Jitendra Singh opens 'AATAL' air-pollution analysis laboratory for Delhi-NCR at IITM's Delhi branch

Polity, Economy & Urban Affairs · 25 October 2026 · https://www.shanmugamiasacademy.in/current-affairs-english/2026/10/25



News

On 24 Oct 2026, Dr Jitendra Singh, Union Minister of State (Independent Charge) for Science & Technology and Earth Sciences, opened the 'Integrated Atmospheric Chemistry and Aerosol Toxicity Analysis Laboratory' (AATAL) at the Delhi branch of the Indian Institute of Tropical Meteorology (IITM), New Delhi. The Ministry of Earth Sciences set it up under 'Mission Mausam' at about ₹80 crore. It analyses PM2.5, gases, metals and toxic elements to work out how much pollution comes from each source (source apportionment) – vehicles, industry, crop-residue burning, construction and road dust, and pollution carried in from nearby regions. Linked to IITM's 'AIRWISE' decision-support system, it will give evidence-based inputs to CAQM and other agencies.

Key facts

Opened	24 Oct 2026 – Dr Jitendra Singh
Place	IITM Delhi branch, New Delhi
Set up by	Ministry of Earth Sciences – Mission Mausam; about ₹80 crore
Task	Pollution composition, sources and their shares (source apportionment), health impact

Linked to	AIRWISE – 72-hour forecasts at 400 m resolution; supports GRAP and CAQM
Present	Dr T. Srinivasa Kumar (Secretary, MoES); Dr A. Suryachandra Rao (Director, IITM)

Background

- IITM (Indian Institute of Tropical Meteorology) – Pune; an autonomous institute of the Ministry of Earth Sciences. 'SAFAR' (System of Air Quality and Weather Forecasting And Research) was built to monitor air quality during the 2010 Delhi Commonwealth Games, and later extended to Pune, Mumbai and Ahmedabad.
- Mission Mausam – approved by the Union Cabinet in Sept 2024; ₹2,000 crore for the first two years. Implemented by IMD, IITM and the National Centre for Medium Range Weather Forecasting (NCMRWF); aim – a 'weather-ready and climate-smart Bharat'.
- Science: PM2.5 – particles 2.5 micrometres or less in diameter; they reach the air sacs (alveoli) of the lungs and can enter the blood. PM10 – up to 10 micrometres. The National Ambient Air Quality Standards (NAAQS, 2009, CPCB) set limits for 12 pollutants; PM2.5 limit – 40 µg/m³ (annual), 60 µg/m³ (24-hour). WHO's 2021 guideline (annual) is 5 µg/m³.
- Governance: the Commission for Air Quality Management in NCR (CAQM) is a statutory body under a 2021 Act; the Graded Response Action Plan (GRAP) is applied in winter. AATAL's measured 'which source, how much' evidence will help decide where curbs are needed.

Tamil Nadu link: four TN cities – Chennai, Madurai, Tiruchirappalli and Thoothukudi – are on the National Clean Air Programme (NCAP) list of 'non-attainment cities'. The Manali industrial area of North Chennai is classed a 'Critically Polluted Area' under CPCB's Comprehensive Environmental Pollution Index (CEPI).

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