# CSIR in Media



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CSIR-NBRI

April 2017



मिटिक प्लांट (सीमेप) की आर से किया जा रहा है। गोरतलब है कि लोकसभा सांसद वीरेंद्र कश्यप ने सवाल के अरिए जानना चाहा था दवा वीजीआर-34 कारगर पाई गई कि क्या बीजीआर-34 का निर्माण सरकार ने किया है और इसके प्रभाव

## Published in:

Sunday Navbharat Times, Page 6

## Also Published in:

Dainik Jagran, Page 15

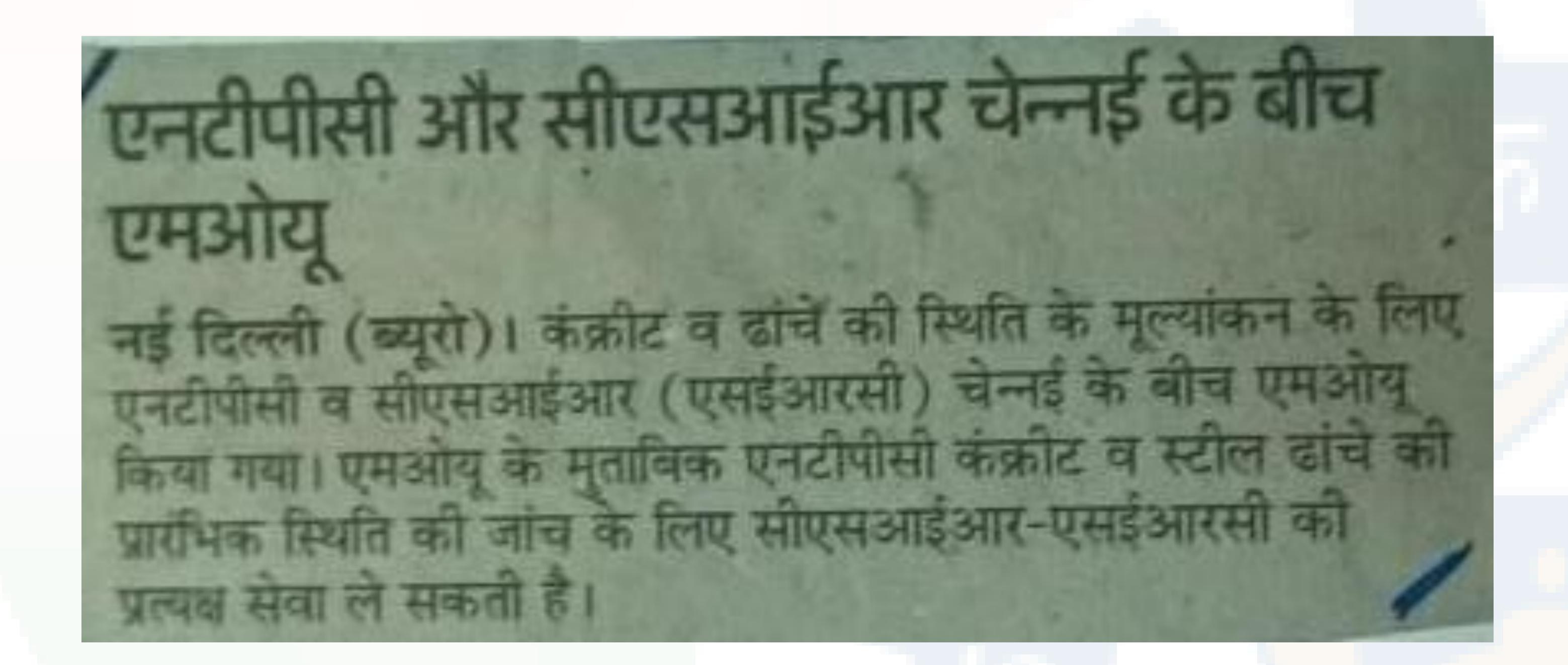
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## Highway to HELL: Research body says Delhi's roads are deathtraps after 1,500 people die in 2016

CSIR-CRI

9<sup>th</sup> April 2017



Faulty designs and inadequate safety measures have turned major arterial roads in the national Capital into virtual deathtraps, a recent study of the Central Road Research Institute (CRRI) found.

Over 1,500 people were killed in various accidents on Delhi roads in 2016. Experts believe were it not for heavy congestion, the fatalities would be much higher.



'A large number of road projects in Delhi lack the safety norms,' Dr S Velmurugan, head of the traffic engineering and safety division at CRRI, told Mail Today.

'Delhi has 33,000 km of road network, out of which the arterial ways measure about 1,800 km of road-length.







'These arterial routes accommodate nearly 80 per cent of Delhi's traffic and thus proper road design and safety measures become very important.'

Unfortunately, said the CRRI official, recent post-operational safety audits on two of the busiest arterial roads in the city – Dwarka flyover and Sarita Vihar underpass – proved their worst fears right.

In its audit of Dwarka-Palam flyover, which reports nearly 30 grave accidents every year, the CRRI pointed out that the road-owning agency had completely ignored design and safety standards, leaving motorists vulnerable to fatal accidents.

The CRRI findings noted that apart from five sharp curves, that are the biggest engineering fault on the two-km long flyover, safety measures like cautionary signs, pedestrian facilities and speed-calming measure are also missing.

The flyover has claimed over 150 lives since it was built. A city court had even termed the flyover a 'man-made death trap' in its observation.

'Most long stretches designed for non-stop smooth traffic flow in the Capital have basic design flows,' said Velmurugan.



In the safety audit of the Sarita Vihar underpass in southeast Delhi, which caters to a whopping 30,000 vehicles every hour, the CRRI team came to the conclusion that pedestrians and non-motorised vehicles were left to the mercy of fast-moving traffic. Velmurugan, who supervised the audits for both projects, said nothing could be done change the sharp curves on the Dwarka flyover but traffic calming measures and large cautionary signs could bring down the accidents significantly.

The expert also suggested strict enforcement and prosecution of speeding vehicles on the flyover.

More loss The Dwarka flyover and the underpass were designed to provide better connectivity to the traffic coming from western and eastern parts towards south Delhi.

But in gross violation of prescribed safety designs, the two arterial pathways have caused more loss than ease, the CRRI report said.

Dwarka flyover caters to a heavily built-up area and provides access to about 11 lakh people residing in Dwarka, which is locked between a railway line, the Najafgarh drain and airport.

Sarita Vihar underpass is located close to the confluence of Delhi, Uttar Pradesh and Haryana and hence caters to a sizeable amount of traffic emanating from the arterial roads of NCR townships namely, Faridabad, Noida and Greater Noida.

The underpass and flyover connects strategically important locations like Ashram, Badarpur and Noida.



Eventually, a six-lane flyover was constructed by the Delhi Development Authority in Ashram-Badarpur direction in the year 2000 to facilitate signal-free movement of traffic on NH-2.

The audit report points out that the cycle tracks created at the Sarita Vihar interchange facility were left completely dysfunctional forcing the cyclists and other non-motorised vehicles to merge with the normal traffic.

This created a messy situation and increases the risk of fatalities.

#### LOOPHOLES IN DWARKA FLYOVER

Taxis and normal cars can be seen as standing at the bus stop during the peak hours trying to get passengers, despite the presence of a "No Stopping No Standing" sign. This forces the buses to stop in middle of the road and increase chances of accidents.

2 Ineffective traffic-calming measures at the sharp curves on the flyover

Crash cushions at the start of the flyover on both sides have got damaged and not been replaced. Speed breakers are not been provided with a "speed breaker ahead" cautionary sign. This can lead to crashing of vehicles from behind.

A Non-standard speed limit sign posted just at the start of the bus stop in the airport-Dwarka direction. Also, the facility information sign for the bus stop is absent, which is required for the information of the road users.

Passenger waiting area at the bus stop in the Dwarka-Airport direction is inadequate. As a result, the bus users are forced to stand on the middle of the road and thus leading to severe congestion. Also, passengers standing on the pavement can lead to several pedestrian-vehicle conflicts.

## Published in:

## Dailymail.co.uk



## Non-invasive early test for pregnancy in cattle

CSIR-CCMB

9<sup>th</sup> April 2017



Diagnosis can be made as early as five to six weeks

Pregnancy tests for cattle will soon become easier with the availability of a new kit being developed by scientists from the Centre for Cellular and Molecular Biology (CCMB), Hyderabad. Using ELISA to test a sample of dung can reveal the pregnancy at an early stage as compared with existing methods.

In what is quite novel, the group has identified a biomarker, a metabolite, which is found in high concentrations in dung within 3-4 weeks of pregnancy.

When this dung sample is tested using the ELISA method, there is a colour change to indicate presence of the specific metabolite.

Further, the paper-based microfluidic kit being developed is constructed so as to enable reading out the result.

Timely detection of pregnancy in cows and buffaloes is important to maximise reproduction and milk production. According to G. Umapathy from CCMB, this can help in shortening calving interval and planning for rebreeding at the earliest oestrus cycle.



## Easy verification

Though they have studied this aspect of many animals, the group focused on cattle, as the livestock sector is poorly organised. In currently available methods, pregnancy detection in cattle requires veterinary expertise or lab facilities. The present method not only detects pregnancy at an earlier stage, it also makes it possible for breeders to independently carry out the process of detection. With this view, the group is working on a kit developed by Amit Asthana and Ch Mohan Rao, also from CCMB.

## Pregnancy kit

They adapted the laboratory ELISA protocol to a simple paper-based device. The special feature of this system is that while normally any moisture placed on a paper would be sucked in through capillary action, this device shows a guided flow. "We use hydrophobic barriers in such a way that the flow is regulated and the colour change in the paper can be used as a read out," says Dr Asthana, in an email to this correspondent.

The proof of principle of the kit is established. "However, we are trying to further simplify and improve its efficacy. A multi-centric extensive evaluation is necessary before the product can be released in the market," says Dr Ch Mohan Rao, in an email. The group is in the process of filing a patent for this system.



While this kit is specifically designed to test for pregnancy in cattle, the group is concerned about detecting pregnancy in wildlife in general. It is not easy to do this, as animals need to be anaesthetised and blood samples drawn for testing in existing methods. The anaesthesia and frequent drawing of blood can leave the animal stressed out. "Our laboratory has been investigating ways of non-invasively estimating hormone profiles in wildlife," says Dr Umapathy.

## Published in:

The Hindu



## Reviving rivers biggest challenge: Neeri chief

CSIR-NEERI

9<sup>th</sup> April 2017

Stepping into its 60th year, the city-based National Environmental Engineering Research Institute (Neeri) has decided to focus on rejuvenation of river and water bodies, air pollution, energy and climate change, and waste minimization.

At the foundation day ceremony on Saturday, Neeri director Rakesh Kumar said that river rejuvenation is the biggest challenge for Neeri and other institutes of Council of Scientific and Industrial Research (CSIR). "Rivers across the country are highly polluted. Apart from rivers, perennial open surface water bodies are either drying up or are being

encroached upon," Kumar said.

Speaking to TOI later, Kumar said that apart from major river projects like Godavari, Mithi and Chandrabhaga in Maharashtra, and Ganga, Yamuna, Narmada and Krishna across the country, the institute has also identified water bodies in Delhi, Jharkhand and Punjab. "A city like Delhi once had 600 water bodies but is now left with only 100. This is one of the reasons why the capitals gets flooded despite received little rainfall. There is no space left for immediate storage of rainwater," said Kumar, adding that the focus will also be on cleaning drains.



The institute is also planning to rope well-known water conservationists like Rajendra Singh for the projects. Cleaning a stretch of Nag river is also on the agenda.

While these projects are being planned, availability of funds is a major cause for concern. Director of Jawaharlal Nehru Aluminum Research Development and Design Centre (JNARDDC), Nagpur, Anupam Agnihotri, who was the chief guest of the foundation day programme, said that the government funds provided to CSIR institutions are static for the last few years. "The percentage of funds for the department of biotechnology and space technology has seen an increase but the same cannot be said for CSIR-run institutes," said Agnihotri.

He, however, added that the present government looks favourably disposed towards research and development. "This year, the parliamentary committee report was encouraging towards R&D," he said.

Stressing the need for an increase in R&D spending, Agnihotri said, "While India spends only 0.8 % of its gross domestic product on research and development, countries like China, South Korea and America spend 2.5%, 4.6% and 2.7 % respectively."

Another problem in the R&D sector is the fear of failure. "We discourage failure under the pressure of funds and other arrangements. Trying and experimenting is an integral part of research," Agnihotri added.



On its foundation day, the laboratories of Neeri were open for general public, including students. Eight hundred and fifty school students from 17 schools and few colleges and got a chance to interact with scientists from different divisions. A science model competition and exhibition was also organized for school students.

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## CSMCRI to celebrate 63rd Foundation Day on Apr 10

CSIR-CSMCRI

9<sup>th</sup> April 2017

Central Salt and Marine Chemicals
Research Institute (CSMCRI) in
Bhavnagar, one of the national
laboratories working under the aegis
of Council of Scientific and Industrial
Research (CSIR), New Delhi, will
celebrate its 63th Foundation Day on
Monday (April 10) in Bhavnagar.

According to CSMCRI officials, on the occasion the institute will be open to public. An exhibition has also been put up particularly for science students.

The invitations have been extended to more than 500 schools, colleges and departments of universities.

"It is expected that more than 1,000 students would attend the event. Dr. Govindsamy Mugesh, prof at Indian Institute of Science, Bangalore, would be guest of honour," said an official.

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## Published in:

Divya Himachal, Page 4