CSIR IN MEDIA

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

Department of Scientific & Industrial Research (DSIR) successfully conducted Special Campaign 4.0

CSIR

05th November , 2024

Department of Scientific and Industrial Research (DSIR) along with its Autonomous Body, Council for Scientific & Industrial Research (CSIR) and two PSUs i.e. National Research Development Corporation (NRDC) & Central Electronics Ltd. (CEL), successfully conducted Special Campaign 4.0 from 2nd October 2024 to 31st October 2024 under the active guidance of Secretary, DSIR Dr. (Mrs) N. Kalaiselvi. The Campaign started by the Secretary, DSIR & DG, CSIR with cleanliness drive on 2nd October, 2024 at CSIR Headquarter, Anusandhan Bhavan, New Delhi.

Secretary DSIR & DG, CSIR felicitated Safai Mitrason the occasion of Swachh Bharat Divas (SBD) 2024 at CSIR Hqs on 2nd October, 2024.Also, as a part of Swachhata Hi Sewa Campaign 2024, Joint Secretary, DSIR felicitated Safai Mitras in DSIR, Technology Bhavan, New Delhi in the Ist week of October, 2024. ‘Shramdaan' was also organized during the campaign in DSIR’s and CPSEs i.e. Central Electronics Limited (CEL) and National Research

Development Corporation (NRDC) and all 37 labs of CSIR across the country wherein officers/staff participated in the cleanliness and plantation drive as part of the 'EkPedMaaKeNaam' campaign. Similar plantation drives was carried outat DSIR HQ.

As part of the Special Campaign 4.0, the Council of Scientific & Industrial Research (CSIR), in coordination with the Northern Railways, carried out a cleanliness drive at the New Delhi Railway Station. Dr N Kalaiselvi, Secretary cum DG, CSIR and Shri Mahesh Yadav, Station Director, New Delhi Railway Station lead the cleanliness drive. During the event, the SafaiMitras of New Delhi Railway Station were felicitated by CSIR, underscoring CSIR's appreciation for the contributions of sanitation workers in maintaining public cleanliness.

Under the active leadership ofSecretary, DSIR and close monitoring by Joint Secretary, DSIR who is Nodal Officer of Special Campaign 4.0, this Campaign proved to be very successful. During the Special Campaign period from 2ndOctober, 2024 to 31stOctober, 2024, focus was given to reduce pendency of PGs and enhance the overall cleanliness in and around office premises as well as improving work environment in the Department and its organizations.

Department of Scientific and Industrial Research (DSIR) has successfully achieved 100 per cent targets of disposing of the pendency of IMC references, public grievances, appeals and record management.

As a part of the campaign 9,120 physical files were reviewed, 4488 physical files were weeded, 85 cleanliness campaigns were conducted, total of Rs.19,04,125/- revenue was generated from scrap disposal and total area of 39,230 Sq. ft. of space was freed by way of scrap disposal and weeding out of files. As we look ahead, DSIR remain committed to zero pendency, gradual increase of digitization of processes and enhancement of the overall service delivery experience of its stakeholders. The impact and special efforts of special campaign 4.0 will be a continuous processand this momentum will be maintained in the months to come.

Published in:

Pib

CSIR-IHBT to host 'One Week, One Theme' program focused on AgriNutribiotech

CSIR-IIIM, IHBT

05th November , 2024

The CSIR-Institute of Himalayan Bioresource Technology (IHBT), Palampur, kickstarted its "One Week, One Theme" (OWOT) event, focusing on the AgriNutribiotech (ANB) theme. This event brings together experts from the agricultural, nutritional, and biotechnological sectors, aiming to foster collaboration, promote innovative technologies, and support the development of aromatic and floriculture crops.

Inaugural Ceremony and Guest of Honor

The inauguration began with a tree plantation, followed by a formal welcome. Key dignitaries attending included Prof. Shashi Kumar Dhiman, Vice-Chancellor of Himachal Pradesh Technical University (HPTU), as the Chief Guest, alongside Dr. Zabeer Ahmed, Director of IIIM Jammu, and Madam Netra Meti, IAS, SDM Palampur, as Guests of Honor.

Addressing the audience, Prof. Dhiman stressed the importance of innovation in agricultural biotechnology to uplift rural communities, particularly through value-added crops like chamomile and lavender. Dr. Ahmed and Madam Meti highlighted the role of institutions like CSIR-IHBT in driving research that directly benefits farmers and entrepreneurs in the region.

Aromatic Plants and Floriculture Crops Released

A key highlight was the release of new aromatic plant varieties, specifically Chamomile and Lavender, with technical folders available in both Hindi and English. Farmers also received seeds and planting materials for these crops, including Rosemary, Palmarosa, Gerbera, Gypsophila, and Lilium.

Technology Transfer and Collaboration

The event emphasized fostering industry linkages, with several Transfer of Technology

(ToT) agreements signed to promote collaboration between CSIR-IHBT and industry stakeholders. These partnerships are expected to enhance the commercialization of biotechnological innovations in agriculture and floriculture.

Exhibitions and Demonstrations

Following the inaugural session, attendees visited exhibitions showcasing CSIR-IHBT's advancements in agrotechnology, biotechnology, food technology, and environmental technology. Live demonstrations, including a mini-distillation unit for aromatic crops, provided hands-on learning for farmers and entrepreneurs. An audio-visual presentation of CSIR-IHBT technologies further highlighted the institute's contributions.

Industry Interaction and Panel Discussions

The afternoon session was dedicated to interaction meetings between industry partners, entrepreneurs, and farmers. Success stories were shared, particularly in the context of the Aroma, Floriculture, and Nutraceutical Missions. Talks on Stevia cultivation and processing were also conducted, sparking interest among local entrepreneurs.

The event concluded with a panel discussion on ANB-related technologies, where experts provided recommendations for future advancements in the field.

A Platform for Innovation

The OWOT program is expected to pave the way for new opportunities in agricultural biotechnology, particularly in the Himalayan region. By bridging the gap between research and industry, it aims to drive sustainable growth in agriculture while supporting rural development. This event is part of CSIR-IHBT's larger mission to promote bioresource-based entrepreneurship and boost the local economy through scientific innovation.

Published in:
Himachalheadlines

Goa-based NIO finds microplastics in Antarctica's Adelie penguins

CSIR-NIO

04th November , 2024

Microplastics have infiltrated even the most remote regions of our planet, with alarming new evidence emerging from Antarctica. A recent study conducted by a team of researchers led by Mahua Saha, principal scientist, CSIR-National Institute of Oceanography (NIO Goa), on the Adelie penguin on Svenner Island, unveiled the presence of microplastics in its organs and gastrointestinal tissues.

Microplastics are tiny bits of plastic that are less than 5mm in size—about the size of a grain of rice or smaller. They come from many sources, like discarded plastic bags, bottles, and even from clothes. As a result, despite its isolation from significant human activity, the Antarctic region is not immune to the pervasive threat of microplastic pollution.

During the 39th Indian expedition to Antarctica, scientists of the CSIR-NIO, Goa, and the University of Calcutta, West Bengal, collected an adult Adelie penguin carcass, meticulously dissected it at the Bharti Research Station, Antarctica, and scientists at CSIR-NIO Goa examined its body samples to look for microplastics. They found that most of the plastic they discovered was in the form of fibres—long, thin pieces that are often found in clothing and fishing gear. Interestingly, more than half of these fibres were blue, which might come from things like fishing nets or even clothes.

Sampling revealed microplastics in the gastrointestinal tracts of the penguins, with fibres constituting 97% of the identified particles. According to NIO, the ingestion of MPs by Adelie penguins can occur as they mistake these plastic particles for food. This poses risks of bioaccumulation within individual penguins and may also threaten entire populations, as scientists fear that adult penguins who commonly feed their young crop milk could inadvertently transfer harmful pollutants. This means that the pollutants can get passed down to the baby penguins, putting the entire population at risk.

The study revealed that many of the microplastics in the penguins' bodies were not digested. This suggests that their bodies are struggling to break down these foreign particles, which could lead to toxic substances building up in their systems. These harmful particles could not only affect the penguins but also other animals that eat similar foods, like skuas (a type of bird that also lives in Antarctica).

The way microplastics are accumulated in penguins involves both direct ingestion and indirect ways. Adelie penguins primarily eat marine creatures like krill and fish, which have also been found to contain microplastics. This creates a worrying cycle of pollution that could impact the entire food web. To make matters worse, scientists have also found microplastics in the penguins' respiratory tracts. Inhaling these tiny particles could lead to inflammation and breathing issues, adding yet another layer of danger for these majestic birds.

The findings serve as a clarion call for enhanced conservation efforts and stricter regulations on plastic production and disposal as microplastics invade even the most pristine environments on earth.

Published in:
Times of India

The CSIR-CFTRI has been Active in Developing a Range of Innovative Products

CSIR-CFTRI

04th November , 2024

The CSIR-CFTRI (Council of Scientific and Industrial Research – Central Food Technological Research Institute) has been active in developing a range of innovative products tailored for industry applications. These developments often focus on food processing, preservation, and nutrition enhancement.

These innovations not only support industry needs but also contribute to public health and sustainability goals. Recently the Mysuru-based CFTRI unveiled its probiotic carrot nectar which is a vegetable-based beverage developed by incorporating the probiotic bacterium Lactiplantibacillus plantarum MCC5231 in carrot nectar. Delivery of the probiotics through a non-dairy-based food system is a favourable option due to the problems associated with dairy-based products, such as lactose intolerance and milk allergies. This vegetable-based carrot nectar supplemented with L. plantarum is a novel concept meeting the FSSAI's nectar specification criteria and fulfils more than 50% of daily requirement of Vitamin A. The product was developed by Aditi Goel under the guidance of Attar Singh Chauhan and Prakash M Halami and was funded by DBT, New Delhi.

For the development of gluten-free bread premix with a combination of proso millet, foxtail millet and barnyard millet, the institute targeted small- and large-scale bakeries. The premix includes all the essential ingredients for producing bread hence offers convenience for both small- and large-scale bread production. The gluten-free bread produced from the premixes offers superior nutritional profile as compared to many gluten-free products in the current market. The technology caters to the growing demand for gluten-free products as well as promotes millet utilisation.

The work was funded by Ministry of Food Processing Industries and executed by the team lead by Dr P Prabhasankar as Principal Investigator and Soumya C, Tamilselvan T, Crassina

Kasar, Sudha ML and Matche RS as team members from CSIR-CFTRI.

The food researchers also devised the know-how for multigrain waffles. These are wheat-based baked product which can be taken as a bread variant for breakfast, snack or as desserts with variety of toppings. They often have high calorie with low dietary fibre and essential minerals. In order to improve the nutritional quality, the multigrain waffle has been formulated using whole wheat, pearl millet and finger millet flours with optimal amount of sugar and fat. It is produced by baking the batter in the waffle machine. The multigrain waffle has desirable textures and taste with higher dietary fibre, minerals and lower calorie value as compared to the commonly available waffles in the market.

Waffles can be marketed as a quick snack or dessert through bakeries, departmental stores and restaurants. The popularity of bread variants such as waffles is increasing. Attempts are being made to formulate multigrain waffle from locally available ingredients. It will serve the growing consumer demand for healthy yet convenient foods. The technology can cater to the domestic sector for home baking as well as commercial sectors.

Another was the Instant Masala Tea Premix which is crafted with natural ingredients, including stabilised tea flavour and a curated mix of aromatic spices such as cardamom, ginger, cloves and cinnamon. The tea is packaged in single-serving sachets, allowing for quick and easy preparation. Catering to diverse tastes and dietary preferences, Instant Masala Tea is available with a variety of sweeteners, including regular sugar, jaggery, low-calorie sweeteners, and sugar-free options. The research and development team had Sachin R. Chaudhari, Rajeshwar S. Matche and Anisha Biswas as its members

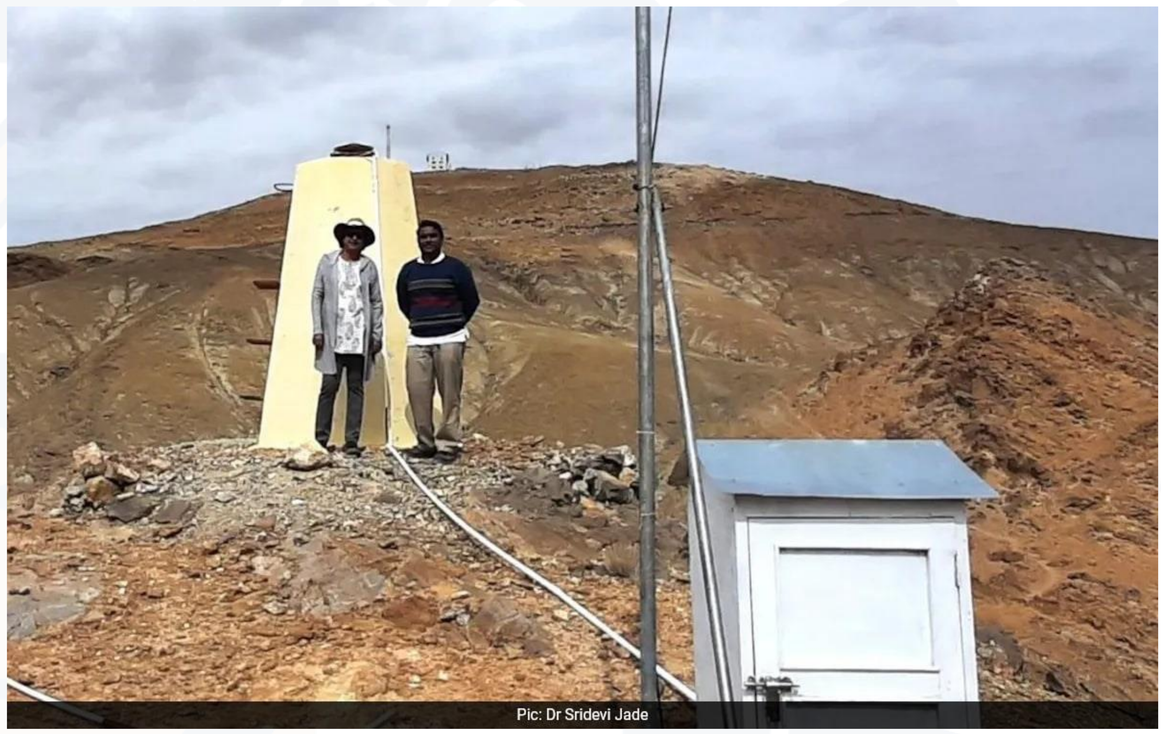
Published in:
Fmtmagazine

Why India Is Disappearing Under China In Tectonic Tug-Of-War

CSIR-4PI

3rd November , 2024

The military stand-off between India and China along the Line of Actual Control (LAC) found an amicable solution recently. However, another kind of tug-of-war between India and China - a continuous and ancient tectonic one - has been going on with the Indian tectonic plate constantly losing land by sliding under the Tibetan plate. The Indian landmass has been shrinking as its tectonic plate has been sliding under the Eurasian or Tibetan plate.



Pic: Dr Sridevi Jade

This correspondent experienced the war of continents first-hand high in the Himalayas at Hanle in Ladakh, where in the last 25 years or so Hanle may have risen by about 2.5 centimetres since this correspondent's last visit almost a quarter century ago to the same locations.

In a quirk of geological history, the Indian landmass is subducting or slipping under the Tibetan of the Asian landmass mainly comprising the current geographical area of China. This is also the reason the Himalayas - considered the ever-growing and youngest mountains - keep rising 5 millimetres per year. The height of Mount Everest, too, keeps going up.

This pull and tug below the Earth's surface in northern India below the Himalayas is the root cause of earthquakes in the Himalayan region. As the Indian plate slides below the Eurasian plate, steadily tension is built up almost like slow tightening of rubber band, then there comes a point when the taut tension is released as the ground gives way, leading to earthquakes. In fact, some parts of the Himalayan region have not faced a mega-earthquake in more than 500

year, and some say a mega-earthquake is long overdue in the region. Experts say one can only build more resilient and earthquake-resistant structures to save lives since earthquakes cannot be stopped or even forecast as of now. This tug-of-war between the Indian and the Tibetan plates has its origins in a phenomenon called continental drift, which started almost 60-70 million years ago; it's also often called the 'mega breakup'.

The Indian landmass was a part of the supercontinent called 'Gondwanaland', which was situated close to the African continent. Because of the little-understood tectonic drama, the Indian plate started moving northwards and for a long time remained like an ever floating and mobile island. Then at some point 10-15 million years ago, the Indian plate crashed into the Asian plate. This resulted in the Himalayan mountain range to be formed. Since then the Indian plate is gently but firmly being squeezed and swallowed under the Tibetan plate at the rate of 5 to 6 centimetres per year.

To accurately monitor what is happening on the ground, Indian scientists from the CSIR Fourth Paradigm Institute (CSIR-4PI), Bengaluru, have set up high-accuracy reference stations one on the Tibetan plate at Hanle in Ladakh and the other at Bengaluru. By tracking the movement of these reference points using sophisticated global positioning system (GPS) instruments and satellites, the Indian team can assess how the land masses have moved respective to each other. "In these last 25 years, Hanle has moved by almost 85 centimetres northeastwards. And India, let us say in Bengaluru, has moved forward by 1.37 metres northeast. This movement causes stress, which manifests in earthquakes," said Dr Sridevi Jade, Director, CSIR Fourth Paradigm Institute (CSIR-4PI), Bengaluru, and a specialist on measuring the continental drift.

The saving grace though, as Dr Jade said, is that "India is unlikely to disappear anytime soon."

Published in:
Ndtv

Dr. Hisham endowment award for CSIR-NIIST scholar

CSIR-NIIST

3rd November , 2024

Sangeetha Mohan, research scholar, Chemical Science and Technology Division, Council of Scientific & Industrial Research -National Institute for Interdisciplinary Science and Technology (CSIR-NIIST), Thiruvananthapuram, has been selected for the Professor Dr. A. Hisham Endowment Award 2024.

The award, instituted by the Kerala Academy of Science (KAS), commemorates the contributions of the late Prof. Abdulkhader Hisham, an internationally reputed phytochemist and an eminent academician from Kerala. The award will be presented during an international conference on 'Advancements and Innovations in Phytochemistry, Nutraceuticals and Functional Foods' to be held at the Mar Athanasius College for Advanced Studies Thiruvalla (MACFAST) on November 11 and 12.

Published in:

The Hindu

Odisha Government Clarifies that No Secret Chambers inside Puri Temple

CSIR-NGRI 02nd November , 2024

Law Minister Prithviraj Harichandan has stated that there are no hidden chambers or tunnels within the Ratna Bhandar, the treasury of the Shri Jagannath Temple in Puri. In a press briefing on Friday, Harichandan remarked, "Based on initial discussions with the scientists and experts conducting the Ground Penetrating Radar (GPR) survey, it has been confirmed that there are no concealed chambers or tunnels in either the Bahara (outer) or Bhitara (inner) sections of the temple treasury." The final report from the GPR survey is anticipated to be released shortly.

In September, the Archaeological Survey of India (ASI) collaborated with the CSIR-National Geophysical Research Institute (CSIR-NGRI) from Hyderabad to perform the GPR survey of the Ratna Bhandar.

The Minister also indicated that the inventory of the deities' jewels and ornaments will begin after the New Year. He explained, "Due to the high volume of visitors during the Hindu month of Kartik, repair work can only commence following Kartik Purnima. The ASI will require approximately one to one-and-a-half months to complete these repairs." He further noted, "Once the repairs are finished, all jewels and ornaments currently stored in the temporary Bahara and Bhitara Bhandar will be transferred to the Ratna Bhandar. The inventory process will be conducted within the Ratna Bhandar, adhering to safety protocols and the temple's established regulations."

After the conclusion of the Kartik month, the ASI will proceed with repairs in both chambers. The final incentivization report will be published after the previous inventory list is reviewed.

Published in:
Odisha

CSIR-IIIM Jammu celebrates Rashtriya Ekta Diwas with a Run for Unity

CSIR-IIIM

01st November , 2024

CSIR-Indian Institute of Integrative Medicine (IIIM) Jammu celebrated Rashtriya Ekta Diwas (National Unity Day) to honour Sardar Vallabhbhai Patel's legacy of integrity, unity, and national cohesion. Led by Director Dr. Zabeer Ahmed CSIR-IIIM, the CSIR-IIIM team took a pledge to promote diversity and harmony within the institution, reflecting Sardar Patel's vision of a united India. The day concluded with an enthusiastic Run for Unity, symbolizing the institute's commitment to solidarity and collective strength.

During the event, Dr. Zabeer Ahmed addressed the staff and highlighted the importance of unity and purpose as key drivers of progress and collaboration within CSIR-IIIM.

Dr. Ahmed noted that Sardar Patel's vision for a united India remains as significant today as ever. On Rashtriya Ekta Diwas, CSIR-IIIM pledged to uphold diversity, integrity, and a harmonious environment—values that are essential in both professional and societal spheres.

The Run for Unity, held in the evening, drew enthusiastic participation from CSIR-IIIM's staff and students, who rallied together, embodying shared purpose and mutual respect. Participants gathered with energy and commitment, their steps symbolizing the drive for unity that underpins both the institute's mission and India's diverse society. The event not only honoured Sardar Patel's instrumental role in uniting India but also served as a powerful reminder of the strength found in collaboration and inclusivity. Through this run, the CSIR-IIIM community reinforced its commitment to a harmonious future built on collective effort

and unity. Rashtriya Ekta Diwas offers institutions and individuals a yearly chance to reaffirm their commitment to national unity. CSIR-IIIM Jammu is honoured to participate in this observance, striving to foster an inclusive and cooperative environment that values and celebrates diversity.

Published in:
Risingkashmir

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