

# CSIR IN MEDIA



**CSIR**

## **NEWS BULLETIN 01 TO 05 SEPTEMBER 2021**





## NAL's Hansa-NG has successful maiden flight

CSIR-NAL

4<sup>th</sup> September, 2021

The two-seater Hansa New Generation (Hansa-NG) aircraft, a revamped version of the original Hansa developed three decades ago, had a successful maiden flight Friday when it took off from the HAL airport and flew for about 20 minutes. Designed and developed by the National Aerospace Laboratories (NAL) in Bengaluru, the aircraft was flown by test pilot Captain Amit



Dahiya to an altitude of 4,000 feet and gained a speed of 80 knots before landing, the NAL said in an official statement. Dahiya said all flight parameters were normal.

The unique features of the two-seater include a glass cockpit with cabin comfort, digitally controlled engine, electrically operated flaps, long endurance, low acquisition and low operating cost. NAL, which is a Council of Scientific and Industrial Research (CSIR) institution, has signed a Memorandum of Understanding (MoU) with the Indira Gandhi Rashtriya Uran Akademi (IGRUA) to be the possible launch customer for Hansa-NG.

The defence sector can also use Hansa-NG for cadet training and coastal surveillance, the NAL said. It will help create job training opportunities for ITI and diploma holders in various aircraft building and training disciplines, NAL officials said.

In 2018, CSIR-NAL and Mesco Aerospace Ltd had signed a collaborative agreement for the design, development, production and marketing of Hansa-NG to ease the availability of indigenous aircraft for the purposes of training for private and commercial pilot licences.



CSIR-NAL has already received 72 Letters of Intent from various flying clubs and the aircraft will be certified within the next 4 months before it gets inducted into service. The flight was monitored in telemetry by senior officers and scientists/engineers from the Directorate General of Civil Aviation (DGCA), Centre for Military Airworthiness & Certification (CEMILAC) and CSIR-NAL.



## Krishi Jagran to Organize Webinar on “Growth of Indian Agriculture in last 25 years & Future Prospects”

CSIR-CMERI

4<sup>th</sup> September, 2021

On the joyous occasion of completing **25 years** in the industry, Krishi Jagran is starting a series of webinars from **5<sup>th</sup> September, Sunday, 11 am onwards**. The first in the series will be about “**The Growth of Indian Agriculture in the Last 25 Years & Future Prospects**”. Through these years, Krishi Jagran has been, voicing the struggles, problems & achievements of farmers, and has witnessed how the agriculture sector in India has changed over the years. From using bullocks to plough the field to using High-end tractors & the latest technology equipments, Indian Farmers have come a long way and so has Indian agriculture! India’s Food Grain Production has increased tremendously over the last 2 decades; it reached **303.34 million tonnes** in the year 2020-21. The reason: increase in productivity due to adoption of new technologies, more intensive use of manufactured inputs, such as fertilizers, and the efficiencies gained as farm production shifted to larger more specialized operations. Not forgetting the tireless hard work of farmers, Research by Agricultural Scientists and farmer friendly policies of the Government.

Indian Agriculture has changed a lot over the years but one thing that has remained the same is that it has continued to be the primary occupation of most of the people of the country. More than 50% of the people depend on this sector for their livelihood and will continue to do so.



**Silver Jubilee Webinar Series**

**Webinar 1**

**Growth Of Indian Agriculture In The Last 25 Years & Prospects For Coming 25 Years**

**25<sup>th</sup> ANNIVERSARY**  
**KJ KRISHI JAGRAN**  
Growing with farmers

**M C DOMINIC**  
Founder & Editor-in-Chief  
Krishi Jagran & Agriculture World

**Guest Speakers**

**JP SHARMA**  
Vice Chancellor, SKUAT

**VK GAUR**  
CMD, National Seeds Corporation

**Sanjay Kumar Rakesh**  
CEO, CSC SPV

**Harish Hirani**  
Director CSIR CMERI

**Subeer Majumdar**  
Director, NIAB

**Manoj Sharma**  
Assistant Director,  
Ministry of Agriculture

**AMAN KUMAR**  
Trishulli Producer  
Company Limited

**GANGA RAM**  
Innovative Farmer Awardee-2021

**CHANDRA MOHAN**  
President, Govt. Affairs,  
Krishi Jagran

SEPTEMBER 2021  
**05**  
Sunday, 11:00 am

**f LIVE**  
facebook.com/krishijagran



To discuss all the developments that have taken place in the last 25 years and what are future prospects in the industry, we have organized a webinar on 5th September, Sunday.

The event will be moderated by **MC Dominic**, Founder & Editor in Chief of Krishi Jagran & Agriculture World.

For the very first webinar, Krishi Jagran has invited eminent personalities from the industry, who will be sharing their knowledge and opinions on the above topic. The guest speakers include **JP Sharma**, Vice-Chancellor, SKUAST, **VK Gaur**, CMD, National Seeds Corporation, **Sanjay Kumar Rakesh**, CEO, CSC SPV, **Pradip Rajan**, Principal Scientist, CSIR CMERI, **Subeer Majumdar**, Director, NIAB, **Manoj Sharma**, Assistant Director, Ministry of Agriculture, **Aman Kumar**, Trishulli Producer Company Limited and **Ganga Ram**, Innovative Farmer Awardee- 2021.

Finally, the Vote of thanks will be conveyed by **Chander Mohan**, President, Government Affairs, Krishi Jagran.

**Published in:**

[Krishijagran](http://Krishijagran)



## Australian High Commissioner visits CSIR-IMMT Bhubaneswar

### STATESMAN NEWS SERVICE

BHUBANESWAR, 4 SEPTEMBER:

Australian High Commissioner to India H.E. Mr Barry O Farrell visits Institute of Minerals and Materials Technology, Bhubaneswar along with Ms Rowan Ainsworth Consul General, Kolkata and others.

The High Commissioner expressed his happiness over the research work at

IMMT and its collaborative work with different Australian institutes and Govt agencies. "We are looking forward for such collaborative academic and industrial research work on critical minerals for the betterment of the Industry and Society", he said.

Prof. Dr. S Basu, Director, CSIR, IMMT, Bhubaneswar said, "We look forward to work with Australia in the

research work of critical minerals and Geographical sensitive areas".

Mr Barry visited Mineral Processing Pilot Plant and Hydro & Electro Metallurgy Pilot plant to witness the ongoing research work where Dr. Ashok Sahu, Head, Dept of Mineral Processing and Dr Kali Sanjay, Head Dept of Hydro Electrical Meteorology demonstrated the research work.



**वैमानिकी क्षेत्र में एनएएल की अहम उपलब्धि**

# 'हंसा-एनजी' ने भरी पहली सफल उड़ान

पत्रिका न्यूज नेटवर्क  
patrika.com

बेंगलूरु. स्वदेशी वैमानिकी (एरोनॉटिक्स) क्षेत्र में नए आयाम गढ़ते हुए राष्ट्रीय वांतरिक्ष प्रयोगशाला (एनएएल) ने प्रशिक्षण विमान 'हंसा' के नए एवं उन्नत संस्करण 'हंसा-एनजी' का पहला उड़ान परीक्षण सफलतापूर्वक पूरा कर लिया।

एनएएल की ओर से दी गई जानकारी के अनुसार यहां शुक्रवार को एचएएल हवाई अड्डे से हंसा-एनजी ने अपराह्न 2.09 बजे उड़ान भरी और लगभग 20 मिनट बाद सफलतापूर्वक लैंड किया। इस दौरान विमान ने 4 हजार फीट की ऊंचाई को छुआ और 80 नॉट की गति पकड़ी। विमान के साथ टेस्ट पायलट कैप्टन अमित दहिया ने उड़ान भरी और कई मानदंडों पर परखा। उन्होंने उड़ान को शानदार और तमाम मानदंडों पर खरा बताया। सीएसआइआर-एनएएल के महानिदेशक शेखर सी.मंडे ने इस उपलब्धि को मौल का पत्थर बताया।

'हंसा-एनजी' को लेकर उड्डयन क्षेत्र में खासा उत्साह है। एनएएल ने कहा है कि विभिन्न फ्लाईंग क्लबों से करीब 72 अभिरुचि पत्र



**एक विमान के कई काम**

हंसा विमान के प्रोटोटाइप ने वर्ष 1993 में उड़ान भरना शुरू किया था। कड़े परीक्षणों से के बाद वर्ष 2000 में उसे मंजूरी प्रदान की गई। 2001 से 2010 के बीच एनएएल ने 14 हंसा विमान विकसित कर उन्हें विभिन्न फ्लाईंग क्लबों को उपलब्ध कराया। इन विमानों ने हवा में हजारों घंटे बिताए हैं। केंद्र सरकार ने वर्ष 2018 में हंसा-एनजी परियोजना को मंजूरी दी

और एनएएल ने हंसा-3 को ग्लास कॉकपिट और अन्य उपकरणों से सुसज्जित किया। किफायती दरों पर उपलब्ध यह विमान प्रदर्शन के पैमाने पर दमदार है। यह स्वदेशी विमान पायलटों के निजी और वाणिज्यिक प्रशिक्षण के काम आएगा। एयरफील्ड पर पक्षियों की टोह लेने, कैडेट प्रशिक्षण, तटीय निगरानी और शौकिया उड़ानों में भी उपयोगी होंगे।

कंप्लिमेंट एवियोनिक्स, स्मार्ट मल्टी फंक्शनल डिस्प्ले, ग्लास कॉकपिट और बबल कैनोपी डिजाइन से लैस है। इसमें रॉटेक्स 912 आइएससी जैसा दमदार इंजन लगा है, जो पूरी तरह डिजिटल रूप से नियंत्रित होता है।

पहले ही प्राप्त हो चुके हैं। अगले चार महीनों के दौरान इसे प्रमाणित किया जाएगा और फिर सेवा में शामिल हो जाएगा। 'हंसा-एनजी' में एनजी का अर्थ 'न्यू जेनेरेशन' है। आधिकारिक जानकारी के अनुसार यह विमान आइएफआर



## Scientists develop bio-methanation tech for integrated treatment of sewage, organic solid waste

CSIR-IICT

3<sup>rd</sup> September, 2021

New Delhi, Sep 3 (PTI) Scientists have developed a new high-rate bio methanation technology for the integrated treatment of sewage and organic solid waste with concomitant generation of biogas, bio manure and reusable water, the Department of Science and Technology (DST) said on Friday. The technology has decentralised application across India, it said.

Solid and liquid wastes are the major challenges being faced by big cities and by areas witnessing rapid urbanisation and these need to be tackled by sustainable technology. An integrated treatment of sewage along with organic solid waste can help evolve a sustainable technology to overcome solid and liquid waste disposal issues.

A Gangagni Rao, chief scientist, and S Sridhar, senior principal scientist at the CSIR-Indian Institute of Chemical Technology (IICT), have jointly developed this high-rate bio methanation tech based on Anaerobic Gas lift Reactor (AGR) technology for the treatment of organic solid waste and concomitant generation of biogas and bio manure along with nanofiltration (NF) setup.

This integrated and sustainable sewage and organic solid waste treatment system can be used for treating groundwater and wastewater and generating potable and reusable water respectively.

The technologies, supported by the "Waste Management Technology" programme of the Department of Science and Technology (DST), have received national patents individually. Instead of sending the organic solid waste and liquid waste to common bigger facilities in the city, those can be treated at source in a decentralised manner. Urban and local bodies and gated communities comprising around 50,000 to 1,00,000 population can benefit from this



technology, said Rao and Sridhar. An integrated model plant comprising of AGR and NF technologies has been established at CSIR-IICT, Hyderabad, for simultaneous treatment of sewage and organic solid waste for the generation of value-added products such as biogas, bio manure, and reusable water.

The technology is field-tested and working continuously for the past two years. This integrated approach of sewage and organic solid waste treatment can be used where municipalities with around 50,000 to 1,00,000 population generate approximately two to four million litres of sewage daily and five to 10 metric tonnes of organic solid waste each day, DST statement added. PTI PR NSD

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[Outlookindia](http://Outlookindia)



## Cusat's anionic clay to aid cancer therapy

CSIR-NIIST

3<sup>rd</sup> September, 2021

KOCHI: Scientists at Cusat have developed a novel method for the synthesis of in situ exfoliated magnetic anionic clay that exhibits high magnetic hyperthermic properties. It can help target cancer treatment and provide localised intervention.

The research proposed by Dr Sailaja G S (principal investigator) is being funded by DST SERB - Early career research grant. PhD student Anjana K is the project fellow. The compound was developed and biological evaluations were performed in Cusat. The magnetic measurements were carried out in the lab of Dr Manoj Raama Varma, chief scientist- CSIR NIIST, who is the co-inventor and co-investigator of the project.

“Magnetic hyperthermia is an advanced strategy for the treatment of cancer with minimum side effects to normal tissues. Unless certain intercalation or post-synthesis strategies are performed, the exfoliation of layers is very difficult for normal anionic clay due to the strong electrostatic interaction between the layers,” said one of the researchers.

**Published in:**

[Newindianexpress](https://www.newindianexpress.com)



# CFTRI to train start-ups on producing healthy snacks

Institute to host webinar on September 21 and 22

**SPECIAL CORRESPONDENT**  
MYSURU

Consumers' preferences for snacks that deliver on health, convenience and taste have sparked innovations in many of the healthy snack segments.

In this regard, CSIR-Central Food Technological Research Institute (CFTRI) is organising a two-day webinar on "Innovative and Healthy Snacks" on September 21 and 22 under the CSIR Integrated Skill Initiative for the benefit of start-ups, SMEs, entrepreneurs, and micro-entrepreneurs working in the area of food processing.

The webinar would focus on formulations, manufacturing quality and other regulatory requirements in the Indian snack food industry. The selected topics would also cover various aspects for establishing sustainable business models for functional



A file photo of CSIR-Central Food Technological Research Institute in Mysuru.

and health promoting snacks in meeting the increasing demand.

It will also provide an insight into the opportunities for MSMEs and start-ups with respect to Indian snack industry, including Return of Investment (RoI), sensory and consumer acceptance studies, plant layout and certifications.

Target audience for this workshop are aspiring entrepreneurs who have completed their graduation or diplo-

ma in any subject, a release from the CFTRI said.

Registration fee has been fixed at ₹885 (including GST) and can be paid through SBI Collect. The details may be found at [https://www.cftri.res.in/PDF/Workshop\\_on\\_Healthy\\_Snacks\\_Brochure.pdf](https://www.cftri.res.in/PDF/Workshop_on_Healthy_Snacks_Brochure.pdf)

or contact the Head, PMC, (E-mail: [pmc@cftri.res.in](mailto:pmc@cftri.res.in)). Those who are interested may apply online for the programme on or before September 9.

**Published in:**

The Hindu



# मैदान में उगेगी पहाड़ों की कुटकी

## टिशू कल्चर से पौधे तैयार करने में सफलता, हाइड्रोपोनिक पद्धति से होगी मल्टीप्लाई

कार्यालय संवाददाता-पालमपुर

अभी तक सिर्फ पहाड़ों में पाई जाने वाली औषधीय जड़ी-बूटी



कुटकी अब मैदान में भी पैदा हो सकेगी। विलुप्त हो रही प्रजाति की

श्रेणी में शामिल कुटकी को बचाने के प्रयास में हिमालय जैवसंपदा प्रौद्योगिकी संस्थान के वैज्ञानिकों ने सफलता हासिल की है। कुटकी को अब हाइड्रोपोनिक पद्धति से किसी भी स्थान पर उगाया जाना संभव होगा। हिमालय क्षेत्र में कश्मीर से सिक्किम तक पाए जाने वाला यह औषधीय पौधा अत्यधिक दोहन के कारण विलुप्त होने की कगार

पर है। ऐसे में वैज्ञानिकों द्वारा कुटकी को हाइड्रोपोनिक विधि से कहीं भी पैदा किए जाने की तकनीक विकसित करने से इसपर मंडरा रहे विलुप्त होने के खतरे को रोका जा सकेगा। आईएचबीटी के वैज्ञानिकों ने पिक्कोरिजा कुरूआ

(कुटकी) का जीनोम अनुक्रम तैयार कर लिया है। ड्राफ्ट जीनोम इस महत्वपूर्ण लुप्तप्राय हिमालयी औषधीय पौधे के जीव विज्ञान को समझने के लिए एक मूल्यवान संसाधन और संदर्भ जानकारी प्रदान करेगा।

“ कुटकी एक महत्वपूर्ण औषधीय पौधा है जो मुख्यतः यकृत की बीमारियों के उपचार में काम आता है और ऐसी कई औषधियां हैं जिसमें कुटकी का प्रयोग होता है। कुटकी पारंपरिक तौर पर खेती नहीं होती है, संस्थान के वैज्ञानिकों ने टिशू कल्चर से कुटकी की पौध तैयार करने में सफलता प्राप्त की है और हाइड्रोपोनिक पद्धति से इस पौध को मल्टीप्लाई किया जा सकता है। संस्थान ने इस तकनीक को हैदराबाद की एक कंपनी को हस्तांतरित किया है

डा. संजय कुमार, निदेशक, आईएचबीटी



## ‘DNA fingerprinting for crime will not give out any background’

CSIR-CCMB

2<sup>nd</sup> September, 2021

DNA fingerprinting taken for crime suspects or convicts is only of a “certain negligible part” looking for more variations to prove the uniqueness of the person concerned and will not give out any background, identity or religion, clarified Director of the Centre for DNA Fingerprinting and Diagnostics (CDFD) K. Thangaraj on Thursday.

A different set of markers are used to trace the human origin and evaluation with the entire DNA or genome when the background of the person is known, he explained, in an effort to differentiate between using the technology for solving crimes and genetic study for population studies, during a webinar on ‘DNA Fingerprinting Technology – its success and future’ organised by Council of Scientific & Industrial Research (CSIR).

Mr. Thangaraj, also Chief Scientist of the CSIR-CCMB, said the technology is to be used only for suspects and convicts with a specific timeline with the profile to be destroyed if proved innocent as per the proposed Bill. While England’s Dr Alec Jeffery is the father of the DNA fingerprinting technology, he traced its development here due to research efforts by CDFD founder-director Lalji Singh.

Dr. Singh was studying the evolution of sex determination through chromosomes of poisonous snakes following which individual specific banding pattern was identified. This technology over the last 25 years has helped to solve many complex crimes like establishing the identity of killers of former Prime Minister Rajiv Gandhi.

Suicide bomber Dhanu and mastermind Sivarasan were identified after taking DNA from the respective parents from Sri Lanka and compared with the DNA obtained from the dead bodies. Incidentally, the ex-PM inaugurated the CCMB from where CDFD originated.



While there are privacy and individual freedom issues, it is possible to ensure innocents are not convicted if the DNA technology is accepted by the legal fraternity and also ensure 100% conviction rate, observed professor of the National Law University G.K. Goswami. In United States alone about 20 people on the death row have been saved as DNA evidence helped, he said and explained close to 60 countries have got the legislations, yet none has come up with an iron clad one.

Currently, DNA fingerprinting is being done for those accused of sexual offences and those involved in other crimes can seek the court's permission to prove their innocence. Professor in NALSAR University of Law K.V.K. Santhy said a legal framework for exoneration has been lacking for the innocent and spoke of the fears of DNA profiling in data collection and maintenance. CSIR-CCMB Director N. Vinay also spoke while Dr. Shika moderated the discussion.

**Published in:**

[Thehindu](http://Thehindu)



CSIR-CSMCRI

2<sup>nd</sup> September, 2021

## Celebration of Jigyasa-Vigyan Jyoti outreach program under the umbrella of Azadi ka Amrit Mohatsav

### સેન્ટ્રલ સોલ્ટ દ્વારા આઝાદીના અમૃત મહોત્સવની ઉજવણી પ્રફુલ્લચન્દ્રરાયના વિજ્ઞાન ક્ષેત્રે યોગદાન અને હાનિકારક જીવાણુ વિશે ચર્ચા કરવામાં આવી

ભાવનગર | 1 સપ્ટેમ્બર

સેન્ટ્રલ સોલ્ટ ભાવનગર દ્વારા સીએસઆઈઆર જિજ્ઞાસા વિજ્ઞાન જ્યોતિ કાર્યક્રમ અંતર્ગત આઝાદીના અમૃત મહોત્સવની ઉજવણી માટે પરિસંવાદ(વેબિનાર) નું આયોજન કરવામાં આવ્યું હતું. કેન્દ્રીય નમક અને સમુદ્રી રસાયણ અનુસંધાન સંસ્થાન ભાવનગર એ તા. 31 ઓગસ્ટ ના રોજ યોજાયેલ ઓનલાઈન પરિસંવાદ માં ડૉ. ડુંગર રામ ચૌધરી , પ્રધાન વૈજ્ઞાનિક એ ધોરણ 9 થી 12 સુધીના વિદ્યાર્થીઓને સંબોધ્યા હતા.

ડૉ. ચૌધરી એ આચાર્ય પ્રફુલ્લ ચન્દ્ર રાયના જીવન તથા વિજ્ઞાન જગતમાં તેમના યોગદાન વિષે વિદ્યાર્થીઓને માહિતીગાર કર્યા. કાર્યક્રમને આગળ વધારતા સીએસઆઈઆર- ના વૈજ્ઞાનિક ડૉ. શ્રુતિ ચેટર્જીએ વિદ્યાર્થીઓને સૂક્ષ્મ વિજ્ઞાન તથા જીવાણુઓ વિષે સમજાવ્યું હતું. તેઓએ

સમજાવ્યું કે કેવી રીતે સૂક્ષ્મ વિજ્ઞાન નો અભ્યાસ કરી પોતાના ક્ષેત્રમાં સફળ થઈ શકાય છે. એમણે જીવાણુઓ થી થતા રોગો તથા તેનાથી બચાવના ઉપાયો વિશે વાત કરી. તેમણે લાભદાયક ની સાથે હાનિકારક જીવાણુઓ વિશે પણ વિદ્યાર્થીઓને માહિતી આપી હતી. તેઓએ એન્ટિબાયોટિક દવાઓના લાભ તથા એન્ટિબાયોટિક પ્રતિરોધથી આપણા શરીર પર થતા પ્રભાવ વિશે માહિતી આપી હતી. વિદ્યાર્થીઓએ એન્ટિબાયોટિક પર દેખાડેલ સ્લાઈડ્સ અને વીડિઓને ખુબ રૂચિપૂર્વક જોયા અને પોતાની વૈજ્ઞાનિક જિજ્ઞાસા અનુસાર પ્રશ્ન પૂછ્યા જેમના જવાબ ડૉ. શ્રુતિ ચેટર્જીએ ખુબ રસપ્રદ રીતે આપ્યા. આ કાર્યક્રમમાં જવાહર નવોદય વિદ્યાલય ( દીવ, ભાવનગર તથા અમરેલી ), કેન્દ્રીય વિદ્યાલય , દીવ તથા સરકારી ઉચ્ચતર માધ્યમિક વિદ્યાલય , દીવ ના વિદ્યાર્થીઓએ ભાગ લીધો હતો.

**Published in:**

Saurashtra Samachar



## Indian Standard Time was introduced on this day 74 years ago. But is one time zone enough for India?

CSIR-NPL

1<sup>st</sup> September, 2021

Two time zones will allow aligning standard time with daylight time, helping the circadian rhythm and also save millions of kWh of electricity every year.

India's national timekeeper, CSIR-NPL, estimates the country's potential savings in energy consumption to be 20 million kWh a year if it follows two time zones. When someone asks you the time, you would have the same answer, whether you are in Kibithu in Arunachal Pradesh or in Ghuar Mota in the Kutch region of Gujarat. Because both the regions are unified by the Indian Standard Time or IST.

On this day 74 years ago (September 1, 1947), the phenomenon of IST was introduced to the country as its official time. The standard time of five and a half hours ahead of Greenwich Mean Time is observed throughout the country, from Kang La to Cape Comorin, and from Kibithu to Ghuar Mota — the northern, southern, eastern and western extremes of India. And this is not really a good thing. We don't say so, science does. For a good reason.

If you were to travel across the breadth of the country, it would take you 2 days, 21 hours and 36 minutes of non-stop driving. India stretches a little less than 3,000 kilometres from east to west, spanning from  $68^{\circ}7'E$  to  $97^{\circ}25'E$  (a spread of  $29^{\circ}$  longitude), with a two-hour difference in mean solar times. Meaning that the sun rises two hours earlier in Arunachal Pradesh than in Gujarat.

Over the years, people in the north-eastern states have protested against this, demanding a separate time zone for the region. This is primarily because the sun rises and sets earlier there than the official working hours, and the states lose on the vital daylight. The sun rises as early as 4 in the morning in summers. However, the working hours for offices open at 10 in the



morning. Hours of productivity down the drain, besides affecting their bodies' circadian rhythm.

This was established by India's national timekeeper — Council of Scientific & Industrial Research's National Physical Laboratory (CSIR-NPL) — which maintains the IST. Scientists at the NPL published a research article describing the necessity of two time zones. The research suggests two time zones — IST-I and IST-II, with the new one an hour ahead of the existing time zone. The new one will cover the northeast region and can be demarcated from the other time zone at what the researchers call the “chicken neck” that connects the Northeast to the rest of India.

The research paper further establishes that India's potential savings in energy consumption could be as high as a whopping 20 million kWh a year if it follows two time zones. How? Simply by using the many daylight hours, which are now being wasted in the eastern region, and calling it a day there with the early sunset, leading to lower consumption of electricity. Besides the electricity, we would also have healthier and happier people who adhere to their circadian rhythm. Wake up and go to bed with the sun. Even now, unofficially, the tea gardens of Assam have been following ‘Chaibagaan time’ which is one hour ahead of the IST. And this is not new to India. The system we followed before IST was of three time zones!

Before independence, the country was following the Bombay, Calcutta and Madras time zones — based on the local times for the three presidencies. The time zones were decided on the basis of longitudes and were followed by all the regions around them. Calcutta was set at Universal Time Coordinated (UTC) or Greenwich Mean Time (GMT) +05.54, making it 24 minutes ahead of the current IST. Madras was set at UTC+05:21 making it nine seconds behind the current IST. Bombay was at UTC+04:51, making it 1:19 minutes behind the current IST. The Bagan Time (or the time for the northeast) was around UTC+06:30, making it an hour ahead of the current IST.



And this is more or less what science suggests and the Northeast demands. However, as is the case with any change, the bottleneck comes from the political quarters. Even last year when the question was posed in the Parliament, Dr Harsh Vardhan, the then Minister of Science & Technology, Health and Family Welfare and Earth Sciences responded saying, "...The matter was examined by a High-Level Committee (HLC). This committee comprising the Secretary, Department of Science and Technology, Director, Council of Scientific and Industrial Research-National Physical Laboratory (CSIR-NPL) and Chief Secretary, Government of Tripura. The HLC after considering the issue recommended not to have two time zones for India for strategic reasons."

We are not sure what the strategic reasons are, but the strategy sure isn't working for the Northeast. So, till we have two time zones, the snooze button is not an option for the seven sisters and their brother.

**Published in:**

[Timesnownews](https://timesnownews.com)



## Australian High Commissioner to India visits CSIR-IMMT Bhubaneswar

CSIR-IMMT

1<sup>st</sup> September, 2021

Bhubaneswar, 1st September 2021: Australian High Commissioner to India H.E. Mr Barry O Farrell visits CISR – Institute of Minerals and Mines, Bhubaneswar today along with Ms Rowan Ainsworth Hon'ble Consul General, Kolkata, Australian High Commission, Ms Ami Keough, 1st Secretary, Australian High Commission and Mr Partha Sen, Business Development Manager, Australian Trade Investment Commission.

Speaking about his visit Mr Barry said, I am very happy to see such world class research work going on at IMMT. It's also good to see collaborative research work already being done by IMMT along with different Australian institutes and Govt agencies. We are looking forward for such collaborative academic and industrial research work on critical minerals for the betterment of the Industry and Society. Hon'ble Consul General, Ms Rowan expressed her happiness seeing such partnership in research work between Australia and IMMT.

Speaking on this occasion, Prof. Dr. S Basu, Director, CSIR, IMMT, Bhubaneswar said, we are happy to showcase our academic and industrial research work to H.E. Mr Barry and his team. We look forward to work with Australia in the research work of critical minerals and Geographical sensitive areas.

H.E. Mr Barry visited Mineral Processing Pilot Plant and Hydro Electrical Meteorological Pilot plant to witness the ongoing research work where Dr. Ashok Sahu, Head, Dept of Mineral Processing and Dr Kali Shankar, Head Dept of Hydro Electrical Meteorology demonstrated the research work.

**Published in:**

[Orissadiary](#)

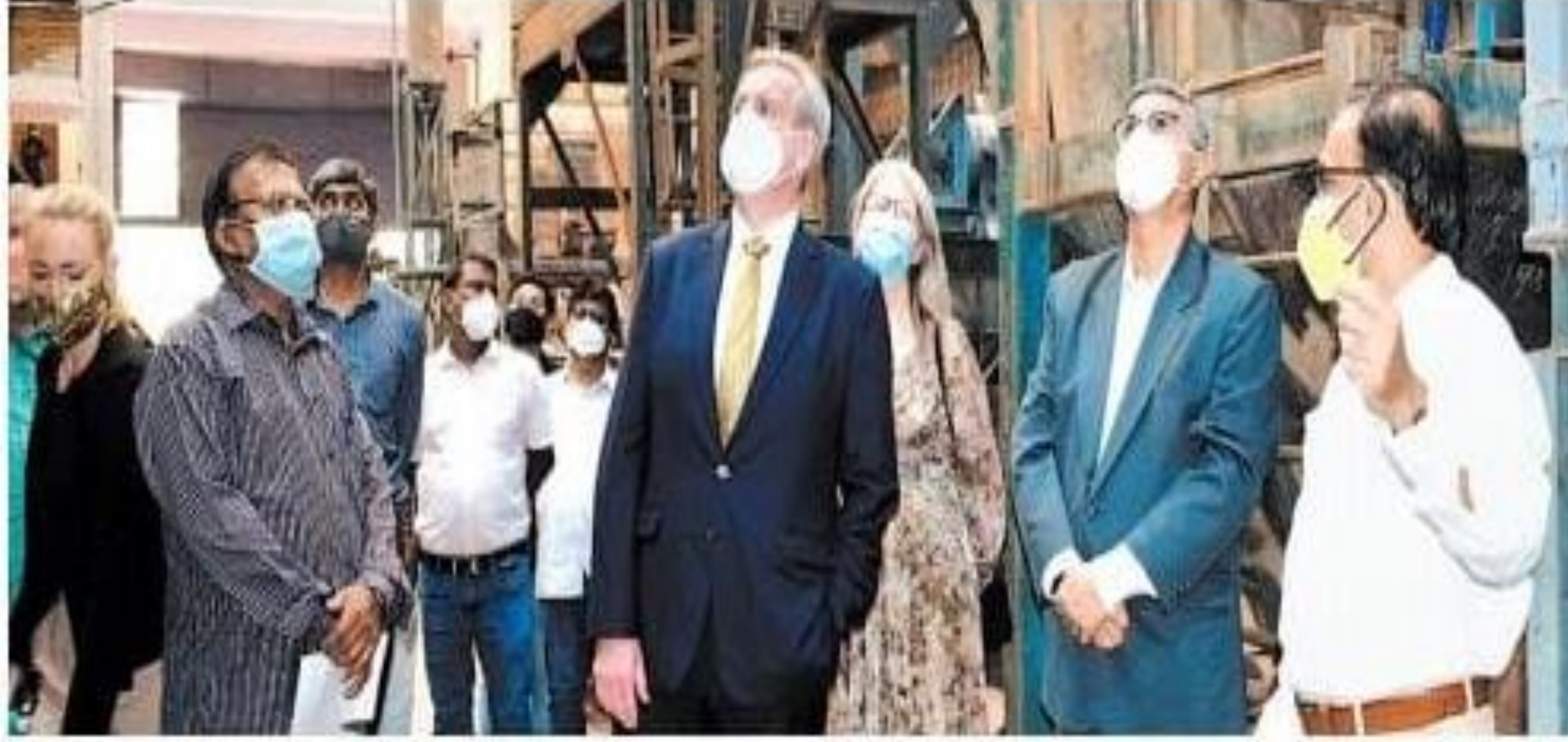


CSIR-IMMT

01<sup>st</sup> September, 2021

# ऑस्ट्रेलियाई उच्चायुक्त ने सीएसआईआर-आईएमएमटी का दौरा किया

भुवनेश्वर. ऑस्ट्रेलियाई उच्चायुक्त एच.ई. बैरी ओ फेरेल ने बुधवार को सीआईएसआर - खनिज और खान संस्थान का दौरा किया. उनके साथ ऑस्ट्रेलियाई उच्चायोग, महावाणिज्य दूत कोलकाता के रोवन एन्सवर्थ, ऑस्ट्रेलियाई उच्चायोग के प्रथम सचिव एमी केफ और ऑस्ट्रेलियाई व्यापार निवेश आयोग के व्यवसाय विकास प्रबंधक पार्थ सेन ने भी दौरा किया. अपनी यात्रा के बारे में बोलते हुए बैरी ने कहा कि, आईएमएमटी में इस तरह के विश्व स्तरीय शोध कार्य को देखकर मुझे बहुत खुशी हो रही



है. विभिन्न ऑस्ट्रेलियाई संस्थानों और सरकारी एजेंसियों के साथ आईएमएमटी द्वारा पहले से किए जा

रहे सहयोगी शोध कार्य को देखना भी अच्छा है. हम उद्योग और समाज की बेहतरी के लिए महत्वपूर्ण

खनिजों पर ऐसे सहयोगी अकादमिक और औद्योगिक अनुसंधान कार्य की आशा कर रहे हैं. अवसर पर

## भौगोलिक क्षेत्रों में काम करने तैयार

इस अवसर पर भुवनेश्वर आईएमएमटी सीएसआईआर निदेशक प्रो. डॉ. एस बसु ने कहा कि, हमें अपने अकादमिक और औद्योगिक अनुसंधान कार्य को एच.ई. बैरी और उनकी टीम के साथ मिलकर करना चाहिए. हम महत्वपूर्ण खनिजों और भौगोलिक संवेदनशील क्षेत्रों के अनुसंधान कार्य में ऑस्ट्रेलिया के साथ काम करने के लिए तत्पर हैं. बैरी ने चल रहे शोध कार्य को देखने के लिए मिनरल प्रोसेसिंग पायलट प्लांट और हाइड्रो इलेक्ट्रिकल मौसम विज्ञान पायलट प्लांट का दौरा किया, जहां खनिज प्रसंस्करण विभाग के प्रमुख डॉ. अशोक साहू और मौसम विभाग के हाइड्रो इलेक्ट्रिकल डॉ. काली शंकर ने अनुसंधान कार्य का प्रदर्शन किया.

महावाणिज्य दूत रोवन ने ऑस्ट्रेलिया में इस तरह की साझेदारी को देखकर और आईएमएमटी के बीच शोध कार्य प्रसन्नता व्यक्त की.

**Published in:**

NavaBharat



CSIR-IMMT

01<sup>st</sup> September, 2021

**“Visit of His Excellency, Mr. Barry O’ Farrell, The Australian High Commissioner to India & Esteemed Delegates to CSIR-IMMT, Bhubaneswar”.**

# ଅଷ୍ଟ୍ରେଲିଆ ଉଚ୍ଚାୟୁକ୍ତଙ୍କ ସିଏସ୍ଆଇଆର୍ ଆଇଏମ୍ଏମ୍ଟି ପରିଦର୍ଶନ

ଭୁବନେଶ୍ୱର, ୧୮ (ବୁଧବେଳା): ଭାରତର ଅଷ୍ଟ୍ରେଲିଆ ଉଚ୍ଚାୟୁକ୍ତ ବେରା ଓ’ ଫାର୍ରେଲ ଭୁବନେଶ୍ୱର ସିଏସ୍ଆଇଆର୍-ଇନ୍‌ଷ୍ଟିଚ୍ୟୁଟ୍ ଅଫ୍ ମିନେରାଲ୍ସ ଆଣ୍ଡ ମ୍ୟାଟେରିଆଲ୍ସ ଟେକ୍ନୋଲୋଜି ପରିଦର୍ଶନ କରିଛନ୍ତି । ତାଙ୍କ ସହିତ କୋଲକାତାର ଅଷ୍ଟ୍ରେଲିଆ କନସୁଲ ଜେନେରାଲ ରୋଡ୍ରିଗ୍ ଆନସ୍‌ପୂର୍ଥ, ପାଞ୍ଚ ସେକ୍ରେଟାରୀ ଆମି କପ୍ ଓ ଅଷ୍ଟ୍ରେଲିଆନ୍ ଟ୍ରେଡ୍ ଇନ୍‌ଡେଭେଲପ୍ମେଣ୍ଟ କମିସନର ବିଜିନେସ୍ ଡେଭଲପମେଣ୍ଟ ମ୍ୟାନେଜର ପାର୍ଥ ସେନ୍ ଉପସ୍ଥିତ ଥିଲେ ।

ଏହି ଅବସରରେ ବେରା କହିଲେ, ମୁଁ ଆଇଏମ୍ଏମ୍ଟି କ୍ୟାମ୍ପସ୍‌କୁ ଆସି ଖୁବ୍ ଆନନ୍ଦିତ । ଏଠାରେ ଏପରି ବିଶ୍ୱସ୍ତରାୟ ରିସର୍ଚ୍ଚ କାର୍ଯ୍ୟ ଦେଖି ଖୁସି ଲାଗୁଛି । ଅଷ୍ଟ୍ରେଲିଆ ଉଚ୍ଚାୟୁକ୍ତଙ୍କ



ଏହି ପରିଦର୍ଶନରେ ସିଏସ୍ଆଇଆର୍-ଆଇଏମ୍ଏମ୍ଟିର ନିର୍ଦ୍ଦେଶକ ପ୍ରଫେସର ଏସ୍. ବାସୁ କହିଲେ, ଆମେ ଆମର

ଏକାଡେମିକ୍ ରିସର୍ଚ୍ଚ କାମକୁ ପ୍ରଦର୍ଶିତ କରିଛୁ । ଆଶା କରୁଛୁ ଆଗାମୀ ଭବିଷ୍ୟତରେ ଆମେ ଅଷ୍ଟ୍ରେଲିଆ ସହ ମିଳିତ ଭାବେ କ୍ରିଟିକାଲ୍ ମିନେରାଲ୍ ଓ ଭୌଗଳିକ ସମ୍ବେଦନଶୀଳ କ୍ଷେତ୍ରରେ ଅନେକ ରିସର୍ଚ୍ଚ କାର୍ଯ୍ୟ କରିବୁ ।

ଏହାପରେ ବେରା ଓ ତାଙ୍କ ଟିମ୍ ମିନେରାଲ ପ୍ରୋସେସିଂ ପାଇଲର୍ ପ୍ଲାଣ୍ଟ ଏବଂ ହାଇଡ୍ରୋ ଇଲେକ୍ଟ୍ରିକ୍ ମେଟାଲୋଜୀ ପାଇଲର୍ ପ୍ଲାଣ୍ଟ ପରିଦର୍ଶନରେ ଯାଇଥିଲେ । ଆଇଏମ୍ଏମ୍ଟିର ମିନେରାଲ ପ୍ରୋସେସିଂ ବିଭାଗ ମୁଖ୍ୟ ଡ. ଆଶୋକ ସାହୁ ଓ ହାଇଡ୍ରୋ ଇଲେକ୍ଟ୍ରିକାଲ ମେଟାଲୋଜୀ ବିଭାଗ ମୁଖ୍ୟ ଡ. କାଳୀ ସଂଜୟ ଏହି ପରିଦର୍ଶନ ସମୟରେ ପ୍ଲାଣ୍ଟର ସମସ୍ତ ରିସର୍ଚ୍ଚ କାର୍ଯ୍ୟ ସମ୍ବନ୍ଧରେ ବିବରଣୀ ପ୍ରଦାନ କରିଥିଲେ ।

**Published in:**

Prameya



CSIR-IIP

28<sup>th</sup> August, 2021

# 5th National Symposium on Shaping the Energy Future held at IIP

By OUR STAFF REPORTER

**DEHRADUN, 27 Aug:** The 5th National Symposium on Shaping the Energy Future: Challenges and Opportunities 2021 (SEFCO-2021) was organised by the CSIR-Indian Institute of Petroleum, here, today. It focused upon "Zero-Emission Energy Alternatives". The symposium provided a common platform to discuss energy and allied subjects by leading scientists and technologists from industries and academics.

The highlights of the events were - Technologies Powering the Transition to Sustainable Energy and Fuels; Enhancing Sustainability of Materials and Processes in Energy Value Chains; Recent Advances in Biochemistry and Biotechnology. The scientific sessions were composed of invited talks, oral and digital poster presentations and a line-up of 15 expert speakers.

Virtual talks were given by the Chief Guest, Vartika Shukla (Director, Engineers India Ltd), and Guest of Honour Dr



Purandar Chakravarty (Head, Innovation and Alternative Energy, Nayara Energy Ltd). Over 400 delegates from across the country virtually attended the event through virtual platforms, i.e., MS Teams, YouTube live and Facebook live page of CSIR-IIP.

Neha Nandal, Convener SEFCO-2021, provided the details of the scientific programme. In his welcome address, Director Dr Anjan Ray, CSIR-IIP, welcomed the dignitaries.

"The event day is special as CSIR-IIP had introduced bio-jet

flight three years ago," said Dr Ray. The Director-General, CSIR, Dr Shekhar C Mande, emphasised the importance of energy sources in life. In his message, Dr Mande stated that India has a considerable amount of challenges and equal opportunities to work in the

energy sector to secure the future of humanity in general. He also appreciated the students of CSIR-IIP for organising the National Symposium-SEFCO regularly and taking it to its 5th edition.

Vartika Shukla delivered her lecture on "Zero-Emission Energy Alternatives". She discussed the challenges being faced by the oil and gas industry. She explained the road map for Net-Zero Emission and strategies like consumer behaviour, electric mobility, green hydrogen and biomass/waste valorisation for achieving the Net-Zero Goal. Dr Purandar Chakravarty discussed various energy pathways like renewable energy, hydrogen and ammonia as alternate fuel, gas fermentation, and ethanol and green diesel to attain a sustainable future. He emphasised on development and scaling up of the technologies.

Swati Saini, Co-Convener, presented the vote of thanks. The SEFCO-2021 souvenir was released by the dignitaries on the dais.

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