

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**RAJYA SABHA**  
**STARRED QUESTION NO. 42**  
TO BE ANSWERED ON 25.07.2024

**Air quality monitoring stations**

\*42. SHRI S NIRANJAN REDDY:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) whether Government has conducted any study to determine the minimum number of air quality monitoring stations required in each State, if so, the details thereof;
- (b) the number of manual and continuous air quality monitoring stations currently established and functional along with the number of such stations added each year over the last three years;
- (c) whether the Air Quality Monitoring Stations (AI-AQMS v 1.0) developed by Government has been deployed at existing stations, if so, the details thereof, and
- (d) whether technologies like AI, GIS mapping, and smart devices are being used to improve air quality monitoring, if so, the details thereof?

**ANSWER**

MINISTER FOR ENVIRONMENT, FOREST AND CLIMATE CHANGE  
(SHRI BHUPENDER YADAV)

(a) to (d) : A Statement is laid on the Table of the House

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**STATEMENT REFERRED TO IN REPLY TO PARAS (a) to (d) OF THE RAJYA SABHA STARRED QUESTION No. 42 DUE FOR REPLY ON 25.07.2024 REGARDING AIR QUALITY MONITORING STATIONS BY SHRI S NIRANJAN REDDY, HON'BLE MEMBER OF PARLIAMENT.**

**(a) and (b)**

The minimum number of air quality monitoring stations required in a State / UT is decided based on the population based criteria, which was developed by Central Pollution Control Board (CPCB) during 2019 in consultation with State Pollution Control Boards (SPCBs) / Pollution Control Committees (PCCs). The criteria for designing the ambient air quality monitoring network is as follow:

**Criteria for minimum number of stations for ambient air quality monitoring**

<b>Population (Census 2011)</b>	<b>Minimum No. of manual station Under National Ambient Air Quality Monitoring Programme (NAMP)</b>	<b>Minimum No. of proposed CAAQMS (Continuous Ambient Air Quality Monitoring Stations)</b>	<b>Total</b>
1,00,000- < 5,00,000	1-Background 2-Residential/ Commercial	1-Residential	4
5,00,000- <10,00,000	1-Background 2-Residential/Commercial	1-Residential 1-Traffic dominant area 1- Commercial	6
10,00,000- <50,00,000	1-Background 2-Residential/ Commercial	2-Residential 1-Traffic dominant area 1- Commercial 1-Industrial area	8
≥50,00,000	1-Background in upwind direction 1-Background in down wind direction 2-Residential/ Commercial	4-Residential 3-Traffic dominant area 3- Commercial 2-Industrial area	16

The ambient air quality monitoring network comprises of total 1504 (Manual and Continuous) stations across the country. The manual monitoring network consists of 963 stations in 419 cities and continuous monitoring network consists of 541 stations in 280 cities.

The growth and total number of such manual and continuous monitoring stations added in the last three years are as follow:

**Growth of Ambient Air Quality Monitoring Network**

<b>Stations</b>		<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<b>Manual (NAMP)</b>	<b>Added</b>	<b>64</b>	<b>28</b>	<b>53</b>
	<b>Total</b>	882	910	963
	<b>Cities covered</b>	378	389	419
	<b>States /UT covered</b>	35	35	35
<b>Continuous (CAAQMS)</b>	<b>Added</b>	<b>9</b>	<b>143</b>	<b>85</b>
	<b>Total</b>	313	456	541
	<b>Cities covered</b>	156	242	280
	<b>States/UT covered</b>	27	31	31

**(c) and d)**

Indigenous Air Quality Monitoring System (AQ-AIMS) is a sensor based air quality monitoring system. At present, air quality data generation using any technology other than the specified in National Ambient Air Quality Standard (NAAQS), 2009 including Sensor is not used for regulatory purpose as its accuracy, linearity, reliability, and long-term performance are not yet fully established.

To encourage the indigenous products on air quality monitoring instruments, the Government has notified CSIR –National Physical Laboratory (NPL) as the national certification agency for air quality monitoring instruments and equipment. This CSIR-NPL certification system is mandated to tackle all the issues related to product certification at par with international standard to strengthen indigenous manufacturers for participation in international market.

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