CSIR IN MEDIA

सीएसआईआर
CSIR
भारत का नवाचार इंजन
The Innovation Engine of India

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Compiled by Science Communication and Dissemination Directorate (SCDD), CSIR, Anusandhan Bhawan, New Delhi

Parijat Lab: From flower to perfume bottle, Lucknow's NBRI to do it all

CSIR-NBRI

15th December , 2023

Lucknow's National Botanical Research Institute (NBRI) has opened a lab, Parijat Lab, dedicated to exclusive research and development of natural ingredient-based perfumes. This is a first for any Council of Scientific & Industrial Research (CSIR) lab. "Right from producing the raw material i.e. fragrant flower, to using it to make perfume, all research will be conducted here in this lab," said Ajit Kumar Shasany, director, CSIR-NBRI, adding that the NBRI will also take the help of Fragrance & Flavour Development Centre (FFDC), Kannauj.

Explaining the process, Shasany, who is also the brainchild behind the concept, said that leftover flowers which are being grown by the farmers under floriculture mission will be used. Unsold flowers will be bought from them and then perfume will be made with them. This technology will be shared with interested private players as well.

'Different from perfume made in Kannauj'

Differentiating the perfume manufactured in Kannauj, the NBRI director said, "In Kannauj, the perfumes are produced after purchasing the ingredients. They don't produce it themselves. Whereas, here at CSIR-NBRI, from growing flowers to using their natural ingredients will be done indigenously."

"The Indian perfume market is worth ₹10,000 crore. There is a lot of scope for people producing perfumes from their own finished products. However, currently the practice is exporting the raw material which is then imported back to India as high cost finished product

by the big players after fabricating it using synthetic material," said Shasany, a post-doctorate in Aroma Biology from Portugal University. "The idea is to go vocal for local and produce a completely desi perfume, soap perfume, diffuser among others," he said.

Published in:
Hindustan Times

CCMB researchers estimate critically endangered 'Hangul deer' population using genetic data

CSIR-CCMB

15th December , 2023

For the first time in India, geneticists from the Hyderabad-based Centre for Cellular and Molecular Biology (CCMB) have utilised genetic data to estimate the population of the Hangul deer, the critically endangered iconic species of Kashmir Himalayas, which faces imminent threat of population loss and extinction.

Once widely distributed across Kashmir, the Chenab Valley of Jammu and Himachal Pradesh, the Hangul deer (hangul Cervus hanglu hanglu) is categorised as 'Critically Endangered' on the IUCN Red List and as a Schedule 1 species in the Indian Wildlife (Protection) Act, 1972.

The CCMB study, published in Cambridge Core — the journal of Cambridge University Press — on December 13, 2023, was led by senior principal scientist Dr P Anuradha Reddy. The researchers utilised non-invasive genetics to understand the population status of Hanglu at the Dachigam National Park, Jammu and Kashmir, which contains its last sizeable population.

In the early 1900s, there were 3,000-5,000 Hangul and over the years, due to a variety of reasons (including hunting), their numbers in the wild are now estimated to be close to 200 individuals with skewed sex ratio of just 12-15 males for every 100 females.

Using 14 microsatellite markers, the CCMB team identified 293 individuals (208 females and 85 males) through faecal analysis and generated data on the genetic status and population size of Hangul in its winter habitat. The detection of males was the highest in November,

coinciding with the breeding season, whereas the detection of females was the highest in December. “Our estimate of the Hangul population using genetic mark-recapture with bootstrapping was 394 individuals,” the CCMB said.

Hangul is a seasonal migrant, moving between lower and higher elevations in winter and summer, respectively. Throwing some light on the breeding patterns, the CCMB researchers said it is a seasonal breeder, with a few observational and anecdotal records suggesting that males rut during September-November, when they guard large female harems and break away from groups immediately after the mating season.

The study will guide future studies of the subspecies and also serve as an impetus to identify founder animals for captive breeding to ensure the long-term survival of the Hangul deer.

Published in:
Telangana Today

CSIR-IIIM started Lavender cultivation in Udhampur District

CSIR-IIIM 15th December, 2023

Under CSIR Aroma Mission, CSIR IIIM Jammu organized training-cum Lavender distribution program, under the patronage of Dr. Zabeer Ahmed, Director, CSIR-IIIM here today. Earlier in the morning, two mini trucks loaded with Lavender Quality Planting Material were flagged off by Dr. Zabeer Ahmed, Director from Jammu, to remote and far-flung areas across the Ramnagar sub-division of Udhampur District.

A statement said that under the phase-III of CSIR Aroma Mission, 172 farmers of Upper Meer, Chulna, Meer, Kultyar, Katti, Lalli of Zone Panchari, Sarar, Mantalai and Marothi of Zone Chenani and Zone Latti of the sub-division Ramnagar of district Udhampur received free-of-cost Lavender quality planting material. The program was graced by local BDC members including Mr. Hansraj (BDC Dudu), Mr Prakash Chand (BDC, Chenani), Sarpanch Mr. Krishan Kumar and progressive farmer Mr. Aslam Wani from Latti. The program was conducted in coordination with a team from Agriculture Department, Udhampur led by Chief Agriculture Officer.

The CSIR-IIIM Aroma team comprising of Dr V P Rahul, Rajender Gochar, Dr. Sandeep Charak and Subash provided awareness on the cultivation and importance of Lavender flowers, oil, and value-added products in enhancing the income of the farmers. The farmers were demonstrated Lavender cultivation practices on-site.

It is important to note, that earlier, through the interventions of CSIR-IIIM, Lavender cultivation was started at Bhaderwah, which has now emerged as a major hub for its cultivation. Earlier this year, CSIR-IIIM had also organized Lavender festival at Bhaderwah, and the occasion was graced by Dr. Jitendra Singh, Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy & Space and Vice President, CSIR.

Now, with the starting of cultivation of Lavender at Udhampur district, the farmers from this region would also be benefitted and it is possible that this district would also emerge as one of the hubs for its cultivation, as well as for production of various value-added products from Lavender oil. This program also marked a significant milestone in the mission's journey toward a sustainable and economically vibrant Udhampur district.

Published in:
Scoop News

CSIR-NPL organized Outreach Program of IISF 2023

CSIR-NPL

14th December , 2023

CSIR-NPL organized a half day outreach program on 14th December 2023 for the IISF-2023 which is to be organized during 17 to 20 January, 2024 at RCB-THSTI Campus, Faridabad, Haryana. The Inaugural program started in CSIR-NPL auditorium with lighting of the lamp and Saraswati Vandana. Prof Venugopal Achanta, Director, CSIR-NPL welcomed the guests and emphasized the importance of IISF and the outreach program for sensitizing the masses and promoting the scientific temperament. The Chief Guest of the program, Prof. M. M. Tripathy (DG, NIELIT) addressed the gathering and shared his memories with IISF 2016 which was organised earlier in CSIR-NPL campus. He emphasized that youth should make an active participation in such programs because they are the future leaders and will play a major role in economic development of the country. Dr Tripathi also highlighted the importance of ethics in Artificial Intelligence, digital public infrastructure, cyber security, quantum computing, molecular communication etc. for the society and associated challenges.

The programme further followed up with the detailed presentation by Prof. Puneet Misra, President, Indraprastha Vigyan Bharati on spectra of events planned at IISF 2023. Dr Misra highlighted about 16 events which are planned to be the part of this four-day event like

Student Science Village, Young Scientist's conference, Women Scientist and Entrepreneur Conclave etc. He conveyed the audience about the role and objective of IISF which involves translation of science in form of tradition, culture and festival so that it can be disseminated to maximum number of people especially youth of our country to nurture and develop scientific temperament in future generation. Another speaker, Dr. Sushil Kumar, Chief Scientist, CSIR-NPL gave an overview of CSIR-NPL, about its mandate, past and present activities being performed at CSIR-NPL in field of Metrology, Research, Skill development and further assisting industries in various areas. The program concluded with vote of thanks by Dr. Sumit K. Mishra, Coordinator, IISF Outreach Program at CSIR-NPL followed with National anthem.

Published in:

Pib

Home Trending Mobile
National Workshop on Biochar and Bio-resources at CSIR-IMMT

CSIR-IMMT, NEERI, CSMCRI

14th December , 2023

As part of its diamond jubilee year celebration CSIR-Institute of Minerals and Materials Technology (IMMT), Bhubaneswar is organising a 2-day National workshop on Biochar and Bio-Resources on December 14 and 15, 2023. The workshop is being organised in collaboration with IBBN, GIZ, Biochar Crusader which are actively supporting the activities related to Biochar and bio-resource management for sustainable agriculture and environment.

In the inaugural session, Dr.Arabinda Kumar Padhee, Principal Secretary, Department of Agriculture and Farmers' Empowerment, Odisha graced the occasion as the chief guests. Dr.Ramanuj Narayan, Director, CSIR-IMMT, welcomed all the collaborators, sponsors (Gold-Sanjivani Agro-Machinery, Nagpur and Silver-Circonomy, Singapore) participants from various organisation spread across India.

Dr.Narayan shared information about recent formation of Task Force on Biochar utilisation under Ministry of Steels, Government of India and highlighted the emerging scope of R & D towards carbon neutral India.

On the occasion Dr.N K Dhal, Chief Scientist and Dr.Yatendra Singh Chaudhary, CSIR-IMMT CRTDH Co-ordinator shared their opinion. Kshitij Urs from IBBN and R K Mehta from Biochar Crusader shared their work about the Biochar and Bio-resource theme.

The workshop event consisted both practical and case-study oriented deliberation by

renowned resource persons such as Prof.Paul Anderson, USA; Ravi Kalantri, GreenUrban Eco Services Pvt Ltd, Ahmedabad; Dr.Sunil Kumar, CSIR-NEERI, Nagpur; Dr.Thallada Bhaskar, CSIR-IIP, Dehradun; Manojj Natarajan, Goenvi Technologies Pvt Ltd, Thane, Maharashtra; Dr.S Dinesh Kumar, CSIR-CSMCRI, MARS-Mandapam, Tamil Nadu; Niroj Mohanty, Core CarbonX Sols Pvt.

Ltd., Hyderabad; Bipin Sethi, United Sports Association, Dhalapathar-Khordha, Odisha; Kasinath Jena, M/S Jaydev Banana Farmers and Artisan Association, Balipatna, Bhubaneswar. In the workshop, various methods such as trench, drum and continuous rotary pyrolysis system of Biochar production was also demonstrated to the participants.

The workshop attracted the participants (about 100) from all across Odisha and India, primarily from start-up, NGO and industries.

The event was organized under the DSIR supported CSIR-CRTDH.
Dr.Manish Kumar, Principal Scientist and Er.R Sathish, Senior Scientist from Environment and Sustainability Department, CSIR-IMMT, Bhubaneswar were Convenor and Co-convenor of the national collaborative workshop.

Published in:
Odisharay

Scientists began to think about pollution prevention

CSIR-NBRI, CIMAP

14th December , 2023

Scientists began to think about the prevention of climate change and pollution in the capital. The three-day national conference on environmental issues organized by CSIR-NBRI and the National Academy of Environmental Sciences was opened on Thursday by the chief guest, Additional Chief Secretary of Uttar Pradesh, Dr. Devesh Chaturvedi and the director of the institute, Dr. Ajit Kumar Shashani, by lighting the lamp Secretary NESA RK Sinha It is known that this conference will be held in collaboration with NBRI and NESA until December 16, where contemporary trends and challenges of green chemistry, pollution prevention and climate change will be discussed. During the inauguration, Dr Pankaj Kumar Srivastava, senior chief scientist of the institute and convener of the conference, said that more than 80 oral presentations and 110 poster presentations by scientists and experts in the fields of environmental science, environment and biotechnology will be discussed. these 13 main lectures will be given by renowned subject experts from the country.

Informing about the objectives set by the Academy, Executive Chairman of NESA, RK Sinha, said that we strive to increase public awareness through organizing various programs and seminars at the national and international levels on the harmful effects of increasing pollution in Also, welcoming the guests, the Director of the Institute Dr. Ajit Kumar Shashani said that the instructions and suggestions received at this conference will certainly help us in finding solutions for the new challenges of pollution and climate change. National Academy of Environmental Science at the conference. Prizes were also announced.

In this series, dr. Devesh Chaturvedi, congratulating all the scientists and researchers honored by the Academy, said that we are facing better technological development and challenges to face different types of pollution and climate change problems, considering them, this topic of the conference is very relevant. dr. Chaturvedi stressed that research institutions and universities must convey the recommendations and actions of this conference to stakeholders so that appropriate policies are made in time to address these issues.

Speaking on recent environmental issues, Dr. Chaturvedi said that we must make all possible efforts to save our humanity from the dangerous effects of pollution and climate change. At the same conference, at a special session organized by the Foundation for the Science of Flora and Fauna, the third prof. Ph.D. Ajit Kumar Shashani. The memorial lecture was delivered by Sushil Kumar. dr. SPS Khanuja, Founder of the Foundation and former Director, CSIR-CIMAP, also attended the session. In which the participants held a total of 28 oral lectures with 28 poster presentations.

Published in:
Geotvnews

DGCA to create special cell for helicopters, small aircraft: Scindia

CSIR-NAL 13th December, 2023

India's civil aviation regulator, the Directorate General of Civil Aviation, will create a new special cell for helicopters and small aircraft in the near future, according to Civil Aviation Minister Jyotiraditya Scindia.

"Had an action-oriented brainstorming session with our young and talented small aircraft entrepreneurs to iron out regulatory, policy and operational issues. As per consensus, the DGCA will create a new special cell for helicopters and small aircraft in the near future," the minister said in a statement via X, formerly Twitter, on Tuesday.

In order to give fillip to helicopter services in the country, the Ministry of Civil Aviation had earlier set up a Helicopter Accelerator Cell that has been tasked with addressing the issues associated with the sector.

In 2021, the ministry unveiled a new helicopter policy under which parking and landing, route navigation facilities and terminal navigation charges were done away with.

However, despite certain policy measures being undertaken, commercial helicopter services are predominant in few pockets of the country, such those in Himalayan regions for transport to religious sites and destinations. Use of chartered helicopters also increase during state and general elections.

"The safety requirements associated with helicopter services are very much different from those associated with regular commercial aircraft operations and proper regulatory framework needs to be established first," said a senior official from the ministry to ET Infra.

"Moreover, unlike airlines, helicopter services do not provide a steady cash flow and their

operations are only limited to certain regions in the country," the official added.

On development of small aircraft, currently, Bengaluru-based National Aerospace Laboratories, established by the Council of Scientific and Industrial Research, is undertaking the development of 19-seater Saras MK II, which can be used for the short-haul regional connectivity, for ambulance and for utilization by the armed forces.

Once certification is received from the concerned authorities, manufacturing partner Hindustan Aeronautics Ltd is expected to undertake the production of 15 SARAS MK II aircraft initially.

Published in:
Economictimes

Parliament apprised of medical instruments developed by CSIO

CSIR-CSIO 13th December, 2023

As part of a national mechanism to facilitate affordable and reliable access to medical imaging solutions, several devices have been developed by the Central Scientific Instruments Organisation (CSIO) here, Parliament was informed today.

These include a computer-aided thermal imaging based non-invasive technique for diagnosis of musculoskeletal disorders, the prototype of which is undergoing trials at the PGIMER, Chandigarh, stated Dr Jitendra Singh, Minister of State for Science and Technology, in the Lok Sabha in response to a question raised by several members. It is non-contact and non-invasive system for the diagnosis of knee arthritis and compartment syndrome, which overcome the existing limitations of using ionising radiations in systems like CT-scan, MRI and X-ray.

Since MRI cannot be used in patients having implants like pacemaker, thermography is used which 'captures' infrared thermal emissions from subjects and does away with the need of harmful radiations. The prototype of image-guided vascular vein visualiser, an indigenous, affordable, non-contact and portable device for vascular vein detection and visualisation in real-time through infrared imaging technique is ready and clinical data acquisition and clinical trials for performance optimisation is under process at the GMCH. It is useful for precise catheter insertion or piercing of peripheral veins for persons with hidden and difficult-to-access vein.

An artificial intelligence-based automated interpretation of echocardiographic image from hand-held echocardiography devices is also being developed in collaboration with the PGI, which would help a technical person to interpret the scan and provide tertiary care referral.

Published in:
Tribune India

INTACH launches training workshop for women to make Agarbatti from flowers

CSIR-CIMAP

13th December , 2023

About 30 women, belonging to economically disadvantaged sections, are being trained to make Agarbatti (incense sticks) and Dhoop from the flowers used in various temples of Visakhapatnam. The heritage, crafts, and community division, INTACH New Delhi, and the INTACH Visakhapatnam Chapter launched the 15-day training workshop here on Wednesday.

The Central Institute of Medicinal and Aromatic Plants under the Council of Scientific and Industrial Research - CIMAP (CSIR), Lucknow is providing the technical support for the workshop. Chief trainer from CIMAP Dr Ramesh Srivastava will personally supervise the training and impart best practices in this Dhoop and Agarbattis-making workshop for the next two weeks.

INTACH Visakhapatnam chapter former convener Rani Sarma inaugurated the workshop along with Dr Ramesh Srivastava and other dignitaries. Visakhapatnam chapter convener Dr D Rajasekhar Reddy, co-convener Dr B Surendra Kumar, program coordinators Mayank Kumari Deo and Dr Renuka Rani Maganti, senior members Edward Paul, Jaya Sree Hattangadi, Asha Jain, Mahesh Rao, S Madhavi were also part of the inaugural ceremony.

Dr Surendra Kumar thanked the INTACH chairman Major Gen LK Gupta and Vandana Bindu Manchanda and Sakshi Awasthi of the INTACH heritage, crafts and community division, New Delhi for the initiative, encouragement, and financial support for organizing the workshop. He also thanked Dr Srivastava of CIMAP, Lucknow for sparing his time and

putting in the efforts to travel to Visakhapatnam to train the participants. The workshop aims to reduce the huge quantity of flowers used in temples and other events going as a waste into the landfills and provide an environment friendly business opportunity for women and make them self-reliant. According to Dr Srivastava, a member can make 1000 Agarbattis with one kilogram of powdered flowers with a nominal expenditure of around Rs 200 to 300 rupees. By this, they can earn a profit of Rs 700 per day if they work for a couple of hours at their homes during free time.

Published in:
Times of India

NML Jamshedpur marks 74th Foundation Day with grand celebrations

CSIR-NML

13th December , 2023

The CSIR-National Metallurgical Laboratory (CSIR-NML) marked its 74th Foundation Day, with a splendid celebration that reflected its rich history and significant contributions to Science & Technology since its inception in 1950. The main event kicked off with the traditional lamp-lighting ceremony, gracefully executed by the dignitaries on the dais, setting the stage for a day filled with retrospection and recognition.

Dr. N.C. Murmu, the Director of CSIR-NML, warmly welcomed the attendees and delved into the institute's remarkable journey and its pivotal role in the development of the nation's science and technology landscape over the past seven decades.

The Guest of Honour, Dr. Indranil Chattoraj, Former Director of CSIR-NML, took the audience on a nostalgic journey, reminiscing about the institute's legacy of historic innovations in the areas of Minerals, Metals, and Materials. His speech encapsulated 74 years of excellence and groundbreaking achievements.

Dr. Ramanuj Narayan, Director of CSIR-IMMT, Bhubaneswar, highlighted NML's scientific contributions, particularly in critical metals, emphasizing CSIR's consistent presence at the forefront of scientific advancements in service to the nation.

The Chief Guest, Dr. C.K. Asnani, Chairman cum Managing Director of Uranium Corporation India Ltd., delivered an enlightening speech on 'The influence of innovation-powered strategy on sustainable economic development.' Dr. Asnani touched upon various

aspects of science and technology, including business models, sustainable ventures, industrial waste management, and the paramount role of knowledge-based economies in a country's development.

A significant part of the celebration included the presentation of awards to deserving individuals. Prof. V.A. Altekar Award for the best technology licensed or commercialized in the last calendar year was conferred upon Dr. Manis Kumar Jha and team for their groundbreaking work on recycling lithium-ion batteries. The ceremony also recognized excellence in paper publication, in-house projects, and outstanding employees in both technical and non-technical categories.

The awards were handed over to the deserving recipients by the Chief Guest and Guest of Honour, adding a touch of prestige and recognition to their outstanding contributions.

The program concluded on a thankful note, with Aditya Mainak, Administrative Officer of CSIR-NML, extending gratitude to all participants and culminating in the harmonious rendition of the National Anthem.

CSIR-National Metallurgical Laboratory's 74th Foundation Day celebration was not just a commemoration of its illustrious past but a testament to its unwavering commitment to scientific excellence and innovation that will undoubtedly shape the future of metallurgical research in India.

Published in:
Avenuemail

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इस साल की रसायन और शारीरिक चिकित्सा की नोबेल खोजों पर हुई चर्चा

CSIR-CDRI

12th December , 2023

सीएसआईआर-केंद्रीय औषधि अनुसंधान संस्थान लखनऊ ने अपने 6वें नोबेल सिंपोजियम का आयोजन किया", जो विभिन्न वैज्ञानिक विषयों में महत्वपूर्ण उपलब्धियों को सामने रख कर उनका जश्न मनाता है। इस वर्ष की संगोष्ठी उस अनुसंधानो पर केंद्रित है जिसने वर्ष 2023 में रसायन विज्ञान और शरीर विज्ञान या चिकित्सा में नोबेल पुरस्कार खोजों की नींव रखी। सीएसआईआर सीडीआरआई की निदेशक डॉ. राधा रंगराजन ने संगोष्ठी के आयोजन के लिए शोधार्थियों को बधाई दी।

उन्होंने विभिन्न वैज्ञानिक क्षेत्रों में अनुसंधान हितों को व्यापक बनाने में संगोष्ठी के महत्व पर जोर दिया और कहा कि इस वर्ष के नोबेल अनुसंधान सहयोगात्मक अनुसंधान (कोलोबोरटिव रिसर्च) का एक महान उदाहरण हैं।

सीएसआईआर-सीडीआरआई में हुई छठीं नोबेल संगोष्ठी

शोधार्थियों ने इन मूल्यवान नोबेल निष्कर्षों के बारे में अपनी समझ को बहुत ही रोचक ढंग से प्रस्तुत किया। आयोजन का पहला सत्र "क्वांटम डॉट्स की खोज की सैद्धांतिक अवधारणा एवं दैनिक जीवन में उसके व्यावहारिक अनुप्रयोग" विषय पर केंद्रित था।

सुचित्रा गुप्ता ने "क्वांटम डॉट्स की खोज में नैनोस्केल पर आकार मायने रखता है" विषय पर एक ज्ञानवर्धक व्याख्यान दिया, जो इस क्षेत्र में अभूतपूर्व कार्य के बारे में जानकारी प्रदान करता है। अर्पिता बनर्जी ने "आगे के विकास के लिए अग्रणी क्वांटम डॉट्स की खोज" के बारे में, जबकि श्री सौविक बर्मन ने "क्वांटम डॉट्स के टावर्स एप्लिकेशन: एक सुनहरे भविष्य के लिए एक मार्ग" पर चर्चा की। दूसरा सत्र "कोविड-19 के खिलाफ एमआरएनए वैक्सीन के विकास के लिए अग्रणी न्यूक्लियोसाइड संशोधन" के बारे मे रहा।

सपना श्रीवास्तव ने "अंडरवैल्यूड रिसर्च कंट्रीब्यूशन से नोबेल पुरस्कार डिस्कवरी: द जर्नी ऑफ कैटालिन कारिको" शीर्षक व्याख्यान में अपनी विचार सझ किए।

संगोष्ठी में ड्रयू वीज़मैन का अनुसंधान योगदान " इम्यूनोलॉजी के साथ आरएनए थेरेप्यूटिक्स के संयोजन" विषय पर सोनू खनका का व्याख्यान रहा एवं गिरधर भाटी ने "समानांतर खोजें एवं पहले वयस्क सामूहिक टीकाकरण" पर चर्चा की।

सत्र का समापन सीडीआरआई के निदेशक की टिप्पणियों के साथ हुआ। संगोष्ठी ने विज्ञान की प्रगति में इन शोध निष्कर्षों की महत्वपूर्ण भूमिका और समाज पर उनके प्रभाव को प्रदर्शित किया।

क्वांटम डॉट्स से लेकर एमआरएनए वैक्सीन विकास तक विषयों की विविध श्रृंखला ने आधुनिक वैज्ञानिक सफलताओं की अंतःविषय प्रकृति का प्रदर्शन किया।

सीएसआईआर सीडीआरआई वैश्विक वैज्ञानिक समुदाय की प्रगति में योगदान करते हुए वैज्ञानिक अनुसंधान में नवाचार, सहयोग और उत्कृष्टता को बढ़ावा देने के लिए प्रतिबद्ध है। संगोष्ठी के अंत में धन्यवाद ज्ञापन अब्दुल बासित खान ने किया।

Published in:
Nationalnewsvision

Have earthquakes really increased in India due to activation of Almora Fault? Experts weigh in

CSIR-NGRI 12th December, 2023

There has been an increase in the number of earthquakes in January to November, 2023 compared to the last three years, Union Minister of Earth Sciences Kiren Rijiju told the Lok Sabha on December 6, 2023. However, experts have questioned the government's information on the causes of the increase in earthquakes.

The minister's submission to the Parliament read:
Data indicates increase in earthquake activity in the year 2023 and it was mainly attributed to the activation of the Almora fault in Western Nepal.

The activation led to major earthquakes on January 24, 2023 (magnitude 5.8), October 3, 2023 (magnitude 6.2) and November 3, 2023 (magnitude 6.4), Rijiju said. These mainshocks, accompanied by subsequent aftershocks, have led to an increased frequency of earthquakes in the year 2023. However, the background seismicity remained unchanged during this period, he added.

Occasional moderate earthquakes and fluctuations in seismic activity are common in northern India and Nepal, the minister's submission added. "Nepal and the neighbouring northern part of India, situated near the active faults of the Himalayan region, are highly seismically active areas prone to frequent earthquakes due to collision tectonics, where the Indian plate subducts beneath the Eurasian Plate," it read. Most media outlets carried the reply under the title "Almora fault becoming active". However, experts disagree with the view. Down to Earth (DTE) talked to three different geologists, who unanimously rejected the idea of the Almora Fault was active. Tectonic collisions are the only reason for earthquakes in the Himalayan region, they said.

DTE spoke to Vineet Gehlot, senior scientist at the National Geophysical Research Institute

and former director of the National Center for Seismology. Severe earthquakes don't happen every year and when they do, many small earthquakes follow it, which are called aftershocks, he said. In 2023, two major earthquakes occurred — first in January and second in November. As a result, the number of earthquakes this year has increased.

Gehlot said he has read the government submission. "The government has also stated the same thing. When the number of aftershock earthquakes is removed, the number of earthquakes that occur each year is not nearly the same. Unless there is a major earthquake, the numbers do not change much," he said.

However, bringing up the Almora fault activation seems to be a communication issue, according to Gehlot. There are significant differences between science communication, public communication, and political communication, he said. Science communication is founded on facts, but the public may interpret it differently and politicians may give it a different spin, he pointed out. Whenever an earthquake occurs, it is named. For example, the earthquake that occurred in Nepal was named the Gorkha earthquake, after the Gorkha district in Nepal. A Gorkha Fault also lies in the region, which is completely inactive. The earthquake occurred in the Main Himalayan Thrust under the Gorkha district, but was named the Gorkha earthquake, Gehlot stated.

A thrust fault is a break in the Earth's crust. There are two thrusts in Kumaon, Uttarakhand: One is the South Almora Thrust and the other is the North Almora Thrust. This Almora Fault extends to western Nepal and is likely called by the same name in the neighbouring country as well. But the question is whether this earthquake happened on the Almora Fault, the expert pointed out.

Geologists studying the tectonics of the Himalayas know that all the earthquakes that occur in the Himalayas, are due to a fault 15 to 20 kilometres below the mountain range called the Main Himalayan Thrust, Gehlot said. Both of the major earthquakes in 2023 occurred on the Main Himalayan Thrust. Its likely they were incorrectly attributed to the Almora Fault as it

has been mapped. While it is not scientifically correct, the common people can accept the attribution. If scientific terminology is used, this earthquake occurred on the Main Himalayan Thrust, the geologist stated.

In such a case, the government must clarify its response in Parliament. “Clarity is needed at two instances in the government’s response. Although nothing in the report is incorrect, it is difficult to communicate science to the general public, and many people misinterpret it,” Gehlot said.

On being asked if the Almora Fault was active, the geologist replied in negative. “Activation of a fault is a major event. None of the faults in the Himalayas — Main Boundary Thrust, North Almora Thrust or South Almora Thrust — are active. This must be clarified because it sends the wrong message to the public. People may believe that if a fault becomes active, a large earthquake will occur, but this is not the case.

The Almora Thrust is not deep and does not reach the mantle, according to geologist MPS Bisht, former director of the Uttarakhand Space Application Centre (USEC). “While it is a thrust, it is also referred to as a fault by some. However, the possibility of an earthquake is negligible,” he said.

Describing the structure of the planet, Bisht said the top layer of Earth is called a crust, which is made of layered rocks. The next layer is the mantle, which is made of rocks in semi-molten form. The pressure in the mantle is very high and a lot of activities happen in the layer, which causes movements in the upper crust.

The activities sometimes reach a boundary and where they end, they collide with the edge of another plate.

According to Bisht, all of the energy in the mantle has been released in the Himalayan belt to date, with their epicentre remaining near the Main Boundary Thrust. “In such a case, if the

government has mentioned the North or South Almora Thrust, I strongly disagree. To the best of my knowledge, there has never been an earthquake or energy release point on these thrusts," he said.

The South and North Almora thrusts are not active, agreed SP Sati, geologist and associate professor of the Department of Basic Science, Veer Chandra Singh Garhwali Uttarakhand University of Horticulture and Forestry. "The Srinagar earthquake, which occurred many years ago, was said to have occurred on the Almora thrust, but scientists later clarified that it was not the case," he said.

Published in:
Downtoearth

Food processing industry to eye on innovation opportunities for traditional foods and Ayurveda Aahara

CSIR-CFTRI 12th December, 2023

Indian food processing sector needs to tap into innovation opportunities for traditional foods and Ayurveda Aahara. This is an untapped sector and would give companies a first mover advantage, according to D B Anantha Narayana, CSO, Ayurvidye Trust, Bengaluru and Chairman of Expert Committee Nutra-FSSAI.

Speaking at the 9th International Food Convention (IFCoN)-AFSTI hosted in the CSIR-CFTRI campus, Mysuru, from December 7 to 10, 2023, Dr Narayana said both Indian and the international food sectors need to look at these innovations. This is so far untapped. Companies foraying into this arena can maximise the first mover advantage. This is also important for startups to develop and scale up such products.

Some of these are infant foods which is a pristine area for growth. The FSSAI has issued Foods For Infant Nutrition Regulations, 2020, which have been enforced from October 1, 2022, and there is immense scope to explore this area, he added.

Noting that there is a huge opportunity for the development of traditional food for infants which can be formulated using rice, rice flour, wheat flour, semolina, pulses and other cereals, spices, dry fruits and vegetables, milk, ghee and eggs.

These can be developed in a ready-to-use or reconstituted with milk, water, curd or any other medium appropriate for infants. The food processor should provide clear instructions to prepare the food.

These can succeed in the market going by the appropriate technologies and packaging formats to retain nutritional, physical and sensorial qualities. However, it is mandatory to ensure that these are prominently labelled as 'Traditional Food for Infants'.

There are also exhaustive offerings for infant food processing like cooked lentils, cereals, dry fruits, grains mashed to a pasty mass sweetened with sugar or jaggery or honey.

"Even cooked vegetable mashed to pasty form either sweetened or with ghee which can be prepared fresh at home. Also there are ragi and corn malt mixes, semolina or sooji based foods that can be blended with either milk or curd or ghee. All these examples have escaped attention of food sector," said Dr Narayana.

Referring to the highlights of Ayurveda Aahara regulations notified in 2022, he said that these are not intended for administration to infants up to 24 months. "Food Business Operators would need to formulate Ayurveda Aahara in accordance with the categories and requirements specified in Schedule B of the regulations. No vitamins, minerals and amino acids can be added to Ayurveda Aahara. The recipes are as per Granthas-Food basis. Inherent Vitamins, Minerals and Nutrients present can be claimed. Health benefit claims as per the Grantha is permitted," he said.

Some of these for adults could be Methi Ka Laddoo, which contains fenugreek seeds roasted, cooked in jaggery, with little cardamom powder and pepper. The innovations permitted here are adding ginger powder as it is anti-inflammatory, shatavari and jeera or cumin seeds.

In the case of pepper rasam, which is recommended in winter or for conditions like rhinitis, can also be consumed to improve immunity. The processor can consider a change in format from liquid to granules or cubes which could dissolve in hot water.

Indian food processing sector can consider such innovation as it provides it a competitive advantage. Going by India's diverse agro-climatic conditions, there is a wide-ranging and large raw material base suitable for food processing industries, according to Dr Narayana.

Published in:
Fnbnews

Nat'l Metallurgical Lab awards team

CSIR-NML, IMMT 12th December, 2023

National Metallurgical Laboratory conferred the Altekar Award for Best Technology 2023 to the Urban Ore Recycling Centre team for technology transfer related to the recycling of lithium-ion batteries.

The award was handed over at the 74th Foundation Day celebrations of CSIR-National Metallurgical Laboratory (CSIR-NML) on its premises on Sunday.

C K Asnani, chairman-cum-managing director, Uranium Corporation India Ltd was the chief guest on the occasion, while former director of NML, Indranil Chattoraj, was the guest of honour. Also present were the director NML N.C. Murmu and Ramanuj Narayan, director, CSIR-IMMT, Bhubaneswar.

Published in:
Times of India

Raman Research Award to NIO scientist Dr Firoz Badesab

CSIR-NIO

12th December , 2023

Senior Scientist at CSIR-National Institute of Oceanography, Dona Paula, Dr Firoz Badesab, has been selected for the prestigious Raman Research Fellowship for the year 2023-2024 to pursue his research at University of Bremen, Germany.

The Raman Research Fellowships are granted to the researchers for carrying out research in the emerging and high priority areas at foreign institutions/R&D Centres of Excellence.

Dr Firoz Badesab will work with Prof Dr Tilo von Dobeneck, at the Marine Geophysics Group, University of Bremen, Germany for conducting his research.

Published in:
Herald Goa

CSIR-NEERI

12th December, 2023

'Plastic ban will not help save environment'

Says Dr Shantanu Bhowmik at IISF 2023

LOKMAT NEWS NETWORK
NAGPUR

Former Rajya Sabha member Ajay Sancheti addressing the gathering at IISF 2023 held at NEERI in the city on Monday.

India produces 3.4 million tonnes of plastic waste. Complete ban on plastics will not help in saving the environment. Adapting the 3R principle for plastic waste is the key solution to save the environment.

"The countries who have put a blanket ban on production and use of plastic, have significantly incurred huge loss of gross domestic product (GDP)", said professor, department of aerospace engineering, school of engineering, Amrita Vishwa Vidyapeetham, Coimbatore.

Bhowmik was delivering a keynote lecture at India International Science Festival (IISF)-2023 organized by CSIR-National Environmental Engineering Research Institute (NEERI) along with Vigyan Bharti (VIBHA) Vidarbha Pradesh Mandal here on Monday.

Bhowmik showcased two presentations during the event, 'State of the art recycle technology of thermoplastic wastes to thermoplastic composite products' and 'High performance Hybrid Composite: Game Changer for Aviation and Defence'.

Bhowmik also mentioned about his success of turning plastic bottles and wastes into pavement tiles, which are durable for forty to fifty years. He also added tetra packs of drinks and beverages which are successfully being converted into synthetic fibres which can be used for developing blankets, pillows. He also briefed about his invention of the bulletproof jackets which are developed from lightweight thermoplastics for defence personnels.

Former Member of Parliament (Rajya sabha) and chief guest of the event, Ajay Sancheti mentioned how science and technology play key roles in our everyday lives. He was left stunned after looking at IISF 2023 journey and future plans. He said " Every single student should benefit from IISF and should participate in the event and learn." With the help of technology, one need not be present there physically and hence more and more participation is expected.

- Total of 561 students from twelve schools from Nagpur and Vidarbha attended the function. CSIR-NEERI scientists briefed the audience about various R&D activities of the Institute. CSIR-NEERI also conducted practical demonstrations at laboratories and Harit Sanghralaya. Visitors interacted with CSIR-NEERI scientists on various issues relating to environmental science and engineering.

Executive Council (EC) member, VIBHA shared a brief presentation on the upcoming IISF 2023 and informed the students present for the function about fifteen various programs that will be covered in IISF 2023. He further provided an insight of how many participants are estimated to be involved in every program.

CSIR-NEERI director, Dr Atul Vaidya in his welcome address told the students how IISF is a much awaited annual event that celebrates achievements done in science, technology and innovation. Dr Vaidya also motivated the students to participate in the upcoming IISF 2023.

Science Models Competition was organized and prizes were given away to the winners. The first prize was conferred to Bhavan's B.P. Vidya Mandir, Ashti for presenting the model on 'Innovative mixture and bricks for replacing cement in building construction' and second prize was awarded to 'G.G. Sarda Higher English School, Nagpur for the model on 'Drip Irrigation'.

Published in:
Lokmat Times

Study Reveals Environmental Impact Threatening Historic Monuments Of Assam

CSIR-NEIST 11th December, 2023

In a recent study conducted by scientists from the CSIR-North East Institute of Science & Technology in Jorhat, concerns have been raised about the corrosive effects of biomass burning, industrial emissions, and particulate matter on Assam's cherished medieval-era architectural wonders — Rang Ghar, Kareng Ghar, and Talatal Ghar, located in the Sivasagar district.

The research, headed by Shanti Swarup Bhatnagar awardee scientist Binoy K Saikia, highlights the potentially damaging impact of emissions from biomass burning in households and industries. Dust particles from road surfaces and vehicular emissions also contribute to the corrosive effects on these historical monuments.

The findings of the study, titled "Chemical and toxicological studies on black crust formed over historical monuments as a probable health hazard," were recently published in the Journal of Hazardous Materials.

The research reveals that emissions from coal burning in industries may have led to the deposition of toxic elements in the black crust covering Rang Ghar, Kareng Ghar, and Talatal Ghar.

Saikia has cautioned that long-term exposure to the toxic elements found in the black crust could pose health hazards. The study emphasises that the black crust and its components have a low possibility of health implications unless they are disturbed without proper care.

Historical monuments often fall victim to atmospheric particulate matter (PM), a complex pollutant with the ability to spread over large distances and deposit on building surfaces. The interaction between PM and other gaseous pollutants results in the formation of a black or

greyish crust on the surfaces of these monuments. For the first time, the research provides a detailed analysis of black crust samples from historical monuments and structures in northeast India, shedding light on potential health hazards associated with their long-term exposure.

As concerns mount over the preservation of cultural heritage, the study underscores the need for environmental care linked with monument conservation. The government's plan, unveiled in the 2020 budget, to develop five archaeological sites, including Sivasagar, into "iconic" sites gains significance in light of these findings.

The team of scientists includes Nazrul Islam, Kallol Roy, Pankaj Barman, Shahadev Rabha, Himangsu Kousik Bora, Puja Khare, and Rituraj Konwar.

Published in:
Guwahatiplus

Farmers Should Adopt Smart Farming: Prof. S. Ayyappan

CSIR-CFTRI

11th December , 2023

Stressing on the need for encouraging small farmers to take up smart farming, Padma Shri awardee Scientist Prof. S. Ayyappan (Subbanna Ayyappan), who is also the Chairman of Gurugram based National Accreditation Board for Testing and Calibration Laboratories (NABL), said that development of farmers who provide us food, should be the first priority.

He was delivering the valedictory address of the 4-day 9th International Food Convention 'IFCoN 2023,' organised by the Association of Food Scientists and Technologists (India), at CSIR-CFTRI (Central Food Technological Research Institute) campus here yesterday.

Underlining the importance of using Big Data Analytics, Remote Sensing, Image Processing, Artificial Intelligence (AI), Deep Machine Learning, Block Chain Technology, Sensor and Robotics and the like, Prof. Ayyappan emphasised on the need for cutting down agricultural costs.

Noting that 85 percent of the farmers in our country own less than 5 acres of land, he said that this percentage is expected to go up to 90 in the coming years. He also called for innovations in agri production using less quantity of water.

Pointing out that the world has witnessed the effects of climate change in the past 15 years, he said that this has had an adverse impact on grain production, fisheries and dairy farming. As such, it has become inevitable for us to carry out research on crops that are best suited. Reiterating that food is God, he said that it is for this reason that development of farmers

should come first and all other things later. “As per the 17 Sustainable Development Goals (SDG) listed by the World Health Organisation (WHO), 7 are related to the Agriculture sector. Priority should be given for chemical-free farming. Doing so will prevent the damage that is being caused to nature by the use of chemical fertilizers,” he said.

Continuing, Prof. Ayyappan said that 70 percent of the population will habitat in urban areas in the near future. This will cause a natural imbalance leading to water crisis and other issues. As such, more allocation should be made in the Budget for meeting water shortage and at the same time, the Government should carry out a widespread campaign on judicious use of water, he said adding that farmers should take up organic farming for enhancing soil fertility and for better crop yield.

Maintaining that stability and sustainability in food production has become a challenge in the wake of natural disasters such as drought, floods, global climate change etc., he said that conserving biodiversity is crucial for achieving SDGs. Scientist and former CFTRI Director Dr. V. Prakash too spoke. Prizes were distributed to the winners of best poster, best oral presentation and achievement during the valedictory.

NIFTEM-Thanjavur Director Prof. V. Palanimuthu, CSIR-CFTRI Director Dr. Sridevi Annapoorna Singh, CSIR-IITR (Lucknow) Director Dr. N. Bhaskar, Organising Secretary Dr. Suresh D. Sakhare, Co-Chairperson Dr. K.V. Harish Prashanth, Telangana’s ICRISAT Accelerated Crop Improvement Research Programme Director Dr. Sean Mayes and others were present.

The 4-day event featured a number of oral presentations, poster presentations, with special emphasis on the themes provided and a Food Expo that featured as many as 85 stalls and showcased the food processing machineries, instruments, ingredients, processed food etc. Over 2,500 experts and representatives, both domestic and foreign, took part in the 4-day event.

Published in:
Star of Mysore

‘Chennai oil spill spans over 20 sq kms’ Indian Coast Guard’s recce reveals; TN govt forms special team to mitigate crisis

CSIR-NEERI

11th December , 2023

The Indian Coast Guard’s recce of area on the December 9 and 10 Dec revealed that the oil spill extended at sea from Kosathalaiyar river mouth till Kasimedu harbour in North Chennai areas covering 20 square kilometers.

According to the survey conducted by the Indian Coast Guard, the oil has entered the sea through Ennore Creek and has spread over 20 sq km to Kasimedu harbour.

Meanwhile, the Tamil Nadu government on Monday constituted a 20-member State of Oil Spill Crisis Management Group to mitigate the oil spill in Ennore-Manali.

Similarly, the state environment department has issued an order to form a 5-member technical team with TNPCB, CPCB, CSIR-NEERI, Anna University, and the Indian Coast Guard to visit CPCL and ascertain the cause of the oil spill and submit a report this evening.

Oil spill mixed with flood water in North Chennai

In the aftermath of cyclone Michaung, a large-scale oil spill mixed with flood water was reported in Ernavur and its surrounding areas located in the northern part of Chennai.

While the State Pollution Control Board commenced its investigation to trace the source of the spill, the spilled oil continued its way, engulfing the city drains, Ennore creeks, and the entire coastal sea area through Kosathalaiyar river mouth. Indian Coast Guard helicopter undertook the recce of the area on 09 and 10 Dec and reported the spill to have extended at

sea from Kosathalaiyar river mouth till Kasimedu harbour, extending to about 20 square kilometers.

The Coastal area from Ennore to Kasimedu harbour is a dense fishing area and supports thousands of livelihoods. Oil spills in the area could result in disastrous effects of damaging the fragile environment and irreparable loss to the ecosystem.

Coast Guard ships & helicopters undertook extensive operations

The Coast Guard ships and helicopters undertook extensive response operations against the spill on 10 Dec and averted major damage to the delicate coastal ecosystem. Meanwhile, the oil that has been trapped in the interior land area/creek/canal area is being responded to by SPCB under their recently promulgated Oil Spill Contingency Plans. The ICG oil spill response specialists are being deputed to assist them in the interior area clean-up actions.

Published in:

News9live

India's first Six Lane Steel Slag based Road Connecting NH-6 to Hazira Port has been constructed

CSIR-CRRI 11th December, 2023

Steel Slag is generated as a solid waste during steel production. For every tonne of steel production around 180 - 200 kg of steel slag is generated in the integrated steel plants, which amounts to around 15 million tonnes steel slag generation annually.

Ministry of Steel has funded a R&D project on "Development of Design Guidelines and Specifications for utilization of steel slag in road construction" being pursued by CSIR-CRRI in association with the steel industry. Under this R&D project, India's first six lane steel slag based road connecting NH-6 to Hazira port was constructed in May, 2022 at Surat Hazira using processed steel slag aggregates as substitute of natural aggregates in all layers of bituminous pavement. In this 1 km long test section, processed Electric Arc Furnace (EAF)/ CONARC slag from Arcelor Mittal Nippon Steel (AMNS) steel plant at Hazira has been used.

The draft guidelines for construction of steel slag based roads, developed as part of the aforementioned R&D project, prepared by CSIR-CRRI, has been shared with the Indian Road Congress and Ministry of Road Transport & Highways. Upon finalisation of the said Guidelines, the road making agencies would be at liberty to use the processed steel slag based on techno-economic feasibility.

This information was given by the Minister of State for Steel Sh. Faggan Singh Kulaste in a written reply to a question in Rajya Sabha today.

Published in:
Pib

CSIR-NEERI to organize IISF Outreach Programme

CSIR-NEERI 10th December, 2023

CSIR-National Environmental Engineering Research Institute (CSIR-NEERI), in association with Vigyan Bharati (VIBHA) Vidarbha Pradesh Mandal, will organize the IISF Outreach Programme on 11 December 2023 in the NEERI Auditorium, as a precursor event of 9th India International Science Festival (IISF-2023). Shri Ajay Sancheti, Former Member of Parliament (Rajya Sabha) will be the Chief Guest and Dr. Shantanu Bhowmik, Professor, Department of Aerospace Engineering, School of Engineering, Amrita Vishwa Vidyapeetham, Coimbatore and

Adjunct Professor, Center for Future Materials, University of Southern Queensland, Australia will the Guest of Honour on this occasion. The scientific and technological achievements offering diverse benefits will be showcased to the general public, including students on this occasion. The students will be encouraged to become a part of nation building by promoting their innovative ideas.

Published in:
Thelivenagpur

IIT-Hyd, CBRI experts to help in selection of idol for consecration

CSIR-CRRI

10th December , 2023

As one of the three idols of Ram Lalla, which are almost ready, has to be selected for installation in the sanctum sanctorum of the Ram temple for consecration on January 22, technical experts from IIT-Hyderabad and CBRI Roorkee may extend their help in final selection. The idol will be finalized this month with the consent of Kashi's Shankaracharya Vijayendra Saraswati, famous scholar from Varanasi, Ganeshwar Dravid, and a few prominent saints from South India. According to temple sources, the reports of technical experts from IIT-Hyderabad and CBRI, Roorkee, will form the base of selection of the final idol.

The technical report will advise as to which stone has the longest lifespan and for how many years the shine will remain intact. There will be daily worship of the idol with embers and applications of sandalwood, the report will suggest about stains or marks on the idol and which of the three statues will look most attractive when sunlight falls on it.

The selected idol that will be consecrated in the Ram temple will be installed as an immovable statue in the sanctum sanctorum and the present idol of Ram Lalla that has been worshipped since 1949 will be established in the form of a movable idol. This idol will also be kept in the sanctum sanctorum. Three statues have been made from two stones from Karnataka and one from Rajasthan. The idols have been made by sculptors Ganesh Bhatt of Karnataka, Satyanarayan Pandey of Jaipur and Arun Yogiraj of Karnataka.

Published in:

Times of India

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