

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

RAJYA SABHA
UNSTARRED QUESTION No. 1807
TO BE ANSWERED ON 22.12.2022

Ten highest polluted cities in the country

1807. SHRI K.R. SURESH REDDY:

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

- (a) whether measures are being taken to reduce and control air pollution in the country;
- (b) if so, the details thereof, if not, the reasons therefor;
- (c) whether measures are being taken to help persons facing health issues due to poor air quality in the country, if so, the details thereof, if not, the reasons therefor; and
- (d) a list of the ten highest polluted cities in the country and whether Government has taken special measures to extend support to such cities?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI ASHWINI KUMAR CHOUBEY)

(a) to (c)

The details of measures being taken to reduce and control air pollution in the country is given as **Annexure-I**.

There is no conclusive data available to establish a direct correlation of health problems exclusively due to air pollution. Health is impacted by a number of factors which include food habits, occupational habits, socio-economic status, medical history, immunity, heredity, etc., of the individuals apart from the environment.

(d)

Based on the air quality data of previous years, Central Pollution Control Board has identified 123 non-attainment cities exceeding National Ambient Air Quality Standards (NAAQS) continually for 05 years. List of 123 cities is given as **Annexure-II**. The PM₁₀ concentration of these cities for the year 2017-2021 is given as **Annexure-III**.

Measures taken by the Government for Air Quality Management

i. Vehicular Emissions:

- Leapfrogging from BS-IV to BS-VI norms for fuel and vehicles since April, 2018 in NCT of Delhi and from 1st April, 2020 for rest of the country.
- Network of metro rails for public transport are enhanced and more cities are covered.
- Development of Expressways and Highways are also reducing the fuel consumption and pollution.
- Eastern Peripheral Expressway & Western Peripheral Expressway has been operationalized to divert non destined traffic from Delhi.
- Ban on all diesel vehicles older than 10 years and all petrol vehicles older than 15 years, in Delhi and NCR. (Hon'ble SC order dated 29.10.2018).
- Environment protection charges (EPC) have been imposed on diesel vehicles with engine capacity of 2000cc and above in Delhi NCR.
- Introduction of cleaner/alternate fuels like CNG, LPG, ethanol blending in petrol.
- Permit requirement for electric vehicles has been exempted.
- Promotion of public transport and improvements in roads and building of more bridges to ease congestion on roads.
- RFID (radio-frequency identity) system implemented by South Delhi Municipal Corporation (SDMC) for collection of toll and Environment Compensation Charges from commercial vehicles entering Delhi.
- Introduction of BS VI compliant vehicles across the country since April, 2020.
- Sustainable Alternative Towards Affordable Transportation (SATAT) has been launched as an initiative to set up Compressed Bio-Gas (CBG) production plants and make CBG available in the market for use in automotive fuels.
- Department of Heavy Industry is providing subsidy on e-vehicles under Faster Adoption and Manufacture of (Hybrid &) Electric Vehicles in India (FAME -II India) scheme.

ii. Industrial Emissions:

- Notification regarding SO₂ and NO_x emission standards have been issued for Thermal Power Plants
- Ban on use of pet coke and furnace oil as fuel in NCR States since October 24, 2017 and ban on use of imported pet coke in the country since July 26, 2018, with exception for use in permitted processes (processes in cement plants, lime kilns and calcium carbide manufacturing units).
- Shifting of industrial units to PNG.
- Installation of online continuous emission monitoring devices in highly polluting industries.
- Brick kilns shift to zig-zag technology or vertical shaft or use Piped Natural Gas as fuel in brick making to reduce pollution.
- System and Procedure for Emission Compliance Testing of Retro-fit Emission

- Control Devices (RECD) for Diesel Power Generating Set Engines up to Gross Mechanical Power 800 kW developed.
- Development of low carbon strategies across sectors such as phasing out older coal based power plants, compliance of standards, City Gas Distribution (CGD) network, emphasis on improved power reliability in urban areas, etc.

iii. Air Pollution due to dust and burning of waste:

- Notification of seven waste management rules covering solid waste, plastic waste, e- waste, bio-medical waste, C&D waste, hazardous waste and battery waste.
- Setting up infrastructure such as waste processing plants.
- Extended Producer Responsibility (EPR) for plastic and e-waste management.
- Ban on burning of biomass/garbage.
- Bio-mining of three dumpsites at Bhalswa, Okhla and Ghazipur is being carried out.
- Under Central Sector Scheme on 'Promotion of Agricultural Mechanization for in-situ management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi', agricultural machines and equipment for in-situ crop residue management are promoted with 50% subsidy to the individual farmers and 80% subsidy for establishment of Custom Hiring Centers. In 2022, the Scheme has been merged with Sub-Mission on Agricultural Mechanization (SMAM) and SMAM has been merged with RashtriyaKrishiVikasYojana (RKVY).
- The Commission for Air Quality Management in NCR and Adjoining Areas (CAQM) on 17.09.2021 directed the coal-based Thermal Power plants situated up to a radius of 300 Km of Delhi to co-fire biomass based Pellets, Torrefied Pellets/Briquettes (with focus on paddy straw) with Coal (up to 5-10%).

iv. Monitoring of Ambient Air Quality:

- Expansion of air quality monitoring network of manual as well as continuous monitoring stations under programmes such as National Air Monitoring Programme (NAMP).
- Initiation of pilot projects to assess alternate ambient monitoring technologies such as satellite-based monitoring.

v. National Clean Air Programme:

- With the prime objective of abating Air Pollution, the Ministry, in 2019 launched a National Clean Air Programme (NCAP) as a National-level Strategy outlining the actions for reducing the levels of air pollution at city and regional scales in India.
- NCAP targets to achieve 20 to 30 % reduction in Particulate Matter less than 10 and 2.5 microns (PM10 and PM2.5) concentrations by 2024 across the country.
- Under NCAP, Non-attainment cities have been identified based on ambient air quality levels exceeding National Ambient Air Quality Standards (NAAQS) which were notified to protect

human health. City Specific Clean Air Action Plans have been prepared and rolled out for implementation in 131 non-attainment and million plus cities.

- Activities in these cities include strengthening of ambient air quality network, source apportionment studies, dust mitigation equipment, composting units, infrastructure for non-motorized transport, shifting to clean energy in unorganized sectors, etc.
- The NCAP focuses on multi-sectoral sources of pollution including power plants, industries, vehicles, open burning of waste, construction & demolition activities, etc.; inter-Ministerial coordination for convergence of actions and interventions; and partnership with Institutes of National repute and International Agencies as Knowledge Partners
- PRANA a portal for monitoring implementation of NCAP has been launched.

vi. Other Steps:

- Public Grievances and Response System (PGRS) is developed under NCAP.
- Emergency Response System (ERS) has been prepared in NCAP cities.
- Air quality monitoring cell has been constituted across the country in NCAP Cities.
- Public Complaints regarding air pollution issues in Delhi NCR are taken through ‘Sameer App’, ‘Emails’ (Aircomplaints.cpcb@gov.in) and ‘Social Media Networks’ (Facebook and Twitter).
- Introduction of green crackers with low emission and noise levels. Green Crackers have 30% potential reduction of PM and gaseous emissions compared to conventional firework.
- Ministry is promoting people’s participation and awareness building among citizens for environmental conservation through Green Good Deeds that focus on promotion of cycling, saving water and electricity, growing trees, proper maintenance of vehicles, following of lane discipline and reducing congestion on roads by car-pooling etc.
- Extension of UjawalaYojana to ensure shifting to cleaner fuel.
- Swacch Bharat Mission and Waste Management initiatives.
- The Commission for Air Quality Management in NCR and Adjoining Areas (CAQM) has come out with a policy to curb air pollution in NCR, along with a standard list of approved fuels for NCR for industrial and other applications.

List of 123 non-attainment cities

State / UT	S. No.	City
Andhra Pradesh	1	Anantapur
	2	Chitoor
	3	Eluru
	4	Guntur
	5	Kadapa
	6	Kurnool
	7	Nellore
	8	Ongole
	9	Rajahmundry
	10	Srikakulam
	11	Vijaywada
	12	Vishakhapatnam
	13	Vizianagaram
Assam	14	Guwahati
	15	Nagaon
	16	Nalbari
	17	Sibsagar
	18	Silcher
Bihar	19	Gaya
	20	Muzzaffarpur
	21	Patna
Chhattisgarh	22	Chandigarh
	23	DurgBhillainagar
	24	Korba
	25	Raipur
Delhi	26	Delhi
Gujarat	27	Ahmedabad
	28	Surat
	29	Vadodara
Himachal Pradesh	30	Baddi
	31	Damtal
	32	Kala Amb
	33	Nalagarh
	34	Paonta Sahib
	35	Parwanoo
	36	Sunder Nagar
Jammu & Kashmir	37	Jammu

	38	Srinagar
Jharkhand	39	Dhanbad
Karnataka	40	Bangalore
	41	Devangere
	42	Gulburga
	43	Hubli-Dharwad
Madhya Pradesh	44	Bhopal
	45	Dewas
	46	Gwalior
	47	Indore
	48	Sagar
	49	Ujjain
Maharashtra	50	Akola
	51	Amravati
	52	Aurangabad
	53	Badlapur
	54	Chandrapur
	55	Jalgaon
	56	Jalna
	57	Kolhapur
	58	Latur
	59	Mumbai
	60	Nagpur
	61	Nashik
	62	Navi Mumbai
	63	Pune
	64	Sangli
	65	Solapur
	66	Thane
	67	Ulhasnagar
Meghalaya	68	Byrnihat
Nagaland	69	Dimapur
	70	Kohima
Orissa	71	Angul
	72	Balasore
	73	Bhubneshwar
	74	Cuttack
	75	Kalinga Nagar
	76	Rourkela
	77	Talcher

Punjab	78	Amritsar
	79	Dera Baba Nanak
	80	Dera Bassi
	81	Gobindgarh
	82	Jalandhar
	83	Khanna
	84	Ludhiana
	85	Naya Nangal
	86	Patiala
Rajasthan	87	Alwar
	88	Jaipur
	89	Jodhpur
	90	Kota
	91	Udaipur
Tamilnadu	92	Trichy
	93	Tuticorin
Telengana	94	Hyderabad
	95	Nalgonda
	96	Patencheru
	97	Sangareddy
Uttar Pradesh	98	Agra
	99	Allahabad
	100	Anpara
	101	Bareilly
	102	Firozabad
	103	Gajraula
	104	Ghaziabad
	105	Jhansi
	106	Kanpur
	107	Khurja
	108	Lucknow
	109	Moradabad
	110	Noida
	111	Raebareli
	112	Varanasi
Uttarakhand	113	Dehradun
	114	Kashipur
	115	Rishikesh
West Bengal	116	Asansol
	117	Barrackpore

	118	Durgapur
	119	Haldia
	120	Howrah
	121	Kolkata
Uttar Pradesh	122	Gorakhpur
Tamilnadu	123	Madurai

Annexure-III

PM₁₀ concentration in 123 Non-attainment cities (NAC) during F.Y 2017-2018 to 2021-2022

States	Sl. No.	Cities	Average concentration (F.Y.) of PM ₁₀ (µg/m ³) (integrated data)				
			2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Uttar Pradesh	1.	Agra	202	196	163	188	146
Gujarat	2.	Ahmedabad	164	233	116	120	113
Maharashtra	3.	Akola	111	71	66	54	64
Uttar Pradesh	4.	Allahabad	169	225	219	184	119
Rajasthan	5.	Alwar	152	176	126	110	112
Maharashtra	6.	Amravati	102	106	89	58	66
Punjab	7.	Amritsar	189	124	109	113	118
Andhra Pradesh	8.	Anantpur	78	68	60	58	52
Odisha	9.	Angul	97	101	95	88	97
Uttar Pradesh	10.	Anpara	175	176	169	142	154
West Bengal	11.	Asansol	147	123	124	114	112
Maharashtra	12.	Aurangabad	75	77	76	65	86
Himachal Pradesh	13.	Baddi	174	179	133	123	132
Maharashtra	14.	Badlapur	160	148	88	67	94
Odisha	15.	Balasore	84	86	86	78	74
Uttar Pradesh	16.	Bareilly	207	221	185	193	175
West Bengal	17.	Barrackpore	86	107	108	75	85
Karnataka	18.	Bengaluru	92	92	73	62	67
Madhya Pradesh	19.	Bhopal	112	134	141	114	116
Odisha	20.	Bhubneshwar	85	100	103	78	95
Meghalaya	21.	Byrnihat	175	155	97	127	181
Chandigarh	22.	Chandigarh	114	98	92	90	97
Maharashtra	23.	Chandrapur	118	107	93	100	104
Andhra Pradesh	24.	Chittur	70	63	51	41	49
Odisha	25.	Cuttack	93	116	104	86	90
Himachal Pradesh	26.	Damtal	55	62	52	65	64
Uttarakhand	27.	Dehradun	250	192	166	144	146
Delhi	28.	Delhi	241	226	192	193	196
Punjab	29.	Dera Baba Nanak	79	84	68	66	71
Punjab	30.	DeraBassi	88	100	100	105	98
Karnataka	31.	Devangere	74	50	66	72	57
Madhya Pradesh	32.	Dewas	83	107	91	93	81
Jharkhand	33.	Dhanbad	315	252	211	198	235
Nagaland	34.	Dimapur	142	124	84	85	84
Chattisgarh	35.	Durg Bhilainagar	86	78	75	56	58
West Bengal	36.	Durgapur	150	144	125	103	168
Andhra Pradesh	37.	Eluru	72	68	64	58	65
Uttar Pradesh	38.	Firozabad	247	211	213	186	137
Uttar Pradesh	39.	Gajraula	204	228	217	168	155
Bihar	40.	Gaya	79	82	76	71	97
Uttar Pradesh	41.	Ghaziabad	285	256	218	218	216
Uttar Pradesh	42.	Gorakpur	150	284	278	168	122
Maharashtra	43.	Greater Mumbai	161	132	106	98	106
Karnataka	44.	Gulburga / Kalaburgi	55	50	80	92	84

States	Sl. No.	Cities	Average concentration (F.Y.) of PM ₁₀ (µg/m ³) (integrated data)				
			2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Andhra Pradesh	45.	Guntur	66	49	58	56	58
Assam	46.	Guwahati	103	109	113	114	103
Madhya Pradesh	47.	Gwalior	126	133	136	125	109
West Bengal	48.	Haldia	92	95	69	93	94
West Bengal	49.	Howrah	139	145	144	117	125
Karnataka	50.	Hubli-Dharwad	79	85	78	69	68
Telangana	51.	Hyderabad	110	96	86	88	88
Madhya Pradesh	52.	Indore	82	85	91	96	103
Rajasthan	53.	Jaipur	172	144	124	112	126
Punjab	54.	Jalandhar	178	115	121	150	130
Maharashtra	55.	Jalgaon	70	70	57	53	59
Maharashtra	56.	Jalna	99	101	95	86	93
Jammu&Kashmir	57.	Jammu	157	157	145	186	170
Uttar Pradesh	58.	Jhansi	109	94	102	99	128
Rajasthan	59.	Jodhpur	189	218	167	155	161
Andhra Pradesh	60.	Kadapa	75	61	48	50	54
Himachal Pradesh	61.	Kala Amb	118	102	95	64	114
Odisha	62.	Kalinga Nagar	109	120	113	104	114
Uttar Pradesh	63.	Kanpur	227	217	200	169	170
Uttarakhand	64.	Kashipur	99	110	130	129	119
Punjab	65.	Khanna	142	104	113	101	106
Uttar Pradesh	66.	Khurja	195	202	226	194	173
Nagaland	67.	Kohima	127	103	81	84	69
Maharashtra	68.	Kolhapur	89	89	95	83	81
West Bengal	69.	Kolkata	147	128	101	99	105
Chattisgarh	70.	Korba	57	61	54	46	61
Rajasthan	71.	Kota	139	144	102	100	112
Andhra Pradesh	72.	Kurnool	79	64	56	52	61
Maharashtra	73.	Latur	82	90	84	54	57
Uttar Pradesh	74.	Lucknow	253	210	216	209	148
Punjab	75.	Ludhiana	168	123	115	129	150
Tamil Nadu	76.	Madurai	72	85	66	57	53
Punjab	77.	MandiGobindgarh	148	131	130	131	122
Uttar Pradesh	78.	Moradabad	222	218	243	206	155
Bihar	79.	Muzaffarpur	147	148	138	180	153
Assam	80.	Nagaon	82	97	92	90	104
Maharashtra	81.	Nagpur	100	93	80	68	68
Himachal Pradesh	82.	Nalagarh	146	78	113	90	84
Assam	83.	Nalbari	87	91	75	57	99
Telangana	84.	Nalgonda	59	59	59	60	70
Maharashtra	85.	Nashik	82	73	57	51	59
Maharashtra	86.	Navi Mumbai	88	80	54	52	97
Punjab	87.	NayaNangal	87	94	98	95	70
Andhra Pradesh	88.	Nellore	64	64	67	56	55
Uttar Pradesh	89.	Noida	229	252	213	197	203
Andhra Pradesh	90.	Ongole	65	64	59	49	52
Himachal Pradesh	91.	Paonta Sahib	84	86	98	78	90
Himachal Pradesh	92.	Parwanoo	66	61	60	44	35

States	Sl. No.	Cities	Average concentration (F.Y.) of PM ₁₀ (µg/m ³) (integrated data)				
			2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Telangana	93.	Patencheru	74	81	87	77	76
Punjab	94.	Patiala	106	98	107	102	109
Bihar	95.	Patna	172	211	170	143	145
Maharashtra	96.	Pune	102	103	81	69	85
Uttar Pradesh	97.	Raebareli	145	140	161	98	112
Chattisgarh	98.	Raipur	70	68	63	55	61
Andhra Pradesh	99.	Rajamahendra varam	85	77	61	69	68
Uttarakhand	100.	Rishikesh	129	133	136	77	117
Odisha	101.	Rourkela	99	118	112	96	106
Madhya Pradesh	102.	Sagar	73	75	71	64	79
Telangana	103.	Sangareddy	85	82	87	77	83
Maharashtra	104.	Sangli	87	80	70	71	60
Assam	105.	Silchar	49	48	45	43	45
Assam	106.	Sivasagar	73	68	55	48	47
Maharashtra	107.	Solapur	81	65	90	79	60
Andhra Pradesh	108.	Srikakulam	69	71	66	66	75
Jammu&Kashmir	109.	Srinagar		132	132	163	111
Himachal Pradesh	110.	Sunder Nagar	78	82	69	63	47
Gujarat	111.	Surat	130	175	109	93	100
Odisha	112.	Talcher	113	113	122	98	81
Maharashtra	113.	Thane	138	118	79	105	130
Tamil Nadu	114.	Trichy	88	109	58	40	45
Tamil Nadu	115.	Tuticorin	123	98	84	84	67
Rajasthan	116.	Udaipur	127	141	136	109	122
Madhya Pradesh	117.	Ujjain	93	113	90	104	114
Maharashtra	118.	Ulhasnagar	153	131	83	66	77
Gujarat	119.	Vadodara	133	199	108	95	121
Uttar Pradesh	120.	Varanasi	230	211	180	168	114
Andhra Pradesh	121.	Vijayawada	91	64	57	56	67
Andhra Pradesh	122.	Visakhapatnam	76	108	97	104	98
Andhra Pradesh	123.	Vizhianagaram	72	66	68	63	71