



CSIR IN MEDIA

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Quake alert tech from Chandigarh lab makes it to Delhi Metro

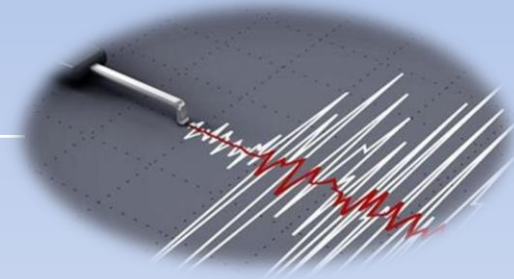
The system — in use at Delhi Metro — had helped in stopping services after the recent tremors.

In a natural catastrophe as devastating as an earthquake, an alert a few seconds as it strikes can reduce panic and save lives.

To provide that split second alert, a nine-member research team at the Council for Scientific and Industrial Research (CSIR-CSIO) laboratory in the city worked for 17 months and results are now showing. A system that can sense, record and generate alerts in real-time about an imminent earthquake is now ready.

The system — in use at Delhi Metro — had helped in stopping services after the recent tremors.

The system works on sensors that are installed around important buildings and cities. The institute plans to expand the use of the technology and take it to cities like Chandigarh and at important buildings like refineries and nuclear plants. It now wants to collaborate with mobile service providers to provide warnings to customers and registered users.



“A technology has been invented, now we want to involve a third party that will play an important role between the user and the CSIO,” said Satish Kumar, principal scientist, Central Scientific Instruments Organisation (CSIO) CSIR.

“The sensors are highly sensitive. Whenever there is a vibration on the earth, sensors detect it and send signals about the seismic activity to the central control unit,” Kumar says.

He added, “Depending upon the response of individual nodes/sensor, the central control unit takes a final decision and, if needed, generates an audio visual alarm and sends details via email and SMS to registered users. As the speed of light is faster than seismic waves, the signals sent reach the spot before the tremor, giving a few seconds of prior alert to take preventive measures.”

However, how much time before the earthquake, the information will reach people depends upon the distance of the nodes from the centre and the epicentre of the earthquake.

How will it work in Chandigarh

For Chandigarh, three-four sensors will be placed at the fencing of the city and these would be connected to the central control units that could be the CSIO building itself.

The alert will be generated and it will be sent to registered users. If mobile companies coordinate, the signal will be sent to mobile companies and within no time, people can see an alert on an imminent earthquake.

CSIO director RK Sinha said, “We are keen to generate mobile alerts and for this the institute is looking to collaborate with mobile service providers to provide warnings to customers.”

www.hindustantimes.com/punjab/quake-alert-tech-from-chandigarh-lab-makes-it-to-delhi-metro/story-qTaZyqkiKyQoTILQyVWVWGM.html

2nd June, 2016

HELIBORNE HOLISTIC WATER MAPPING ON CARDS

Friday, 03 June 2016 | Archana Jyoti | New Delhi



In what could lead to providing a solution to India's water scarcity problem, the Council of Scientific & Industrial Research (CSIR) is likely to start a helicopter-based electromagnetic survey to identify groundwater points, map structures, and measure salinity and contamination among others.

CSIR-National Geophysical Research Institute (NGRI), under the Ministry of Earth Science, has already carried out a heliborne survey in different hydrogeological terrains in Rajasthan (Dausa and Jaisalmer), Maharashtra (Nagpur), Karnataka (Tumkur), Tamil Nadu (Cuddalore) and Bihar (Patna) covering around 3,000 km of area.

"The results of the Rs25-crore project which was carried out at the initiative of the Ministry of Water Resources were encouraging. We have submitted the report to the Ministry," N Purnachandra Rao, chief scientist at NGRI, told The Pioneer recently.

Rao said that they were waiting for the approval from the Centre to kick-off the mega survey across the country that would entail investment of around Rs12,000 crore over the next ten years.

So far, in India, airborne geophysical surveys have been conducted for mineral prospecting and geological mapping.

The scientist said that the water mapping of all the aquifers beneath the earth will help measure water yield, depth of the water to ensure its efficient usage and, contamination level which would in turn help the Government take preventive measures accordingly.

“Once we have the water map, we can prepare 3D map structure to show up to 300 metre beneath the surface,” he added.

Talking about the process of conducting the survey, he said that a metal coil from the helicopter is hanged down and using the electromagnetic signatures scientists can make out if there is groundwater-if current sails through, it indicates presence of water.

Girish Sahni, director general CSIR, called it the best technology in the world to map aquifers and that it also can help find spots and sources of contamination in groundwater. Moreover, it is time saving. This is for the first time in the country that an aquifer mapping in which Heliborne survey has been taken up for groundwater investigations, he added.

NGRI, a constituent Laboratory of CSIR, was established in 1961 with the mission to carry out research in multidisciplinary areas of earth sciences. The Institute plays a pivotal role in the exploration of hydrocarbons, mineral and groundwater resources in addition to studies in engineering geophysics and seismology among others.

www.dailypioneer.com/todays-newspaper/heliborne-holistic-water-mapping-on-cards.html

3rd June, 2016

Chicken legs for your handbags soon!

The CLRI lab has come up with a technology of making leather from chicken legs with its quality similar to the fabric made from baby alligators. (Photo: Pixabay)



Faced with a possibility of reduced leather production in the wake of the beef ban in some states, scientists have come up with a novel method of manufacturing a fabric with chicken legs.

The quality will be similar to the fabric made from baby alligators. “With the beef ban in some states and availability of green technology, we have told the Central Leather Research Institute (CLRI) to come up with synthetic leather or an alternative that can address the demand,” CSIR Director General Girish Sahni said, during a media interaction here.

The CLRI, a laboratory under the Council of Scientific and Industrial Research (CSIR), has come up with a technology of making leather from chicken legs with its quality similar to the fabric made from baby alligators.

The CLRI is now faced with the aspect of commercialising the technology as it is primarily a research institute. At the same time, some scientists are also of the view that the ban on slaughtering of cows is unlikely to have an effect on leather production because there are other sources like sheep, goat and buffalo.

“Beef ban may not affect the production of leather as there are other sources as well like the buffalo, sheep, goat because it is directly linked to the meat sector. We also import leather from countries like New Zealand.

“But then they are not the tanners, so this technology needs to be exploited commercially. At the parallel level, we also made products out of this leather. But it can act as an embellishment, or at the maximum it can be used to prepare small leather bags,” B Chandrasekaran, Director of the CLRI, said.

azearning.com/html/2016/06/01/49228.html?code=0a6ad1ae6e5556f21227&utm_source=googleplus&utm_medium=free&utm_campaign=share

1st June, 2016

MoES Min to attend Clean Energy mission



An Indian delegation led by Dr. Harsh Vardhan, Minister Science & Technology and Earth Sciences will be participating in the Mission Innovation and Clean Energy Ministerial along with Senior Officials from the Ministry of Science & Technology, Ministry of New and Renewable Energy and Ministry of Power in San Francisco.

The event will be held on June 1 and June 2, Bureaucracy Today has learnt.

It is also learnt that World's energy leaders will be gathered for the 7th Clean Energy Ministerial and Inaugural Mission Innovation Ministerial. Energy Ministers from Nations with 90% of Clean Energy Investments and 75% of GHG Emissions to Focus on Advancing Clean Energy Cooperation and Implementing PRIS Agreement Commitments.

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The Clean Energy Ministerial (CEM) is a high-level global forum to share lessons learnt and best practices, and to encourage the transition to a global clean energy economy. Initiatives are based on areas of common interest among participating

Governments and other stakeholders. The CEM is the initiative of the USA. Presently, 23 countries are members of CEM. There are 13 initiatives under CEM covering energy efficiency, clean energy supply and cross cutting areas.

Since its launch in 2010, the Clean Energy Ministerial (CEM) has come a long way. Its various initiatives were instrumental in leading significant collaborative work amongst members in context of clean energy supply, demand side management and relevant cross cutting issues.

During the 7th Clean Energy Ministerial the Minister for Science & Technology and Earth Sciences will also launch the Global Cooling Challenge.

bureaucracytoday.com/top_news.aspx?id=154566

30th May, 2016