GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UN-STARRED QUESTION N0. 1076
TO BE ANSWERED ON 22.11.2019

Pollution in Cities

1076.   SHRI SANTOKH SINGH CHAUDHARY:
SHRI HARISH DWIVEDI:
ADV. ADOOR PRAKASH:
SHRI NARANBHAI KACHHADIYA:

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

(a)   whether India is home to some of the most polluted cities in the world and if so, the details thereof;

(b)   whether the Government has undertaken any study to find the causes of the pollution and its effects on Indian people and if so, the details thereof and if not, the reasons therefor;

(c)   whether the Government has installed Air Quality Index meters in the country which shows pollution level and if so, the details thereof;

(d)   whether the Government proposes to adopt alternative measures like artificial rain in case of severe pollution condition and if so, the details thereof;

(e)   whether the Union/State Governments have taken action on the directives of the National Green Tribunal to modify the National Clean Air Programme and if so, the details thereof; and

(f)   the short-term and long-term action plan formulated by the Government to reduce the pollution level in the country including the National Capital Region of Delhi?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI BABUL SUPRIYO)

(a)   Based on Ambient Air Quality data monitored during 2014-2018 under National Air Quality Monitoring Programme (NAMP), CPCB has identified 122 cities as "Non-attainment cities". The ambient air quality data of the 122 Non-attainment cities is given at **Annexure-I.**

(b)   As per several studies conducted in major cities across the country the major sources of Air pollution are *inter alia*road dust suspension, vehicles, biomass/garbage burning, construction, industries, etc details are at**AnnexureII**.

Although, there are no conclusive data available in the country to establish direct correlation of death/disease exclusively due to air pollution. The air pollution is one of the factors affecting respiratory ailments and associated diseases. Health

effects of air pollution are synergistic manifestation of factors which include food habits, occupational habits, socio-economic status, medical history, immunity, heredity, etc., of the individuals.

(c) There are 205 Continuous Ambient Air Quality Monitoring Stations (CAAQMS)installed in 114 cities across the country,which provides the ambient air quality data for computing the Air quality Index.

(d) to (f) The Central Government has launched National Clean Air Programme (NCAP) under the Central Sector "Control of Pollution" Scheme as a long-term, time-bound, national level strategy to tackle the air pollution problem across the country in a comprehensive manner with targets to achieve 20 % to 30 % reduction in PM_{10} and $PM_{2.5}$ concentrations by 2024 keeping 2017 as the base year for the comparison of concentration. Further, Graded Response Action Plan (GRAP) and Comprehensive Action Plan (CAP) was notified by the Ministry for strict implementation by concerned agenciesto reduce the pollution levels in National Capital Region of Delhi.

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Ambient air quality in Non-Attainment cities (122 cities) of the country with respect to SO₂, NO₂, PM₁₀ during 2018 under NAMP (manual stations)

Sl. No.	State & UTs	Sl. No.	City / town / village	Annual average concentration in $\mu g/m^3$		
				SO_2	NO_2	PM_{10}
1.	Andhra Pradesh	1.	Anantapur	4	19	71
		2.	Chitoor	5	24	62
		3.	Eluru	5	22	67
		4.	Guntur	5	22	49
		5.	Kadapa	5	17	61
		6.	Kurnool	4	18	66
		7.	Nellore	5	22	63
		8.	Ongole	5	21	66
		9.	Rajahmundry	9	20	94
		10.	Srikakulam	9	20	71
		11.	Vijaywada	5	21	77
		12.	Vishakhapatnam	10	20	77
		13.	Vizianagaram	10	21	65
2.	Assam	14.	Guwahati	8	18	112
		15.	Nagaon	7	17	96
		16.	Nalbari	7	17	97
		17.	Silchar	6	11	49
		18.	Sivasagar	7	14	72
3.	Bihar	19.	Gaya	12	21	89
		20.	Muzaffarpur	14	24	139
		21.	Patna	5	51	207
4.	Chandigarh (UT)	22.	Chandigarh	2	17	102
5.	Chattisgarh	23.	Durg-Bhillainagar	8	19	84
		24.	Korba	10	19	59
		25.	Raipur	14	20	65
6.	Delhi (UT)	26.	Delhi*	15	44	243
7.	Gujarat	27.	Ahmedabad	16	29	236
		28.	Surat	22	29	176
		29.	Vadodara	20	25	188
8.	Himachal Pradesh	30.	Baddi	2	31	164
		31.	Damtal	2	10	62
		32.	Kala Amb	3	14	104
		33.	Nalagarh	2	24	148
		34.	Paonta Sahib	3	14	88
		35.	Parwanoo	2	5	63
		36.	Sunder Nagar	2	10	84
9.	Jammu & Kashmir (UT)	37.	Jammu	4	19	165
		38.	Srinagar	-	-	153
10.	Jharkhand	39.	Dhanbad	14	37	264

Sl. No.	State & UTs	Sl. No.	City / town / village	Annual average concentration in $\mu g/m^3$		
				SO_2	NO_2	PM_{10}
11.	Karnatka	40.	Bangalore	2	30	90
		41.	Devanagere	4	6	44
		42.	Gulburga	2	14	55
		43.	Hubli-Dharwad	5	23	75
12.	Madhya Pradesh	44.	Bhopal	7	14	135
		45.	Dewas	16	20	68
		46.	Gwalior	13	21	134
		47.	Indore	10	19	88
		48.	Sagar	3	14	75
		49.	Ujjain	13	15	83
13.	Maharashtra	50.	Akola	12	12	73
		51.	Amravati	16	17	104
		52.	Aurangabad	13	35	70
		53.	Badlapur	24	67	144
		54.	Chandrapur	4	30	149
		55.	Jalgaon	13	34	74
		56.	Jalna	11	43	103
		57.	Kolhapur	20	35	90
		58.	Latur	5	22	95
		59.	Mumbai	2	21	166
		60.	Nagpur	10	28	103
		61.	Nashik	12	21	85
		62.	Navi Mumbai	19	47	71
		63.	Pune	37	75	106
		64.	Sangli	10	46	84
		65.	Solapur	15	33	71
		66.	Thane	17	44	108
		67.	Ulhasnagar	22	58	122
14.	Meghalaya	68.	Byrnihat	26	12	166
15.	Nagaland	69.	Dimapur	2	8	134
		70.	Kohima	2	5	104
16.	Odisha	71.	Angul	9	25	101
		72.	Balasore	4	11	86
		73.	Bhubneshwar	2	17	99
		74.	Cuttack	4	31	114
		75.	Kalinga Nagar	2	11	118
		76.	Rourkela	8	14	108
		77.	Talcher	10	29	110
17.	Punjab	78.	Amritsar	13	34	177
		79.	Dera Baba Nanak	7	12	81
		80.	DeraBassi	6	13	95
		81.	Gobindgarh	7	38	121
		82.	Jalandhar	11	20	153
		83.	Khanna	8	32	135

Sl. No.	State & UTs	Sl. No.	City / town / village	Annual average concentration in μg/m³		
				SO$_2$	NO$_2$	PM$_{10}$
		84.	Ludhiana	9	32	162
		85.	NayaNangal	6	12	91
		86.	Patiala	5	11	98
18.	Rajasthan	87.	Alwar	10	34	182
		88.	Jaipur	8	32	165
		89.	Jodhpur	7	24	223
		90.	Kota	7	28	152
		91.	Udaipur	9	30	147
19.	Tamilnadu	92.	Trichy	17	23	110
		93.	Tuticorin	14	11	102
20.	Telangana	94.	Hyderabad	5	30	105
		95.	Nalgonda	6	24	60
		96.	Patencheru	6	23	81
		97.	Sangareddy	6	38	81
21.	Uttar Pradesh	98.	Agra	4	22	209
		99.	Allahabad	4	45	231
		100.	Anpara	18	28	191
		101.	Bareily	14	22	233
		102.	Firozabad	8	31	226
		103.	Gajraula	20	33	224
		104.	Ghaziabad	21	43	245
		105.	Jhansi	6	18	96
		106.	Kanpur	7	47	218
		107.	Khurja	21	20	214
		108.	Lucknow	7	30	217
		109.	Moradabad	20	34	227
		110.	Noida	20	52	264
		111.	Raebareli	11	17	141
		112.	Varanasi	9	34	189
22.	Uttarakhand	113.	Dehradun	25	28	217
		114.	Kashipur	14	23	105
		115.	Rishikesh	21	25	133
23.	West Bengal	116.	Asansol	13	35	146
		117.	Barrackpore	10	49	108
		118.	Durgapur	12	34	141
		119.	Haldia	14	38	99
		120.	Howrah	11	72	179
		121.	Kolkata	6	44	148
		122.	Raniganj	12	35	147

NB. * - CAAQMS data. NAAQS (annual): SO$_2$=50 μg/m³, NO$_2$=40 μg/m³, PM$_{10}$=60 μg/m³ (Residential / industrial / rural / other areas) and SO$_2$=20 μg/m³, NO$_2$=30 μg/m³, PM$_{10}$=60 μg/m³, PM$_{2.5}$ = 40 μg/m³ (Ecologically sensitive area)

Source Apportionment studies:

TERI ARAI Study (Aug 2018)-Delhi				
Source	% contribution (PM$_{10}$)		% contribution (PM$_{2.5}$)	
	Winter	Summer	Winter	Summer
Residential	9%	8%	10%	8%
Agri. Burning	4%	7%	4%	7%
Industry	27%	22%	30%	22%
Dust (soil, road, and const.)	25%	42%	17%	38%
Transport	24%	15%	28%	17%
Others	10%	7%	11%	8%

CPCB Study (2010) Bangalore	
Source	% contribution (PM$_{10}$)
Road Dust	45.6 - 55.6
Secondary	2.4 - 11.1
Transport	10.9 - 22.6
DG Sets	7.5 - 18.2
Domestic	2.8 - 6.4
Industries	27.2

CPCB Study (2010) Chennai	
Source	% contribution (PM$_{10}$)
Road Dust	6.3 - 27
Kerosene	2.9 - 6.8
Coal	4.2 - 7.1
Bakeries	3.5 - 5.4
Transport	35.1 - 48.3
DG Set	13.8 - 15.6
Domestic	3.9 - 20.5

CPCB Study (2010) Kanpur	
Source	% contribution (PM$_{10}$)
Road Dust	7.2 - 9.4
Garbage burning	17.7 - 30.2
Secondary	15.6 - 18.7
Industries	2.3 - 18.9
Transport	14.7 - 16.8
DG Set	5.2 - 8.5
Domestic	15.1 - 25.8

CPCB Study (2010) Pune	
Source	% contribution (PM$_{10}$)
Road Dust	49.2 - 64.5
Trash burning	2.9 - 8.6
Construction	6.5 - 27.9
Transport	2 - 9.8
DG Set	3.3 - 4.2
Domestic	8.3 - 13.2

CPCB Study (2010) Mumbai	
Source	% contribution (PM$_{10}$)
Soil	28.6 - 46.8
Marine	1.7 - 6
Wood combustion	8.4 - 15.8
Fuel combustion	6.4
LPG combustion	2.5 - 18.1
Transport	7.8 - 26
Coal combustion	4.2
SIA	10.1 - 21.3
Petroleum refinery	5.1
Biomass burning	23