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THE TIMES OF INDIA

Sensor-based hyperlocal air quality monitors plan for city

Dec 21, 2023, 08.14 AM IST



Mumbai: For evidence-based intervention to mitigate air pollution, BMC plans to install about 250 sensor-based air quality monitoring units in the city in association with IIT Kanpur for hyperlocal monitoring of air quality which will also help carry out hyperlocal action and mitigation measures.

BMC has been in talks with professor Sachchida Nand Tripathi of IIT-Kanpur's Civil Engineering & Sustainable Energy Engineering, and his team which includes start-ups.

“The city will be divided into equal size grids ranging from 2 to 2.5 sqkm and the sensor-based air quality monitoring units would be set up at each of these grids. The monitoring units will help BMC

in measuring air quality at granular hyper local levels. All monitoring units will measure PM 2.5, PM 10 and temperature and relative humidity, apart from other parameters at all these locations. Of these 250 units, about 50 will also measure gaseous pollutants such as CO and NOX. The CO will give an idea about vehicular emissions and NOX will give us an idea about emissions from industrial units and power plants,” said an official.

“The sensor-based air quality monitoring devices are smaller than a radio in size and will weigh about 500gm and can transmit cellular and wi-fi to the server and dashboard at BMC headquarters, where data will be analysed.

The devices will be powered by solar panels, eliminating power supply-related problems,” said an official connected to the project.

“Modalities are being worked out. Initially, the number of units to be installed may be fewer and then scaled up, besides sanctions are awaited from higher administration, before we go ahead with the project,” said a BMC official.

“The dashboard for hyper-local monitoring system will be multi-layered and will have real-time analytics embedded. With this, BMC can identify sources of pollution real time and the agencies, which can address the issue of pollution at a location...,” the official added.

The IIT-Kanpur team has set up 538 monitoring units across Bihar and 453 similar units in Uttar Pradesh and several other cities including Lucknow, Chennai and Jaipur.