CSIR in Media





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India to have 2nd largest road network by end FY16; CSIR-CRRI to prepare path-map for pedestrians 28th March 2017



India, with 5,472,144 kilometres, had the second largest road network in the world by the end of FY16. Though the country has done remarkably well on road construction, some of it has happened with little planning. There are many examples of lax planning that one can find across India—lack

A constituent of Council of Scientific and Industrial Research, the Central Road Research Institute (CRRI), is going to embark on a plan to create a mapping and planning structure for roads in India. (PTI) of pedestrian paths across the country and Bus Rapid Transit System in Delhi are a few cases.



Central Road Research Institute (CRRI), is going to embark on a plan to create a mapping and planning structure for roads in India. Basically the manual, which is in the draft stage, will lay down the characteristics of types of road, carrying capacity and augmentation plan, which will help build better roads, intersections and pathways.

While this is not the first attempt at creating an indigenous road plan— Indian Roads Congress had laid down rules in 1990 for mapping of roads and planning of intersections—these were seldom considered. Moreover, being directly substituted from Western countries, they were not regarded by experts as apt for Indian

conditions. With growing urban population and the number of cars expected to increase—India sells approximately 2.8 million cars each year and this is expected to double to 5 million by 2020, making the country fourth largest automobile market—the country would require a well planned infrastructure. Just more roads, flyover and highways would not do the job, there is a need for a complete roadmap.









CSIO team awarded for developing earthquake-warning system

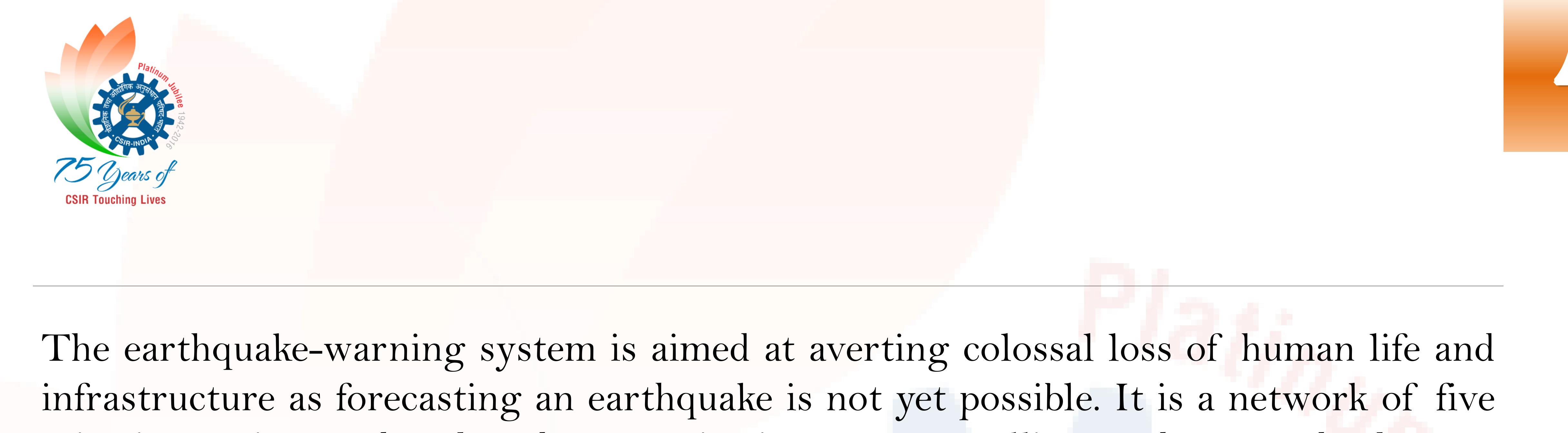


27th March 2017

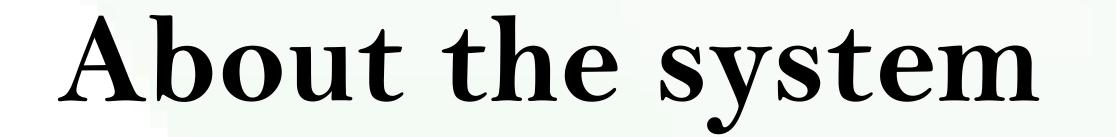


The team from the Central Scientific Instruments Organisation (CSIO) here that had developed the Earthquake-Warning System for Regional Notification of Substantial Earthquake has been awarded by the National Research Development Corporation (NRDC) for its

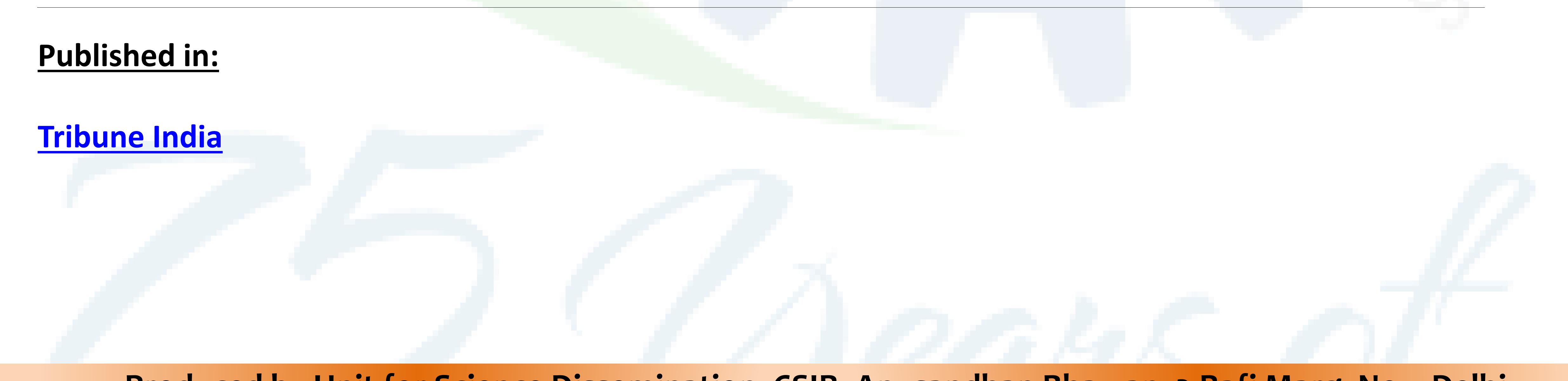
The CSIO team with their awards presented by the National Research Development Corporation in Chandigarh. A Tribune photograph innovation.



seismic sensing nodes that detects seismic waves travelling underground when an earthquake erupts. This sets off an alert in split seconds and vital systems such as electrical grids, nuclear plants, refineries or railway networks can be shut down before damaging seismic waves hit the area or trigger off other pre-set responses. Felicitating the team comprising Satish Kumar, Ripul Ghosh, Ashish Gaurav, Siddhartha Sarkar and Amarendra Goapwas, CSIO Director Prof RK Sinha pointed out that there are many spin off technologies of this system that can be used in border management and wildlife management.



The earthquake-warning system is aimed at averting colossal loss of human life and infrastructure as forecasting an earthquake is not yet possible. It is a network of five seismic sensing nodes that detects seismic waves travelling underground when an earthquake erupts. This sets off an alert in split seconds and vital systems such as electrical grids, nuclear plants, refineries or railway networks can be shut down before damaging seismic waves hit the area or trigger off other pre-set responses.







'Focus on products for poor, result-oriented research'



28th March 2017

The Institute of Microbial Technology (IMTECH), a premium laboratory of the Council of Scientific and Industrial Research (CSIR), recently got a new director, Dr Anil Koul. Having worked for a mulination giant in pharmacy, consumer packaged goods, and medical devices in Belgium, Dr Koul had been involved in discovery and development of a new drug for treatment of drugresistant tuberculosis (TB) — the first to be discovered in 40 years — called Bedaquline. The drug has been approved across the world including US, Europe and India. Dr Koul speaks exclusively to Shimona Kanwar about his roadmap for IMTECH in terms of research and development strategy.

I have more than 16 years of experience in pharmaceutical research and development field — right from discovery of new molecules in laboratory to going through phases of clinical testing, and eventual market approvals and bringing the drugs to patients. I have experience in both, small biotech companies and big multinational pharmaceutical environment. To be honest, I had my fair amount of luck in bringing Bedaquline from laboratory to patients. With this experience in industrial research, I believe I can bring lot of value to IMTECH. My goal for IMTECH is to bridge the gap between basic science programmes and clinical product development. However, considering all current challenges which CSIR is facing, we need to channelize the current open-ended research environment to more product and team-focused research linked to cutting-edge science.

How to you plan to take your expertise of drug discovery and development further as director of IMTECH?



Published in:

TOI



You have changed the mandate of IMTECH as #MISSION_IM@2020.What is it now? Why was the change required? There is a clear need to change focus of research as we want to bring value to our

R&D set-up and focus on innovative products/solutions for poorest of poor. We have to work with the mantra that every rupee counts.

In our new mandate $\#MISSION_IM(a)2020$, we have aimed to bring new drugs and technologies to the market with "disease-centric focus". We have created discovery disease units. At present, we have narrowed our focus to disease area-specific (DAS) units — namely antibiotic discovery unit, virology disease unit, and human microbiome and metabolic/biopharmaceutical discovery unit. We want to pioneer the art of drug discovery for some of the neglected diseases and be the first to bring new

drug approvals. We want to deprioritize areas which do not fit our mandate. At same time, we are revisiting our technology and service platforms and have created technology-platform units (TAP) in microbial collections or bioprocess engineering. What are other plans to improve R&D at IMTECH?

We want to promote the "open-innovation model" for drug and technology development. For this, we can collaborate with industry partners, within the country and outside, and government-funded medical institutions. We are also building minimal preclinical research facilities to bring our products to the level of clinical

testing. However, here we will rely mostly on external contract research organizations and other CSIR laboratories. We have also emphasized to synergize and seek input from medical and industry experts early on in a project before we invest any money in R&D. The idea is to bring in relevant stakeholders on a common platform.





LIDCAP signs MoU with CLRI



25th March 2017

Aimed at developing leather and affiliated industries in the State, the Leather Industries Development Corporation of AP (LIDCAP) entered of Memorandum into a Understanding (MoU) with the Central Leather Research Institute (CLRI) at the Interim Government Complex in Velagapudi on Friday.

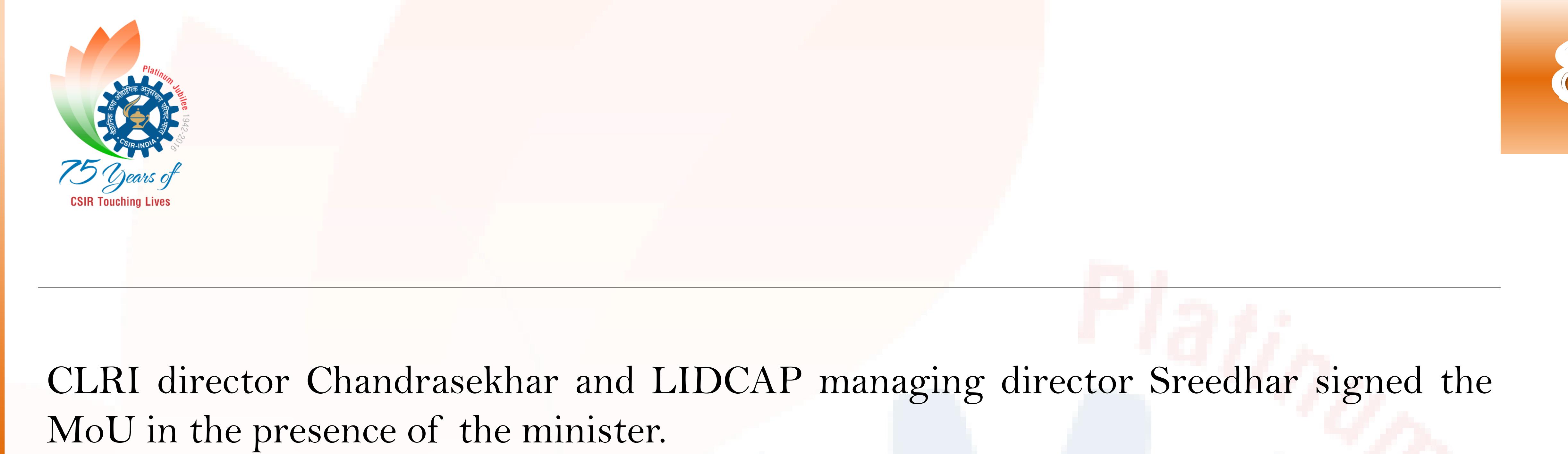
As the leather products have great demand, the State government decided to extend support to leather workers, he said and observed the MoU between LIDCAP and CLRI will help in giving the necessary technical support and skill development to the workers

Speaking on the occasion, Social Welfare Minister Ravela Kishore Babu said despite the State having

10 per cent of leather raw materials in the India, 95 per cent of them had been shifted to Tamil Nadu because of lack of facilities in the State to produce leather products.

Stating that the government has already allocated Rs 24 crore for the leather works under the SC sub-plan, he said training would be given to 10,000 families on making and marketing leather products in the coming three years. Besides

developing the existing nine mini leather parks in the State, the government will also provide modern machines and other equipment to leather workers, he said.









सीएसआईआर की दवा फेज-2 किलनिकल ट्रायल चरण में नई दिल्ली (ब्यूरो)। हृदय रोगियों के लिए जीवन रक्षक दवा सीएसएसके के फेज-2 क्लिनिकल ट्रायल को मिली मंजूरी इसकी क्षमता जांचने की दिशा में एक महत्वपूर्ण कदम है। यह बात सीएसआईआर ने कही। सीएसएसके, सीएसआईआर की चंडीगढ़ स्थित राष्ट्रीय प्रयोगशाला इंस्टीट्यूट ऑफ माइक्रोबियल टेक्नोलॉजी में

विकसित हुई है। मानवों पर दवा की क्षमता तथा अन्य प्रभाव का आकलन करने के लिए फेज-2 क्लिनिकल ट्रायल किया जाता है। यह देश में विकसित अपनी तरह की पहली दवा है।

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Amar Ujala, Page7





An idea to reduce leather industry pollution



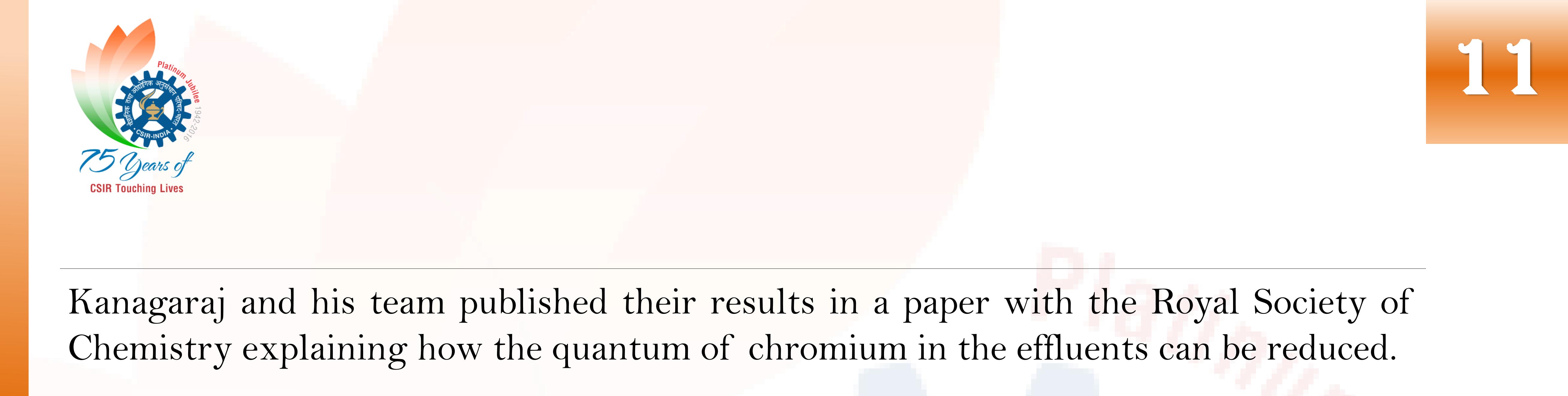




The leather industry is a major pollutant, but it can be cleaned up if an out-of-the-box idea of scientists from the Central Leather Research Institute (CLRI) is employed at the processing stage.

"By simply changing the chemicals

A scientific experiment relating to basic and applied sciences for leather processing techniques being demonstrated at the Central Leather Research Institute in Adyar in Chennai used in tanning, you can bring down the amount of unused chromium released to a bare minimum," says Dr J Kanagaraj, senior principle scientist at the CLRI. It's chromium (III), found in the effluent released by the leather industries, which causes most of the damage to the environment.



Tanning is a process that makes leather non-perishable. The most popular method is chrome-tanning, which uses chromium for treatment. "The use of chromium (III) is indispensable for tanning. So we just have to find an efficient and cost effective way to cut down on the amount of chromium released," said Kanagaraj.

There are two way of controlling the heavy metal content in the effluent: increasing exhaustion of chromium from the effluent sent out by treating it or increasing the adsorption on the material, so that most of the heavy metal sticks to the product,

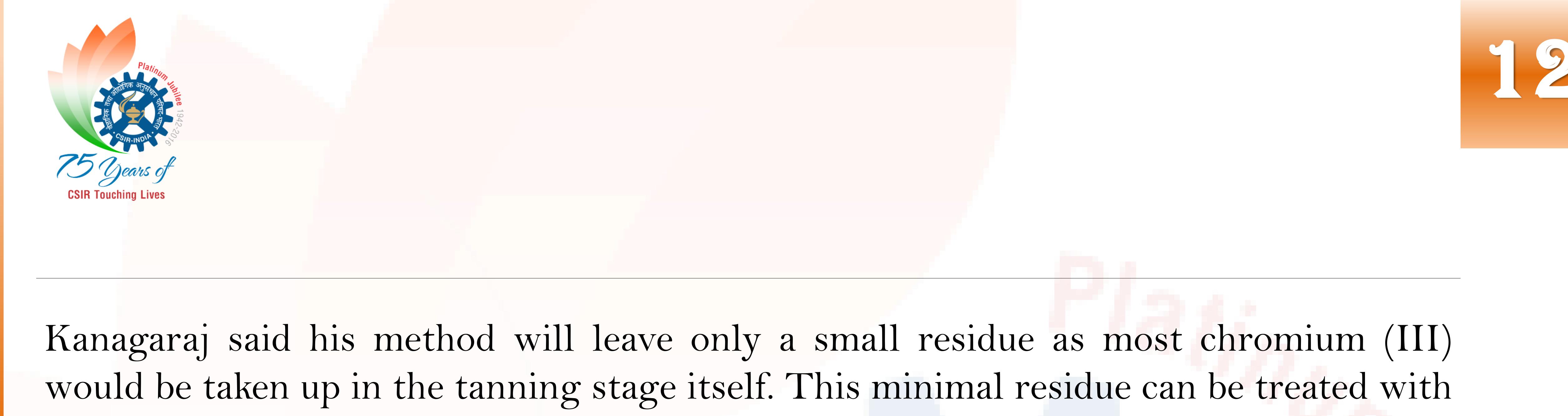
leaving very little unused.

To achieve optimal adsorption by the leather, he and his team devised a bio-based copolymer (an organic chemical chain) matrix that efficiently spreads chromium (III) through the pores of the material and fixes it at the active sites in the leather in an aqueous (water-soluble) environment.

"Over 90 per cent of all leather tanneries globallyuse chromium for tanning.

Managing its pollution will have a large impact on the environment," said Kanagaraj. Technological limitations allow only for 70 per cent of the chromium containing chemicals to be adsorbed during treatment, leaving 30 per cent unused.

pumilus.



bacteria, thus making heavy metal traces negligible. "In addition, the raw materials needed to manufacture the adsorbent can be obtained from the by-products of other steps used in the industry. Along with reducing chromium in the waste, this process can be applied in other areas such as de-fleshing, trimming and pre-tanning. This also reduces solid waste from the leather industry," he said. "This compound is not only environment friendly, it also produces finer quality of

leather. The colour properties of the leather become richer and more uniform, the softness increases, the thickness of the leather is increased and the product is more

physically and thermally stable," he added.

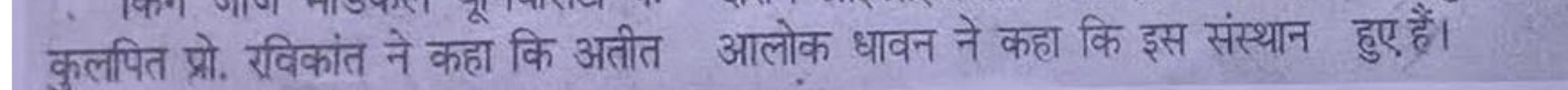
While chemicals used by the industry cost about `150 a kg, his compound can be manufactured at about `90 a kg. The only limitation he sees is that the adsorbent that is also obtained from animal product, may increase the degradability after a year of manufacture.





को रोका जा सकता है।' यह बात बायोटेक पार्क के पूर्व सीईओ प्रफेसर पीके सेठ ने कही। वह गुरुवार को भारतीय विषविज्ञान अन्संधान संस्थान (आईआईटीआर) में 'पर्यावरण प्रदूषण- महिला और बाल स्वास्थ्य पर प्रभाव पर मंथन' विषय पर हए कार्यक्रम में बोल रहे थे। उन्होंने कहा कि पर्यावरण प्रदुषण से निपटने के लिए वैज्ञानिक बहुत काम रहे हैं, लेकिन इस समस्या के प्रभावी समाधान के लिए नासी और अन्य विज्ञान अकेडमियों को भी एक ही मंच पर लाने की जरूरत है।

देशभर से आए विशेषज्ञ मंथन में जुटे इस सत्र में चेन्ने, बेंग्लूरु, नई दिल्ली, चंडीगढ़, कोलकाता, इलाहाबाद और लखनऊ के विशेषज्ञ चिकित्सक, न्युरोलॉजिस्ट और स्वास्थ्य वैज्ञानिक भाग ले रहे हैं। इसके अलावा कार्यक्रम में आईआईटी के पर्यावरण वैज्ञानिक, पर्यावरण कानून के विशेषज्ञ, एनजीओ के सदस्य और समाज के विभिन्न वर्गों के सदस्य भी भाग ले रहे हैं। इस मौके पर नासी के अध्यक्ष डॉ. सीएस नौटियाल, डॉ. नित्यानंद, डॉ. बी एन धवन, डॉ. वीपी कांबोज, डॉ. बारिख, डॉ. पीएस चौहान, प्रफेसर प्रमोद टंडन, प्रफेसर पी के मिश्रा जैसे कई वैज्ञानिक दिगगज भी मौजूद रहे। में इस समस्या पर कई विचार-विमर्श के की स्थापना पर्यावरण और पर्यावरण विष बावजूद बेहतर नतीजे नहीं मिले हैं। इस विज्ञान से निपटने के मकसद से की गई थी। किंग जॉर्ज मेडिकल यूनिवर्सिटी के दौरान आईआईटीआर के निदेशक प्रफेसर जिस मुहीम में हम दिलों जान से आज भी जुटे



Published in:

Navbharat Times, **Dainik Jagran**





With natural pack, CIMAP offers herbal soln for acne



27th March 2017

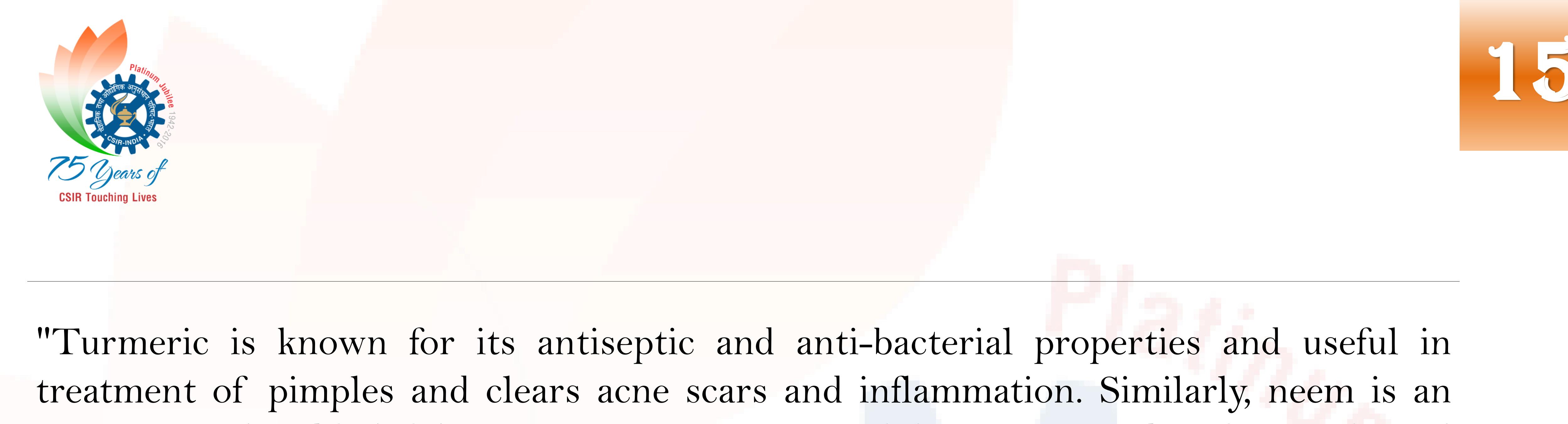
The Central Institute of Medicinal and Aromatic Plants (CIMAP) has found a herbal cure for acne. The scientific institute will be releasing the herbal product on the CSIR-CIMAP's annual day on

Monday. After a research of more than four years, a team of 12 scientists worked on the herbal formulation that will help to fight skin problems. According to sources at the institute, turmeric and neem have been used in the herbal formulation. available in a combo pack," said director CIMAP Anil Kumar Tripathi. He added that the product will be launched by chief guest Padma Bhushan Prof Govindarajan Padmanabhan, former director, Indian Institute of Sciences, Bengaluru

"CSIR-CIMAP has developed a herbal face wash and gel which will help fight acne and skin problem and it will be On the occasion, the institute will also be awarding best research paper from five different fields and winners of the scientific photography contest organised by the institute. CIMAP director will present highlights of the research and development work carried out by the institute in last one

Produced by Unit for Science Dissemination, CSIR, Anusandhan Bhawan, 2 Rafi Marg, New Delhi

year.



anti-bacterial and helpful in acne treatment too. Both have been used in the new herbal formulation," said an official of CIMAP.









Study drafts desi rules for road planning



27th March 2017

DRAWING THE LINE

A scientific guideline has been worked out on when and how to expand or manage all types of roads and deal with intersections

WHY THE STUDY

With traffic characteristics and driver behaviour in India fundamentally different from other countries, the country urgently needed an indigenous manual for traffic conditions

Norms set by Indian Road Congress (IRC) in 1990 have become obsolete

CSIR-CRRI, in association with IITs in Roorkee, Bombay and Guwahati: School of Planning and Archtecture: Sardar Vallabhai Patel NIT Surat; Indian Institute of Engineering and Sciences University, Shibpur (Howrah); and Anna University



WHAT IS LOS?

Level of Service (LoS) is a gualitative measure used to measure the quality of traffic service

(Chennai), studied nationwide characteristics of road traffic and developed a manual for determining capacity and level of service (LoS) for varying types of inter-urban and urban roads		n speed of on a road		eed is mph — t	
Serve as a basic guideline for engineers and decision-makers towards capacity augmentation of various types of roads and pedestrian facilities	ANUAL WILL Enable them to plan more facilitiesHelp planners make appropriate allocation of budget for road sector development		VARIOUS STRETCHES ON DELHI ROADS THAT WERE STUDIED: Palam Road, Mother Teresa Crescent, Sardar Patel Road, Ram Raj Road, IGI Airport Road,		
use the manual to directly underst	For instance, Delhi with a road network spanning about 33,000km can use the manual to directly understand the present carrying capacity of any road and take suitable measures for its expansion			ur to	
When should a road be widened	l or	"Indian	traffic	and	driver
augmented with features like flyov	ers?	characterist	ics are	funda	mentally

A scientific guideline for the same has been put together by CSIR-CRRI in association with seven other institutes in the country. The manual could change the way roads, intersections and pedestrian facilities are mapped in cities.

different from other countries. Yet, we use values recommended in highwaycapacity manuals from the US, China, Indonesia, Denmark, Finland, Australia and Taiwan," said S Velmurugan of CSIR-CRRI, which is spearheading the project.



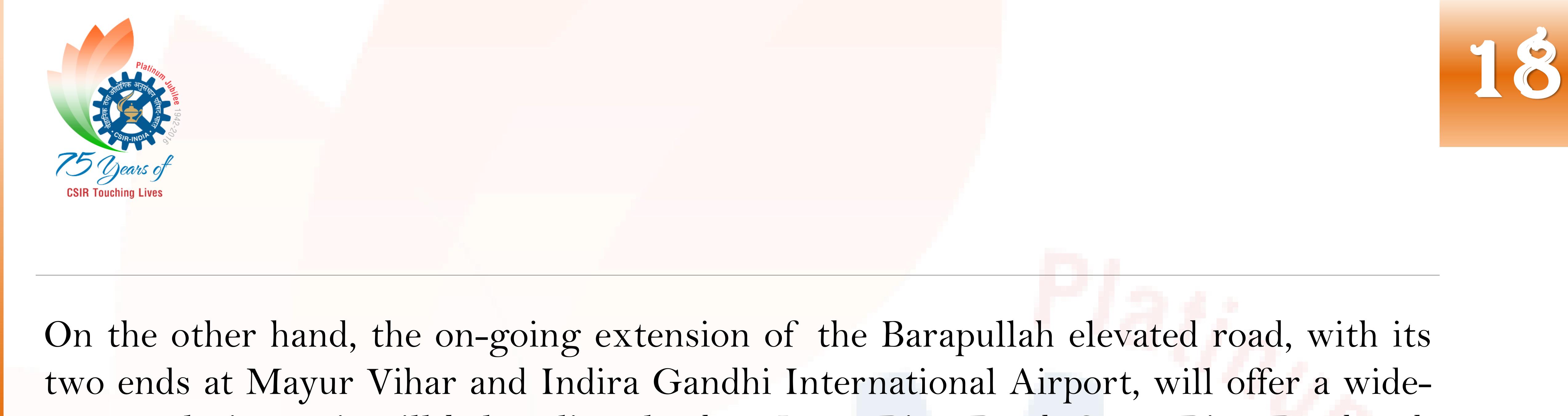
Reflecting the Indian realities, Indian Capacity Highway Manual lays down the guidelines for when and how to expand or manage all types of roads. The manual also sets norms for managing intersections, with corresponding impact on pedestrian facilities.

"The analysis methods in the manual can be used for better road planning covering a gamut of roads — from single-lane, two-lane, multi-lane roads to inter-urban highways, expressways," said Velmurugan. In Delhi, for instance, the road network, spanning 33,000km, can be checked using the manual guidelines and decisions can be taken on further work using Indian yardsticks.

The manual, which is in the draft stage, lays down the characteristics of types of road, carrying capacity and when to augment it.

"When the traffic volume on any urban road crosses the threshold level, it's time to make provisions for road expansion," said Velmurugan. This could be in the form of flyovers or a new road altogether.

"A flyover is a quick-fix solution to address intersection problems," he said. The longpending Kalindi Bypass "can provide relief to the Ashram intersection as well as Mathura Road from Nizamuddin-Badarpur".



range solution as it will help relieve load on Inner Ring Road, Outer Ring Road and, to some extent, on Lodhi Road and the NDMC connectors to IGI/Dwarka and Gurgaon, he added.

There are levels of service (LoS) that determine the time to augment. "LoS is a qualitative measure used to relate the quality of traffic service. It is a measure of the restrictive effects of an increase in traffic volume on any road," explained Velmurugan.

The manual, which is expected to be finalised soon, will also be incorporated in the IRC guidelines, said CSIR-CRRI officials.

"It will help decision-makers make appropriate allocation in the budget for road sector development," said Velmurugan.







India needs to devise effective energy policy: Prof Yadav



26th March 2017



"India needs to devise an effective He was speaking at the inauguration energy policy," said Prof G D Yadav, a of second National Workshop on Solar

recipient of Padma Shri and Vice-Chancellor of Institute of Chemical Technology, Mumbai.

Energy Utilisation (SUN) for Sustainable Development organised by and at CSIR-National Environmental Engineering Research Institute (NEERI) here on Thursday.

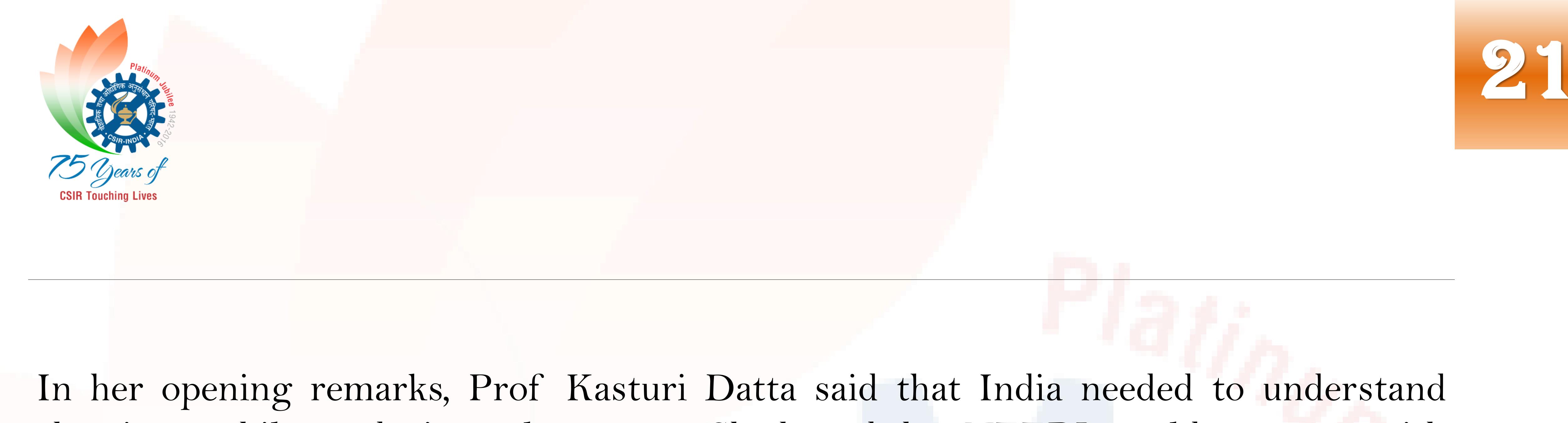


capturing carbon from thermal power plants, he added. Prof G D Yadav was the chief guest in inaugural function of the workshop. Prof Kasturi Datta, Chairperson, NEERI Research Council; Prof Giridhar Madras, CSIR-Bhatnagar Fellow, Indian Institute of Science (IISc), Bengaluru; Dr Rakesh Kumar, Director, NEERI; Dr Sadhana Rayalu, Head, Environmental Materials Division, NEERI; and Dr Nitin Labhsetwar, Senior Principal Scientist, NEERI also were present on this occasion.

Delivering the inaugural address, Prof Yaday said that major challenges for

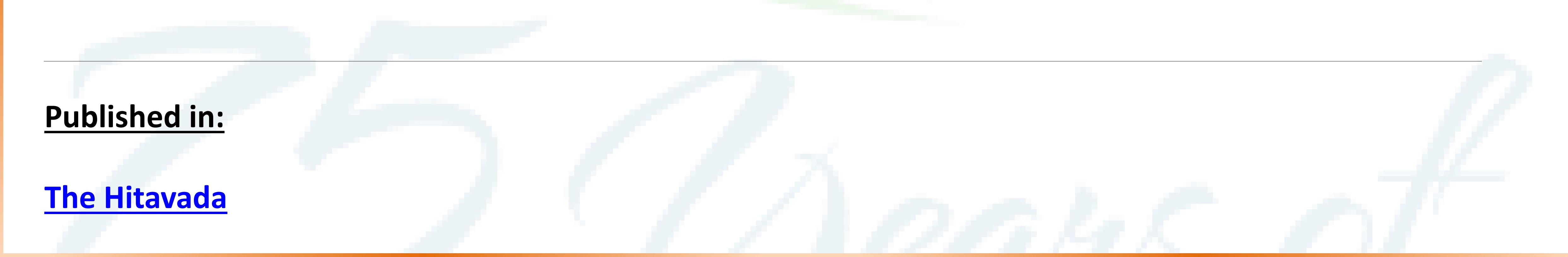
sustainability were growing population, growing energy needs, and environmental degradation. Coal is still preferred in production of about 25 per cent of energy all over the world followed by natural gas, nuclear, and biomass.

Prof Yadav stated that Gujarat (1.16 GW), Rajasthan (1.32 GW), Tamil Nadu (1.6 GW), Andhra Pradesh (0.98 GW), Telangana (0.97 GW), and Madhya Pradesh (0.84 GW) had taken a lead in the country in producing solar energy. However, he added, Maharashtra was still lagging. Solar power should be used for conversion of carbon dioxide into a fuel. He urged the scientists to work more on producing bioenergy from biomass. He advocated the use of agrowaste on a large scale to produce energy as India has more rural areas.



chemistry while producing solar energy. She hoped that NEERI would come out with some fruitful results in the area of environment and energy. Prof Giridhar Madras gave a presentation on 'Design and Development of Ultra-low Permeable Moisture Barrier Materials for Solar Cells'. Prof S Sampath from IISc, Bengaluru gave a presentation on 'Electrochemical (Solar) Cells: Basics and Recent Developments'. A book of abstracts was released on this occasion. Earlier, in his welcome address, Dr Rakesh Kumar said that NEERI had started to work on climate change and energy. He informed that the Institute's focus was on facilitating the production of energy from municipal solid waste and waste water.

Dr Nitin Labhsetwar proposed a vote of thanks. Two technical sessions were held on the first day of the workshop, in which five lectures were delivered by eminent scientists followed by demonstrations of solar thermal systems at Solar Energy Park. Three more technical sessions are organised on second day of the workshop on Friday.







Spice industry to boost rural economy



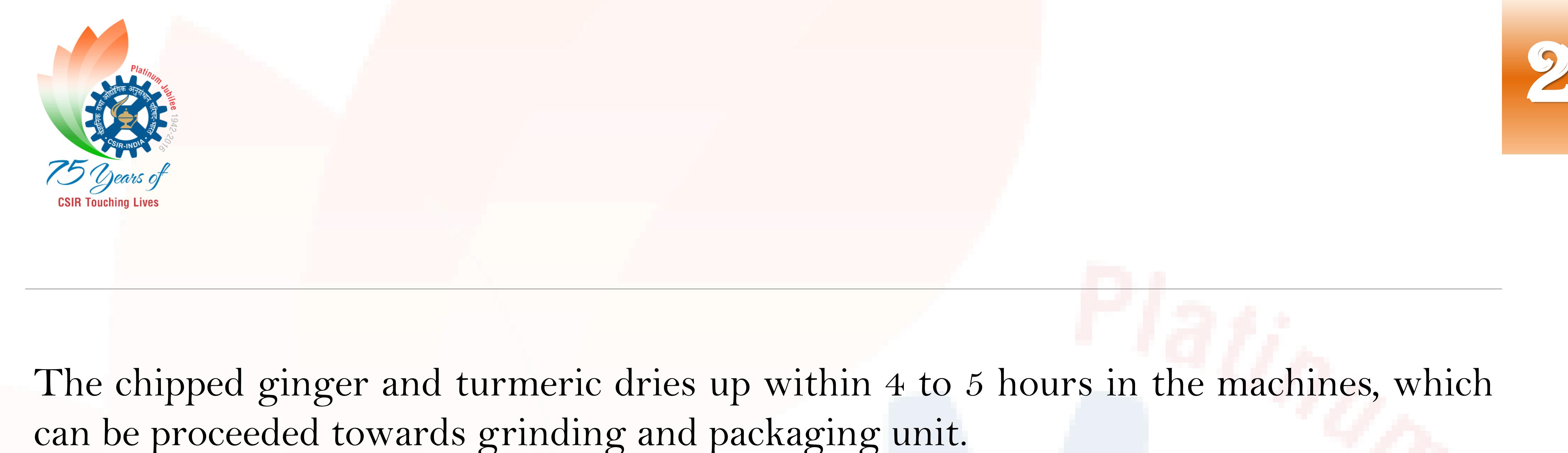
26th March 2017

The Tribal Development Foundation (TDF) of Arunachal Pradesh has set up an industrial unit for processing and packaging of spices at Leku village under Ruksin circle in East Siang district recently. While declaring the small-scale industrial unit opened in an inaugural function, former Arunachal Pradesh Chief Minister cum TDF chairman, Gegong Apang informed that his initiative aims at economic development of the commercial horticulturists and rural entrepreneurs including Self Help Groups. He is optimistic that his venture will boost rural economy through commercial spice cultivation in the region bereft any small-scale industries. He urged the interested farmers and SHG members to come forwards to avail the industrial benefits.

The Core machinery unit was inaugurated by CMERI Director, Professor Harish Hirani.

The spice industrial unit named as "Common Facility Centre" has been designed as per guideline of CSIR-CMERI Durgapur (Council of Scientific & Industrial Research-Central Mechanical Engineering Research Institute).

Coordinator of the Common Facility Centre (CFC) informed that each set of high intensity power operated machines in the industrial unit comprises of 'Sliding' and 'Drying' chambers for processing ginger, turmeric and other fleshy spices.



Besides the CSIR-CMERI scientist, Pradip Kr Chetarjee, mechanical experts, members of 12 Woman SHGs from Ruksin, Mikong, Oyan, Kemi and Leku villages and local villagers attended the programme and exuded their hopes of commercial benefits from the spice industry.









IDTR students visit CSIR-NML to gain exposure of modern laboratory







A batch of 42 Diploma students from Indo-Danish Tool Room (IDTR), Gamharia accompanied by teacher RB Verma visited CSIR-National Metallurgical Laboratory, Jamshedpur and interacted with scientists and research scholars on Friday morning under the aegis of CSIR-NML skill development programme in collaboration with NASI, Jharkhand Chapter. The students were thrilled to visit the laboratory and interact with working group.

The programme was scheduled for two and half hours, which comprised

an overview of Indian Science and Technology, Documentary film show on CSIR and NML separately, visit to NML selective units of the laboratory to gain an exposure of modern laboratory and research environment.



discussed an overview of CSIR and NML, its contributions in different branches of Science & Technology. He defined science, science & technology, development of science & technology in Indian perspectives, discussed the skill development programme and role of diploma holder personnel play at the R&D Laboratory, also explains about natural resources like ores, minerals, rocks and its value for the development of Nation and further arrange lab visit. The students expressed their fillings, asked numbers of question, and clarify doubt with scientists.

The students mainly visited at creep testing units of MST Division and know about

fatigue, creep, fracture prevailing in different types of industrial components, they further visited at Mechanical Testing Division, and Engineering Workshop. They gain working knowledge and develop skill to know the application of different kind of machine like wire drawing machine, impact testing machine, hot rolling machine and its application.

During the interactive session, number of students asked different questions. Teacher and many students requested for their next visit to the lab for a deeper knowledge and skill development.







Fire breaks out at National Chemical Laboratory premises in Pune



A major fire broke out on the premises of National Chemical Laboratory (NCL) in Pune this evening, but it was doused within an hour. Cause of the fire was not known yet. Established in 1950, NCL is a premier research institute of international renown.

27th March 2017

The fire engulfed the Pilot Plan III building of NCL and five fire tenders and two water tankers were deployed to douse it, civic officials said.

Meanwhile, a statement from NCL stated that "since the premises was under renovation, no experiment was being carried out in the laboratory and

No one was injured, they added.

"We received a call at 8.40 pm and immediately fire tenders and tankers were rushed to the spot. By 9.25 pm the fire was doused," said Prashant Ranpise, Chief Fire Officer, Pune Municipal Corporation. no scientist/student was around", so nobody was injured.

Students working in the adjacent building noticed the fire and immediately informed the security, fire brigade and concerned officers. However, "there was a major loss of property" it stated A committee has

