

Warning System During Earthquakes Developed For Delhi Metro

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A Council for Scientific and Industrial Research (CSIR) laboratory has developed an warning system for Delhi Metro that alerts earthquake. (Representational Image)

New Delhi: Highlights

1. It alerts Delhi Metro after an earthquake so services can be stopped
2. System helped stop Metro services after tremors hit Delhi last month
3. Orders can be given to stop Metro within three seconds, said an official

A Council for Scientific and Industrial Research (CSIR) laboratory has developed an warning system for Delhi Metro that alerts it after there is an earthquake so that its services can be halted.

The system helped stop the Metro services after the tremors hit the national capital last month.

Developed by CSIR-Central Scientific Instruments Organisation (CSIR-CSIO), Chandigarh, the system can sense, record the event and generate SMS to the concerned action points, in real time.

The Metro authorities had asked the CSIO to detect quakes measuring beyond 3 on the Richter Scale.

"The information has been integrated with the system and was also passed on to designated officers. Within three seconds orders can be given to stop the Metro,"

said RK Sinha, Director of CSIO.

"The system can also be used at nuclear reactor sites and the activity could be stopped in case of an earthquake," he added.

He, however, refused to call it an earthquake early warning system as it works only after the tremor, following which it senses the waves.

The CSIO has installed five sensors across different locations of Metro---Mundka, Botanical Garden, Huda City Centre, Metro Bhawan and Faridabad--- comprising seismic warning systems with LAN connectivity with the DMRC network for generation of alarm signal on major earthquake.

It is in operation since August 2015, but was validated last month.

"The sensor also has a highly sensitive pendulum. So anytime there is a vibration inside the earth, it starts oscillating. They send signals about any seismic activity and communicate it to the central control located at Operation Control Centre (DMRC-OCC) regarding potential earthquake incidence.

"The central control takes a final decision based on the response of all the individual nodes and generates an audio visual alarm and sends the event details via email and SMS to the registered users," Mr Sinha added.

He said, in countries like Japan the Metro services stop automatically when it receives such signals.