineering.

The students prepared a large variety of innovative working models under the categories of air pollution control, water technology and management, waste management and energy conservation.

The jury was constituted to encourage students to come up with complete solutions through science and technology intervention to address different dimensions of environmental problem and also decide positions and prizes to be given away to the students participating in the Science Model Competition.

Dr Atul Vaidya, Director,

CSIR-NEERI, addressed the students and encouraged them to continue working on their science projects and improving them. This event provided a platform to students to bring out their best from within and to learn from the fellow contenders. The aim of this event was to showcase the talents and innovative ideas of the students thereby encouraging them towards innovation and ideation in the future.

Kendriya Vidyalayam Ajni; Centre Point School, Katol

Road; Swaminarayan School, K John Public School, Shahu's Garden Convent, Shahu Nagar; Bharatiya Vidya Bhavan (BVM), Civil Lines; School of Scholars, Wanadongri; St. Joseph's Convent, Kingsway, Sadar; Dinanath High School, Sandipani Jr. College, Hazaripahad; School of Scholars, Beltarodi; Montfort School, New Apostolic English High School, Shahu's Garden High School, Manewada; etc. participated in the Science Model Competition.



Jury members inspecting one of the models at the exhibition.

Goa banks on Netherlands' lessons to find solution to its sand erosion

CSIR-NIO

01st October , 2023

As climate change and sea level rise might further increase the risk of sand erosion along Goa's coast in the coming years, the state is looking towards the Netherlands for a solution.

This month, a five-member delegation headed by environment minister Nilesh Cabral is travelling to the Netherlands to witness implementation of the sand motor technique along a beach in the country. The technique is believed to be a 'natural solution', which involves extracting large quantities of sand offshore and depositing it along the coast, in a protruding peninsula shape from the beach to prevent sand erosion.

"A team from the Netherlands has already visited Goa to carry out preliminary surveys, as part of this association. Now, a team of two grade-I scientists, environment director, secretary and I will be visiting the site of the implementation of the technique in the Netherlands to understand how it works," Cabral told TOI on Saturday.

The sand motor technique is believed to help redistribute the sand along the coast through natural processes and act as a buffer against sea level rise and mitigate the impact of cyclones. Cabral said that once the Goa committee returns, the team from Netherlands will pay a second visit to the coastal state and help shortlist the beach suitable for implementation of the sand motor technique as a pilot project.

"Scientists from the National Institute of Oceanography (NIO) and the National Centre for Polar and Ocean Research (NCPOR) based in Goa will be consulted before the beach is finalised for implementation. During our visit to the Netherlands, we will also be meeting their environment minister to understand the success of the implementation. The visit will also focus on learning about ocean cleaning methods. During our visit, we will be visiting an exhibition on this topic," said Cabral.

The sand motor method is said to help nourish a beach with quantities of sand over 20 years. Netherlands carried out the first assessment of its pilot project on the Delfland Coast off South Holland in 2016 and found the sand motor technique to be a success.

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