CSIR in Media





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Scientists are returning to India for research: Harsh Vardhan





More than 1,000 Indian scientists abroad have come back through various fellowships, said Union minister for Science and Technology and Earth Sciences. India has become a viable research destination.



From brain drain, India has now reached a stage of brain gain, said Dr Harsh Vardhan Union minister for science and technology and earth sciences, while speaking about the three-year achievements of his ministries.

"More than a thousand scientists

consensus that India is a becoming a destination for scientific research," said Harsh Vardhan.

India has become a viable research destination, according to the minister. "The Council of Scientific and Industrial Research (CSIR) was ranked 12th among government institutions in the world in 2016 in Scimago Institutions Rankings. We are sixth in the world in terms of research output, and third if you look at research published on nanotechnology," he said.

have come back to India on various scholarships and fellowships. And, these are people who have been selected by qualified, there are several others who do not get to come back. This shows that there is a global





The scientists have returned to join across research fields through various scholarships and fellowships like VAJRA (Visiting Advanced Joint Research), according to the minister.

The VAJRA faculty scheme that was launched in January this year, was designed to attract distinguished overseas scientists and academicians, especially nonresident Indians, to contribute to the country's research and development.

Under the scheme, the academicians have to be in India for three months and for the rest of the year work as adjunct faculty and run collaborative labs and coguide PhD students. A total of 1,000 such positions have been created by the ministry for the year 2017-18.

"Now, the scientific community feels that there is a vision, direction, atmosphere and even facility to conduct high-quality research in India," said Harsh Vardhan.

Apart from that, collaborative work with other countries, which open up world's best facilities to Indian scientists, has also contributed towards people coming back to India.

The government is also focussing on nurturing young minds and retaining them.

The revamped MANAK (Million Minds Augmenting National Aspirations and Knowledge) scheme will focus on nurturing 10 lakh relevant original ideas from 5 lakh schools across the country. "We will stress on original idea. Previously, people have also presented models bought from shops," the minister said.





The early career research award to support researchers early on in their career for exciting and innovative research and the national post-doctoral fellowship scheme to encourage scientists to get into research right after PhD, both launched in 2015-16, will also attract and retain young scientists.







CSIR perfects technology for producing diesel from plastic waste at commercial scale





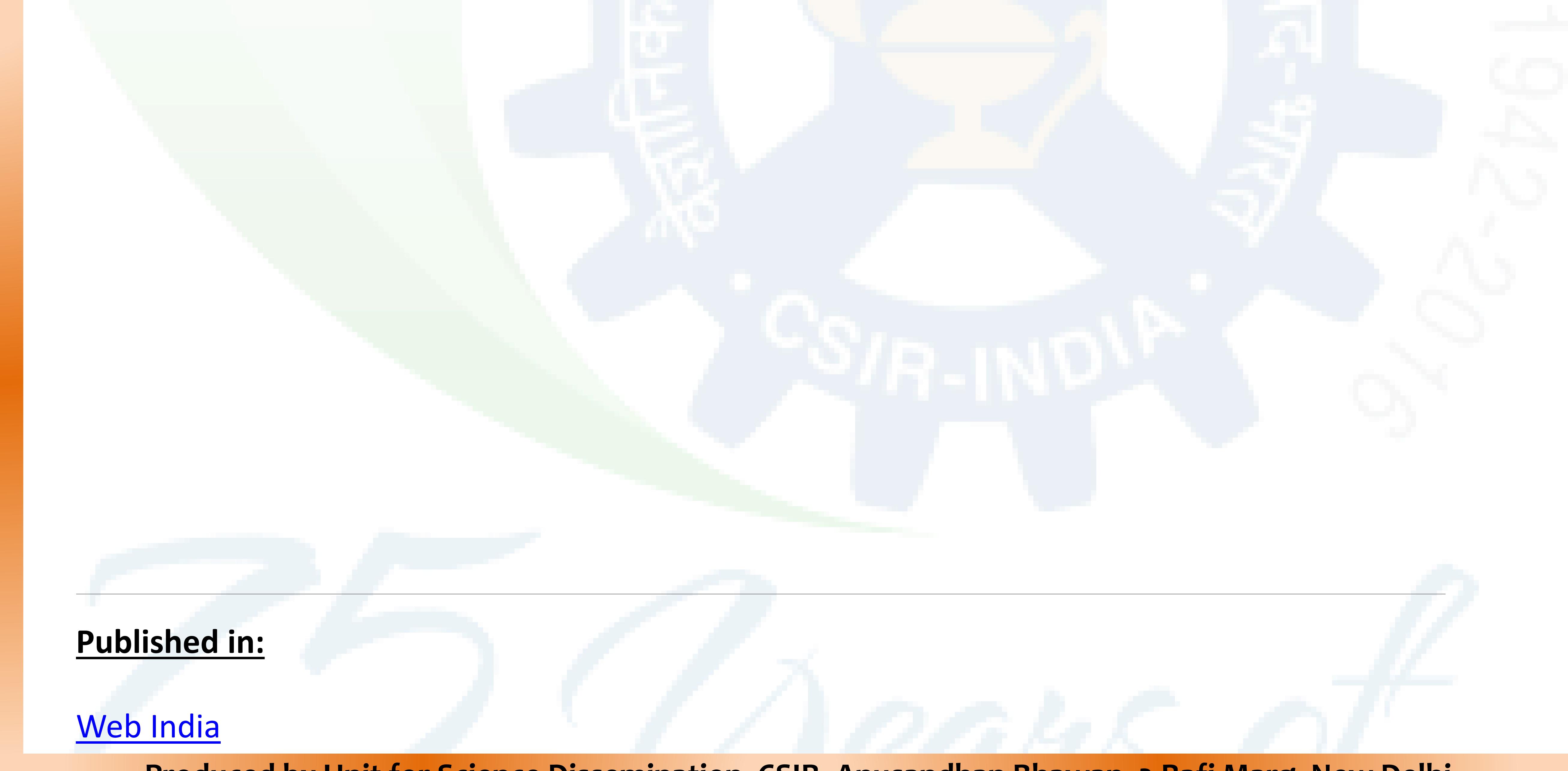
The technology developed by the Council of Scientific and Industrial Research (CSIR) to produce diesel from plastic waste was very close to be used for commercial production. This technology is among a host of other "useful for the common man" technologies the government was focusing on, Minister for Science & Technology and Earth Sciences Dr Harsh Vardhan said here today, at a press conference held here to brief the media on the activities of his Ministry, on three years of the Modi government. The CSIR scientists had scaled up the technology to produce one tonne diesel per day, which was going to be very significant for energy needs at the local levels, and also for solving the problem of disposal of massive plastic was that was being generated everyday in the

country. As part of a programme for providing solution to the common man's problems in their day-to-day life, and to make the youth employable, the Ministry had also embarked upon an ambitious project to train one lakh students of science in various skills in the next two years. Dr Vardhan said during the last three years, the efforts of his Ministry had been to take the technology from lab to land and to align the scientific research and development to national priorities. "We are inferior to none. We have taken long strides in weather forecasting, earthquake observation," he said and pointed out that India was also in 88 international scientific research and development collaboration, with very active 40 collaborations.





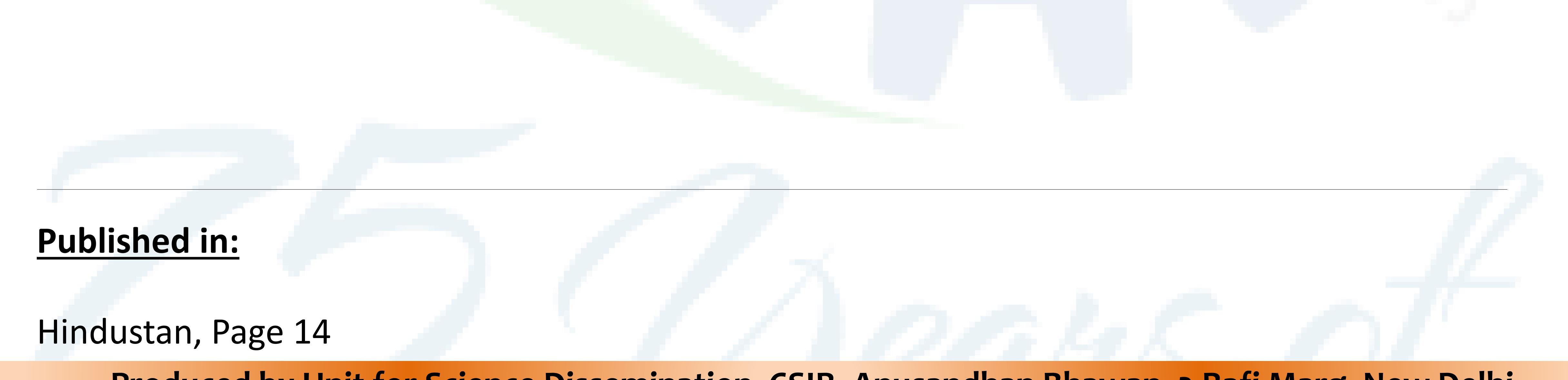
Minister said science and technology was going to play a very big role in achieving the target of doubling the farm income by 2022.Besides, it was working in a very focused way in helping in the major initiatives of Swachch Bharat, Make in India, Digital India. Dr Vardhan also spoke of the work being done to develop Ocean technology to tap its vast potential in every field, especially in energy security. To inspire the quest for science, the Ministry was soon going to lauch a 'Jigyasa' (curiosity) programme in collaboration with the HRD Ministry, under which school children will come to CSIR labs to see for themselves the work being done there, he said. In reply to a question, he said the CSIR was working on about 140 projects related to the solution of day-to-day needs of the people.





रहे हैं। जल्द ही सफलता मिलने की

कम ऊर्जा खपत वाला ट्रैक्टर और





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8 YEARS AFTER, SARAS SET TO TAKE OFF AGAIN





Eight years after India's first multipurpose civilian aircraft SARAS crashed on the outskirts of the city, a prototype of the aircraft is once again ready to fly.

The National Aerospace Laboratories (NAL), which is involved in the



The aircraft will have a range of 1200 km and speed 500 kmph

developmentoftheSARASprogramme, has developed a modifiedprototypeSARASPT1Noftheaircraft.

"NAL has completed more than 15 engine ground runs of SARAS PT1N aircraft. We had some technical issues but now we have overcome those and the aircraft has been moved to ASTE (Aircraft Systems and Training Establishment) for carrying out Low Speed Taxi Trials (LSTT) and High Speed Taxi Trials (HSTT). The process is expected to be completed by end of June and SARAS PT1N flight is expected in early July if all goes well," NAL, director, Jitendra J Jadhav said.

The SARAS PT1N after modification has additional features like new necelle design, stall warning system, larger rudder power, high power engine and improved flight control systems as compared to SARAS prototype 2 that crashed in Seshagiri halli near Bidadi in the outskirts of Bengaluru on March 6, 2009.





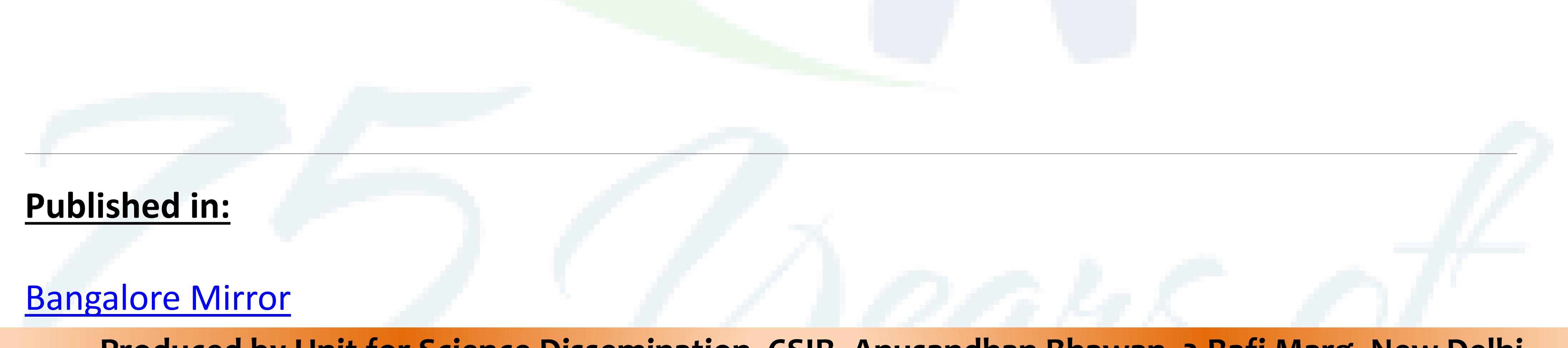
An incorrect relight procedure carried out during a test flight resulted in the tragic death of two pilots-Wing Commander Praveen K and Wing Commander Dipesh Shah and a Flight Test Engineer Squadron Leader Ilayaraja.

Jadhav said that the flight-testing and evaluation of existing SARAS PT1N aircraft will provide essential information towards arriving at aircraft configuration towards realisation of new 14/19 seater aircraft which will be the enhancement of SARAS design.

He said that the developmental flights of SARAS PT1N will lead to evaluation of performance and handling characteristics of the aircraft to fine tune the design modifications.

The key features of 14/19 seater aircraft include: Short Takeoff and Landing (STOL), all weather and high altitude operation, weight & drag reduction, operation from short and unpaved runways, all composite, glass cockpit, advanced avionics and flight control system, and low operating cost.

The aircraft has multiple applications for Military Transportation, Air ambulance, Maritime Patrolling, Border surveillance, Commutation for regional connectivity and Special Missions.







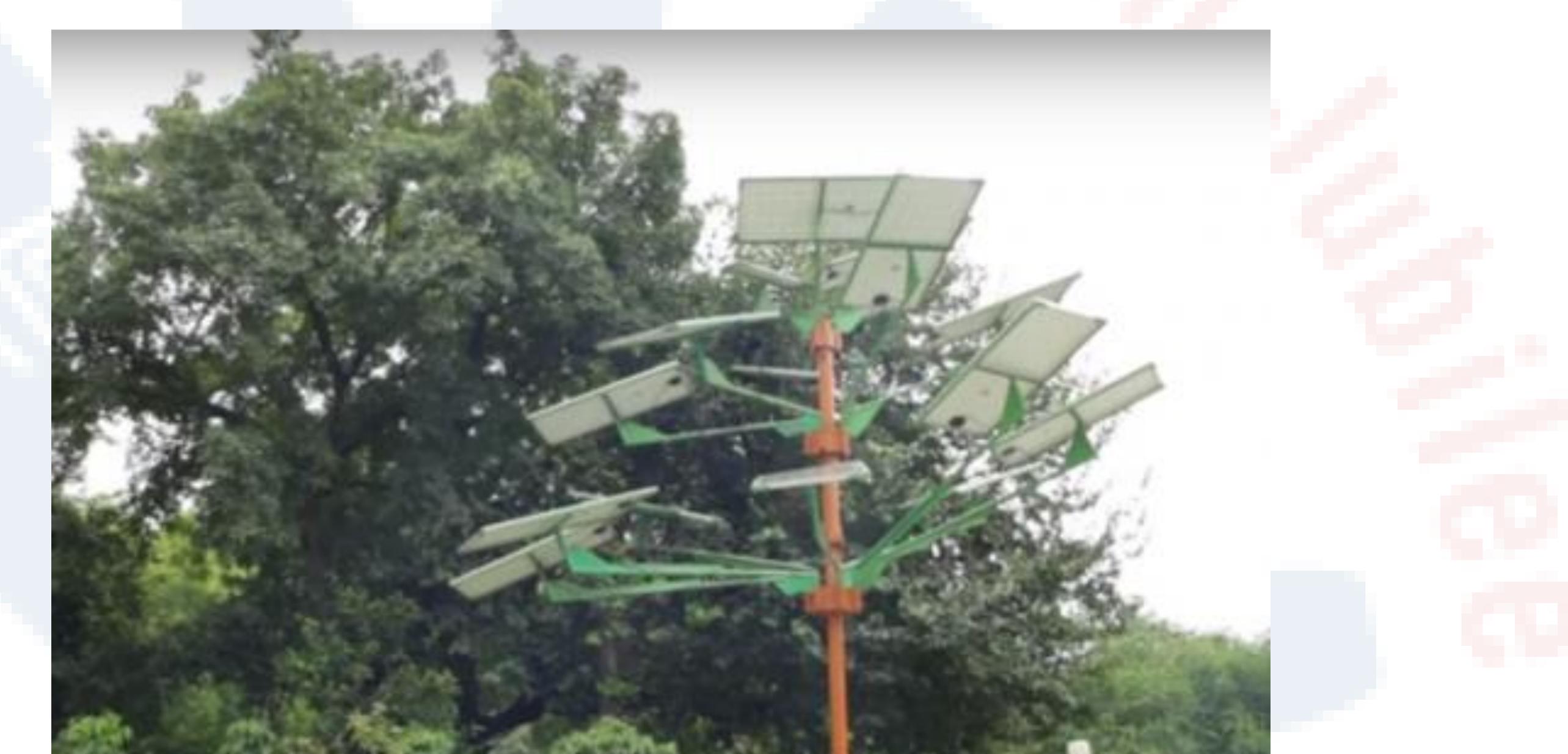
Solar trees are beneficial in a land-scarce economy





The working of a solar tree is much like that of a real one—leaf-like solar panels connected through metal branches using sunlight to make energy.

Availability of land of installing solar panels on a large scale is often a



hurdle in the progress of renewable energy. A solution to this is planting solar trees, which are more ergonomic, using little space. Solar trees are complementary to rooftop solar systems, or other green building measures, symbolizing these larger investments and their environmental benefit.

tree automatically switches on LED

lights. It is programmed to regulate

the amount of light it produces. Solar trees are flexible and rotate to face the sun and produce maximum possible amount of energy using a technique called "spiralling phyllataxy". Its calculated rotations allow even the lowermost solar panels to receive ample sunlight for electricity production. It can also be The Solar tree panels charge used in street lighting and industrial batteries during the day. At dusk, the power supply systems.





Solar tree is made of metal structure and have solar panels at the top instead of branches of real tree. Main body of solar tree is a simple hollow tube closed at one end to enable the attachment of the upper, smaller rod which should carry the upper panel. This panel is placed high above the other panels at a vertical angle. The angle provides a constant area for the sunlight regardless of the sun trajectory during the day. The height at where it is placed enables a greater panel area which will not cover the lower placed panels.

The innovation is suitable for use in off-the-grid remote areas or in places that need point-sourced light like car parks and street lighting. Besides, with gird connectivity or battery store, the solar tree can also supply electricity wherever needed.

The plant's design can vary according to different factors. In India, for instance, solar trees can contribute to fulfilling energy demand while saving space. The technology can ensure continuous supply of electricity in areas that do not have enough power supply and can benefit many who are not connected to the grid. Solar energy is renewable and clean in nature and presents a better alternative over other methods of electricity production.

Working models in India

Central Mechanical Engineering Research Institute (CMERI), in West Bengal's Durgapur, has designed and developed, a solar tree that takes up only four square feet of space and produces about three kilowatts of power, enough to power about five households. Conventional solar photovoltaic systems occupy 400 square feet of space to produce the same amount of electricity.

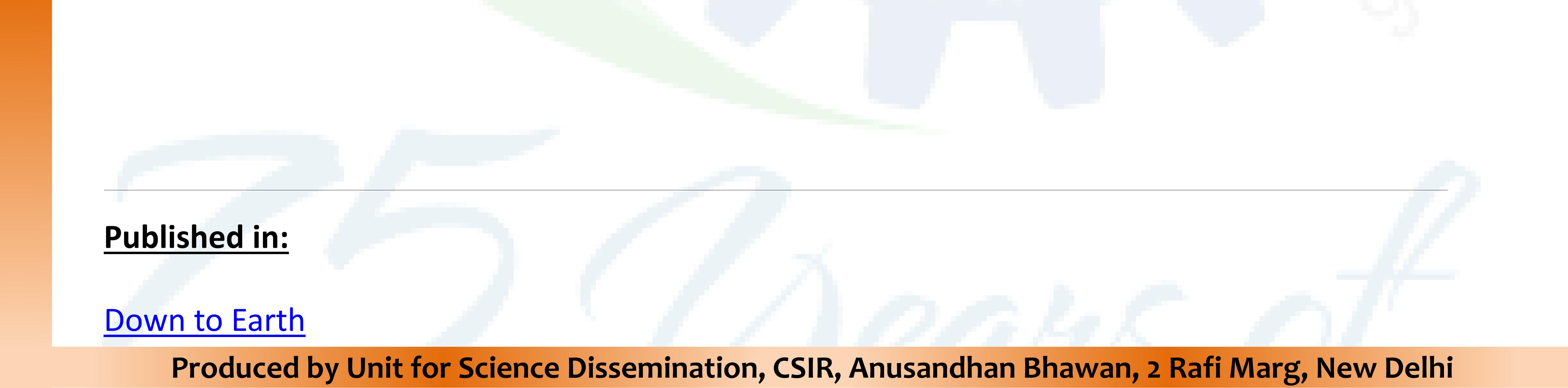




Their working model could be fit onto rooftops and on highways due to its minimal space requirement. Apart from Durgapur, solar trees are also installed in Council of Scientific and Industrial Research, New Delhi and the residential campus of Minister of Science & Technology of India. The solar tree installation was also used by the Durgapur Municipal Corporation at its Srijani Auditorium. The tree has been designed and developed by Indian researchers. They claim that there is no barrier in using solar trees in urban or rural areas.

The vertical solar plant makes it possible to harness 10 per cent more sunlight. They can be rotated twice a day to be aligned to the movement of the sun. CMERI has licensed the solar tree with M/s Vibes Solar Solution India, Kolkata and the process is underway to license the technology to five more companies.

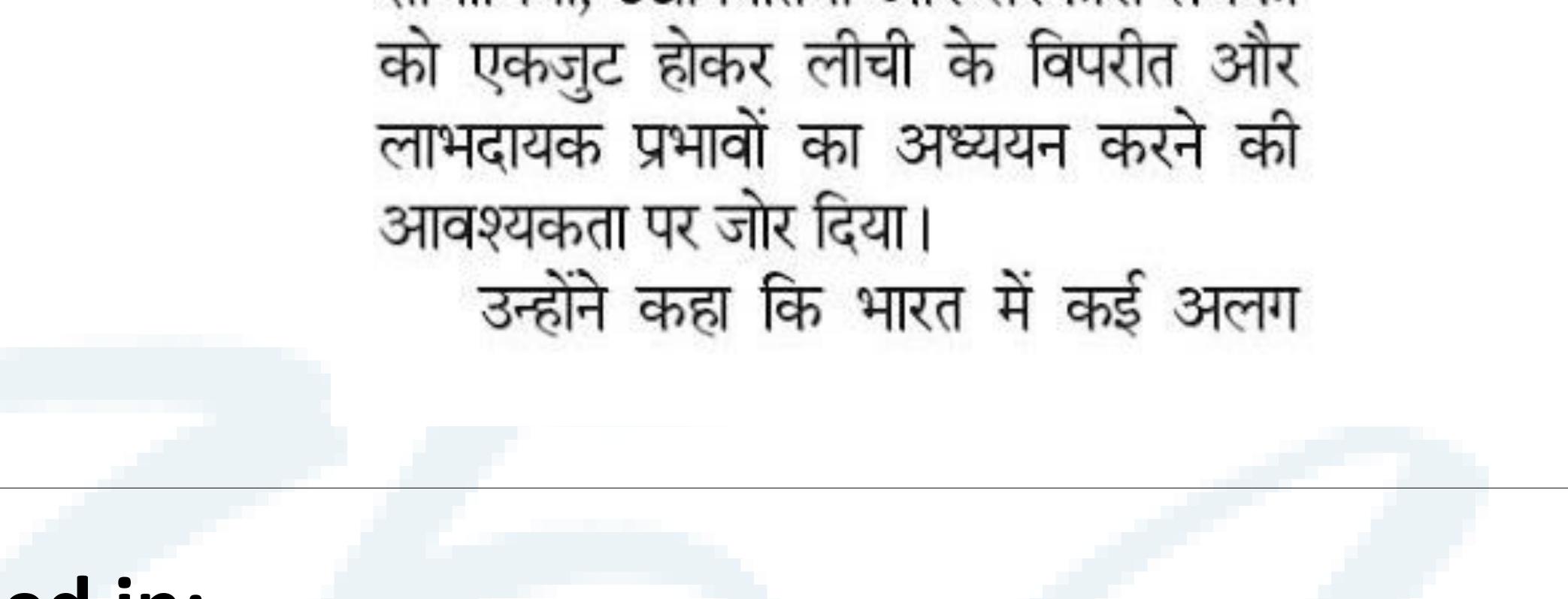
Researchers at CMERI are working on bringing aesthetic models to suit the need of public parks, gardens and market places.





खाद्य पदार्थों में पायी जाने वाली विषाक्तता पर केन्द्रित करें शोध लखनऊ। वैज्ञानिकों को अपना शोध प्रकार की समस्याएं हैं। सबके प्रयास से ही इन प्राकृतिक न्यूरो टाक्सिन पर केन्द्रित करना समस्याओं को समाधान किया जा सकता है। चाहिए। लीची और खेसरी दाल आदि में उन्होंने कहा कि क्लीनिकल और विषाक्तता पायी जाती है। यह एक वड़ी आवादी एक्पेरिमेन्टल टाक्सीकोलाजी की समझ के स्वास्थ्य पर विपरीत प्रभाव आईआईटीआर में स्वस्थ्य समस्याओ रागधान में गटट करके लोगों ਟਾਕਰੀ है।

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Published in:

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UT connect to Kalam bacteria



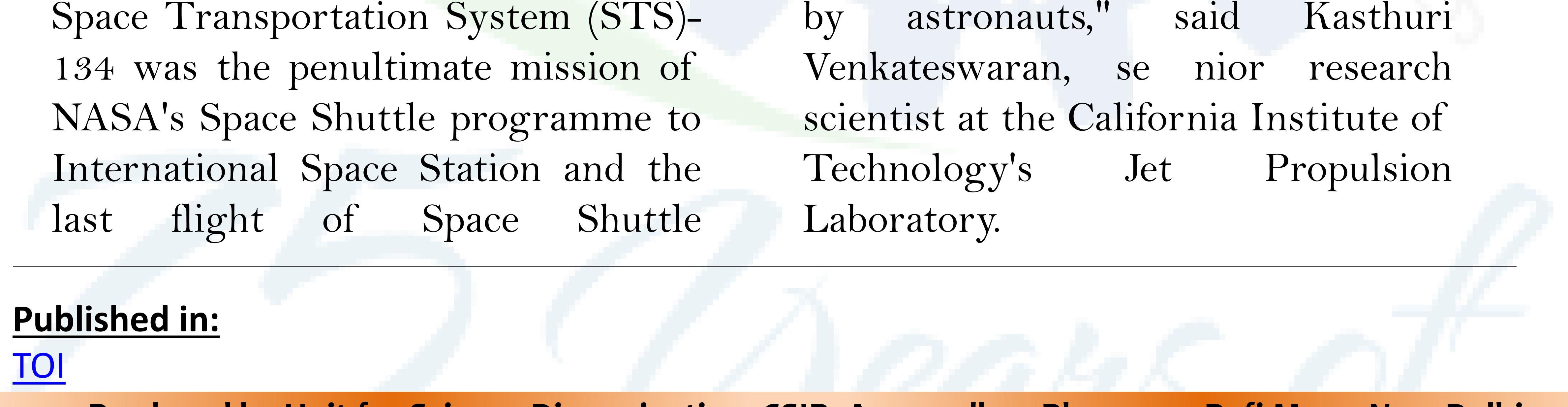


There is a Chandigarh connection to a recently discovered bacteria named after former President APJ Abdul Kalam. Scientists at NASA's Jet Propulsion Laboratory (JPL) in California and at the Institute of Microbial Technology (IMTECH), Chandigarh, have together discovered the bacteria. The bacteria -Solibacillus kalamii was isolated from High Efficiency Particulate Air (HEPA) filters (used to revitalize the air and filter out microbes and viruses in International Space Station).

Endeavour. The filter in the International Space station from where Solibacillus kalamii was isolated returned to Earth in May 2011 using STS-134. The filter on which the novel species

of microbes was found remained on the International Space Station for 40 months.

"HEPA will be an excellent sample since materials collected over a long period of time will be useful to know what kind of microorganisms were inside the International Space Station, and were breathed in and out







INDUSTRIAL GROWTH TO BE ENHANCED TO PROMOTE INCOME GENERATION: TH BISHWAJIT





Commerce & Industries Minister Shri Th. Bishwajit has said that the State Government has been trying to promote industries to generate income in the State. He was speaking at the inauguration of Banana Fibre Development Centre and Opening of 5-days Training Programme on Novel Products based on Ethnic Designs and Fabrics of North East India at CSIR-North East Institute of Science & Technology Branch Laboratory at Lamphelpat, Imphal today. He said Industries is very important Department and therefore there is



Inauguration of Banana Fibre Development Centre will help farmers in increasing productivity. He also urged farmers to cultivate Stevia- a medicinal plant in large scale so as to meet its demand outside the State.

the need to encourage our solve entrepreneurs to unemployment problems in the State.





Shri Bishwajit has further said that the Government will revive Bamboo Chipping Mill and Government is trying to promote cultivation of Dragon Fruit in the State as the fruit has high content of anti oxidant and it is also anti cancerous.Citing in connection with PMGPY scheme Shri Th Biswajit said sanctioning will take place only after proper screening of the applicants.

Revenue Minister Shri Karam Shyam while speaking at the function said, the trainings conducted by CSIR will be very helpful to the people and it will help to increase productivity and sustain livelihood. He hinted to vacate the illegal encroachers at the CSIR premises once the court verdict comes.

Inconnection with the function, pamphlet of CSIR-North East Institute of

Science & Technology Branch Laboratory was also released.

Director CSIR-NEIST Jorhat, Assam Dr. D Ramaiah also highlighted the scientific intervention extended to the people such as development of Agro-Technology in the region. Around 80 trainees participated among others in the inaugural session. (DIPR)





पर है। चीन के मुकाबले भारत में बीते कुछ इजाफे की उम्मीद है। दशकों में इस प्रदूषण में काफी तेजी से वृद्धि छलनी हो रहे फेफड़े हुई है। लखनऊ, कानपुर, आगर, नोएडा, गाजियाबाद जैसे तमाम शहरों में भी वायु प्रदूषण नियंत्रण बोर्ड की हालिया रिपोर्ट के की स्थिति खराब हो रही है। अनुसार राजधानी सहित सूबे के लगभग भारतीय विष विज्ञान अनुसंधान सभी शहरों में फेफड़ों को नुकसान पहुंचाने (आइआइटीआर) द्वारा जारी रिपोर्ट के वाले तत्व मान्य सीमा से कई गुना अधिक **डॉ.राजेंद्र प्रसाद,** पूर्व विभागाध्यक्ष, पत्मोनरी अनुसार हवा में प्रदूषकों खासतौर पर पीएम पाए गए हैं। चिकित्सकों की मानें तो अगले विभाग, केजीएमयू 2.5 की तादाद दिनोंदिन बढ़ रही हैं। यह वर्ष तक देश में दो करोड़ पांच लाख लोग अत्यंत सक्ष्म होने की वजह से न केवल क्रॉनिक आब्सट्रक्टिव पल्मोनरी डिजीज तिवारी का. जो पेड वाले बाबा के नाम से

वायु प्रदूषण पूरे श्वसन तंत्र को प्रभावित करता है। ऐसे मरीज जो सीओपीडी, अस्थमा, एलर्जिक ब्रांकाइटिस से ग्रसित हैं उनमें प्रदूषण से समस्या काफी बढ़ जाती है। क्योंकि उनका इम्यून सिस्टम पहले से कमजोर होता है।

वाहन से निकलते धुएं के कारण फैल रहा प्रदूषण

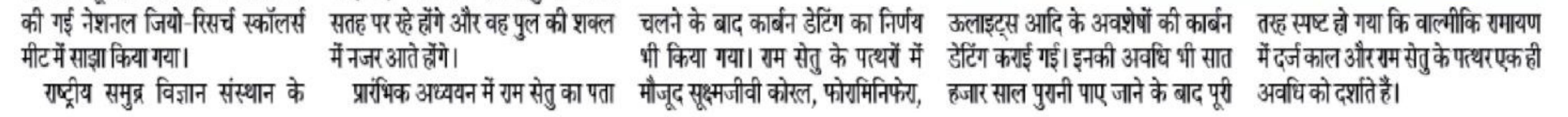


वढ़ रहा ह कसर जसा समस्या	बढ़ते वायु प्रदूषण से निपटने के लिए एकमात्र उपाय यह है कि हम ज्यादा से ज्यादा पौधे लगाएं। यह कहना है चंद्र भूषण	करें। हम लोगों को आसपास ज्यादा से	
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हिमालय भूविज्ञान संस्थान में आयोजित पाए गए। यानी तब राम सेतु के पत्थर



Published in: Dainik Jagran





Tech to keep your vada pav hot and delicious on the street





Two years ago, the Central Food Technological Research Institute (CFTRI) organised a training for street food vendors in Mysuru on preparing quality food in hygienic conditions. Not just the vendors, the institute's scientists, too, picked up some useful lessons.



The trainers discovered that the carts the vendors used lacked the infrastructure to prepare hygienic food. The premier laboratory of the publicly funded Council of Scientific and Industrial Research has now come up with a solution -a solarpowered, modular vending cart that seeks to introduce sensors and cloudbased services to the street food business.



The sensors in the Smart Carts will monitor the quality of food by recording the pH levels, the temperatures of raw and cooked food kept in refrigerators and warmers, and the duration of storage.

The data will be transmitted to the CFTRI server, which, in turn, will splash the quality-check numbers on its mobile app that can be downloaded by vendors and consumers.





"Our Smart Cart will lift the quality of street food," said Ram Rajasekharan, director at CFTRI, adding that India has an estimated 10 million street food vendors. The carts, according to him, can also help Indian food entrepreneurs

seeking to take their brands to overseas markets where Indian food is popular.



