GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION No. 1167
TO BE ANSWERED ON 28.06.2019

Air Pollution

1167. SHRI NALIN KUMAR KATEEL

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

(a) whether the Government has taken note that air pollution has emerged as the largest environment risk factor in the country;
(b) if so, the details thereof; and
(c) whether the Government is initiating effective interventions to improve air quality and if so, the details thereof; and
(d) whether the Government is taking any steps to involve experts across disciplines to make a concerted and collaborative efforts at all levels to effectively curb pollution and if so, the details thereof?

ANSWER

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

(a) & (b) Air pollution is a serious environmental concern in the country. The ambient air quality data for metropolitan cities / million plus urban agglomerations during 2016- 2018 is given in **Annexure-I**. With respect to $PM_{2.5}$, trends are available for 17 cities and out of which, 08 cities showed an increasing trend, 04 cities showed a decreasing concentration, 05 cities showed a fluctuating trend. With respect to PM_{10}, 14 cities showed an increasing trend, 14 cities showed a decreasing concentration, 22 cities showed a fluctuating trend.

(c) The Central Government has taken a number of regulatory measures for prevention, control and abatement of air pollution in the country.

Action Plans for Improvement of Air Quality in Delhi NCR:

(i) Graded Response Action Plan (GRAP) was notified on January 12, 2017, for prevention, control and abatement of air pollution in Delhi and NCR. It identifies graded measures and implementing agencies for response to four AQI categories, namely, Moderate to Poor, Very Poor, Severe and Severe + or Emergency.

(ii) The Central Government has notified a Comprehensive Action Plan (CAP) in 2018 identifying timelines and implementing agencies for actions identified for prevention, control and mitigation of air pollution in Delhi and NCR.

Action Plans for Improvement of Air Quality of Other Cities:

(i) Ministry of Environment, Forest and Climate Change has launched National Clean Air Programme (NCAP) in January 2019 to tackle the problem of air pollution in a comprehensive manner with targets to achieve 20 to 30 % reduction in PM10 and PM2.5 concentrations by 2024. This is keeping 2017 as the base year for the comparison of concentration. The overall objective is to augment and evolve effective ambient air quality monitoring network across the country besides ensuring comprehensive management plan for prevention, control and abatement of air pollution and enhancing public awareness and capacity building measures.

(ii) 102 non-attainment cities have been identified based on ambient air quality data for the period 2011 – 2015 and WHO report 2014/2018. A total of 86 city specific action plans have been approved for ground implementation.

The Central Government has taken several measures for prevention, control and abatement of air pollution across the country. These include-

Monitoring

- Setting up of monitoring network for assessment of ambient air quality. Central Presently, ambient air quality is being monitored at 779 locations covering 339 cities in 29 states & 6 Union Territories across the country under National Air Quality Monitoring Programme (NAMP). Further, real time monitoring is taking place at 170 locations in 102 cities in 18 States/UTs.
- Notification of National Ambient Air Quality Standards.
- Launch of National Air Quality Index.
- Implementation of Air Quality Early Warning System for Delhi in October, 2018 in association with Ministry of Earth Sciences (MoES).

Transport

- Leapfrogging from BS-IV to BS-VI fuel standards since 1st April, 2018 in NCT of Delhi and from by 1st April, 2020 in the rest of the country.
- Introduction of cleaner / alternate fuels like gaseous fuel (CNG, LPG etc.), ethanol blending.
- Promotion of public transport and improvements in roads and building of more bridges to ease congestion on roads.
- Operationalisation of Eastern Peripheral Expressway & Western Peripheral Expressway to divert non-destined traffic from Delhi.
- Streamlining the issuance of Pollution Under Control Certificate.
- Environment Protection Charges (EPC) have been imposed on diesel vehicles with engine capacity of 2000cc and above in Delhi NCR.

Industry

- Badarpur thermal power plant has been closed from 15th October, 2018.
- Notification of stricter emission norms for power plants.
- All brick kilns have been shifted to zig-zag technology in Delhi and NCR.
- Installation of on-line continuous (24x7) monitoring devices all red category industries in Delhi and NCR.
- Revision of emission standards for industrial sectors from time to time.

- Ban on pet coke and furnace oil - monitoring of use of pet coke in Lime Kilns/Cement Kilns and Calcium Carbide Industry in Delhi and NCR States.

Biomass and Solid Waste

- A new 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' for the period from 2018-19 and 2019-20 has been launched.
- Banning of burning of biomass/garbage.
- 3 Waste-to-Energy (W-t-E) plants are currently operational in Delhi with atotal capacity of 5100 Tonnes Per Day (TPD).
- Notifications of 6 waste management rules covering solid waste, plastic waste, e-waste, bio-medical waste, C&D waste and hazardous wastes issued in 2016.

Dust

- Notifications regarding dust mitigation measures for construction and demolition activities.
- Number of mechanised road sweeping machines has been increased significantly and presently 60 machines are deployed for cleaning of roads in Delhi.

Public Outreach

- Ministry of Environment, Forest & Climate Change and Delhi Government launched Clean Air for Delhi Campaign from 10th – 23rd Feb 2018 and to check air polluting activities pre and post Diwali, a special campaign called "Clean Air Campaign" during November 01, 2018 to November 10, 2018.
- Ministry is promoting peoples participation and awareness building among citizens for environmental conservation through Green Goods 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.
- Development of mechanism for redressal of public complaints regarding air pollution issues in Delhi and NCR (through 'Sameer App', 'Emails'(aircomplaints.cpcb@gov.in) and 'Social Media Networks' (Facebook and Twitter) etc.

(d) Leading academic institutions like IITs, Central Universities etc have been identified as technical partners for State Pollution Control Boards (SPCB) to provide science based inputs for implementation of NCAP in States. Memorandums of Understanding (MoUs) have been signed by identified technical experts from these institutions and nodal officers of SPCBs for the States with non-attainment cities for this collaboration. List of technical experts is enclosed as **Annexure- II**. Further, Expert Groups have been constituted by Central Pollution Control Board for providing technical advice on air, water and waste management efforts and on specific issues of concern (**Annexure-III).**

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Annexure-I

Air quality status of million plus/ urban agglomerations cities for 2016, 2017 and 2018 under NAMP (Manual)

(Annual average in µg/m^3)

Sl.No	State	Sl.No	City	2016				2017				2018			
				SO_2	NO_2	PM 10	PM 2.5	SO_2	NO_2	PM 10	PM 2.5	SO_2	NO_2	PM 10	PM 2.5
1.	Andhra Pradesh	1.	Vijaywada	6	44	102	-	6	29	99	-	5	21	77	29
		2.	Vishakhapatnam	8	18	77	-	9	17	73	-	10	20	77	49
2.	Bihar	3.	Patna	4	32	212	-	5	39	156	-	5	51	207	
3.	Chandigarh	4.	Chandigarh	2	21	105	123	2	16	109	64	2	17	102	50
4.	Chattisgarh	5.	Durg-Bhillainagar	9	23	108	-	8	21	97	-	8	19	84	-
		6.	Raipur	12	31	148		10	27	103		14	20	65	
5.	Delhi	7.	Delhi	7	66	278	118	7	68	241	106	6	73	223	121
6.	Gujarat	8.	Ahmedabad	14	27	108	34	14	29	120	38	16	29	236	73
		9.	Rajkot	13	21	92	32	16	22	106	37	19	23	203	64
		10.	Surat	13	22	92	31	16	26	106	36	22	29	176	57
		11.	Vadodara	14	23	92	30	16	23	108	36	20	25	188	60
7.	Haryana	12.	Faridabad	-	-	-	-	-	-	-	-	-	-	-	-
8.	Jammu & Kashmir	13.	Srinagar	-	-	-	-	-	-	-	-	-	-	153	-
9.	Jharkha	14.	Dhanbad	15	37	226	-	15	37	238	-	14	37	264	-

	nd	15.	Jamshedpur	36	45	136	-	36	45	131	-	37	46	128	-
		16.	Ranchi	20	37	196	-	19	37	142	-	18	36	122	-
10.	Karnataka	17.	Bangalore	3	31	103	51	2	31	92	46	2	30	90	47
11.	Kerala	18.	Kochi	2	20	48	-	2	19	51	-	3	16	57	-
		19.	Kollam	4	8	46	-	3	6	43	-	3	5	47	-
		20.	Kozhikode	2	18	51	-	2	18	47	-	2	10	54	6
		21.	Malapuram	2	17	37	-	2	21	32	-	2	26	31	-
		22.	Thiruvananthapuram	10	25	53	-	10	26	49	-	9	24	49	-
		23.	Thissur	2	5	54	-	2	5	56	-	3	9	41	-
12.	Madhya Pradesh	24.	Bhopal	3	15	89	27	4	15	93	41	7	14	135	59
		25.	Gwalior	10	14	96	52	10	17	110	47	13	21	134	62
		26.	Indore	11	20	95	54	11	21	80	43	10	19	88	41
		27.	Jabalpur	10	23	71	32	10	21	74	23	7	17	119	43
13.	Maharashtra	28.	Aurangabad	14	39	92	-	10	33	83	-	13	35	70	-
		29.	Mumbai	6	30	119	-	3	18	151	40	2	21	166	46
		30.	Nagpur	16	26	118	-	9	27	102	-	10	28	103	44
		31.	Nashik	13	27	85	-	12	22	81	-	12	21	85	-
		32.	Pune	28	78	107	-	21	65	102	-	37	75	106	-
		33.	Thane	18	60	122	-	18	47	125	-	17	44	108	-
		34.	Vasai-virar	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
14.	Punjab	35.	Amritsar	12	29	194	-	11	27	168	-	13	34	177	-
		36.	Ludhiana	11	25	139	-	10	28	162	-	9	32	162	-

15.	Rajasthan	37.	Jaipur	8	33	199	-	8	30	177	-	8	32	165	-
		38.	Jodhpur	6	23	168	-	6	21	180	-	7	24	223	-
		39.	Kota	7	30	109	-	8	28	130	-	7	28	152	-
16.	Tamilnadu	40.	Chennai	10	18	65	25	9	17	62	32	9	16	78	34
		41.	Coimbatore	6	24	59	35	5	26	49	34	6	23	54	32
		42.	Madurai	15	24	76	38	14	23	67	30	12	20	84	34
		43.	Trichy	12	20	95	27	12	20	86		17	23	110	53
17.	Telangana	44.	Hyderabad	5	27	101	49	6	28	108	54	5	30	105	55
18.	Uttar Pradesh	45.	Agra	5	22	198	-	4	19	185	124	4	22	209	106
		46.	Allahabad	4	37	196	-	4	40	140	-	4	45	231	-
		47.	Ghaziabad	15	28	235	-	22	34	280	-	21	43	245	103
		48.	Kanpur	7	39	217	-	7	45	224	-	7	47	218	-
		49.	Lucknow	8	27	214	-	8	26	246	102	7	30	217	108
		50.	Meerut	7	55	157	-	7	52	153	-	7	58	177	-
		51.	Varanasi	11	32	256	-	10	38	244	-	9	34	189	-
19.	West Bengal	52.	Asansol	13	42	211	88	12	37	163	67	13	35	146	58
		53.	Kolkata	4	49	113	70	6	41	120	71	6	44	148	86

NB. NA- no monitoring station in the city, '-' data not available, National Ambient Air Quality Standard (NAAQS) for Residential, Industrial, Rural and others Areas (Annual average) for SO_2 = 50 µg/m^3, NO_2 = 40 µg/m^3, PM_{10} = 60 µg/m^3 & $PM_{2.5}$ = 40 µg/m^3 and SO_2 = 20 µg/m^3, NO_2 = 30 µg/m^3, PM_{10} = 60 µg/m^{3}and $PM_{2.5}$ = 40 µg/m^3 for Ecologically sensitive area. The data furnished in the table for year 2018 is as available on date.

Annexure - II

NCAP, City Specific Interventions & Action Plans, Nodal - Prof.SachidanandTripathi, IIT Kanpur			
SNo.	**City**	**State**	**State coordinator**
1	Patna	Bihar	Dr.SubrataHait, Department of Civil & Environmental Engineering, IIT Patna
2	Gaya		
3	Muzaffarpur		
4	Angul	Odhisa	Dr. V. Vinoj, School of Earth, Ocean & Climate, IIT Bhubaneshwar
5	Balasore		
6	Bhubaneswar		
7	Cuttack		
8	Rourkela		
9	Talcher		
10	Kolkata	West Bengal	Dr.AbhijitChaterjee, Environmental Sciences Section, Bose Institue
11	Guwahati	Assam	Dr, SharadGokhale, Department of Civil Engineering, IIT Guwahati
12	Nagaon		
13	Nalbari		
14	Sibsagar		
15	Silchar		
16	Guntur	Andhra Pradesh	Dr. Suresh Jain, Department of Civil Engineering, IIT Tirupati
17	Kurnool		
18	Nellore		
19	Vijayawada		
20	Vishakhapatnam		
21	Ahmedabad	Gujrat	Dr.LokeshSahu, Space & Atmospheric Science Division, Dr.NeerajRastogi, Geosciences Division, Physical Research Laboratory
22			
23	Surat		

24	Tuticorin	Tami Nadu	Dr. Sachin S. Gunthe, Department of Civil Engineering, IIT Madras
25	Baddi	Himachal Pradesh	Ankit Tandon, Department of Environmental Sciences, Himachal Pradesh Central University
26	Damtal		
27	Kala Amb		
28	Nalagarh		
29	Paonta Sahib		
30	Parwanoo		
31	Sunder Nagar		
32	DeraBassi	Punjab	Dr.RavindraKhaiwal, School of Public Health, Department of Community Medicine, PGIMER
33	Gobindgarh		
34	Jalandhar		
35	Khanna		
36	Ludhiana		
37	NayaNangal		
38	Pathankot/ Dera Baba		
39	Patiala		
40	Amritsar		
41	Chandigarh	Chandigarh	
42	Dhanbad	Jharkhand	Dr. Suresh Pandian Elumalai, Department of Environmental Science & Engineering, IIT, Indian School of Mines
43	Kashipur	Uttarakhand	Dr. B. Gurjar, Department of Civil Engineering & Centre for Excellence in Transportation Systems, IIT Roorkee
44	Rishikesh		
45	Akola	Maharashtra	Dr. Abhishek Chowdhury, Department of Mechanical Engineering, IIT Powai
46	Amravati		
47	Aurangabad		
48	Badlapur		

49	Chandrapur		
50	Jalgaon		
51	Jalna		
52	Kolhapur		
53	Latur		
54	Mumbai		
55	Nagpur		
56	Nashik		
57	Navi Mumbai		
58	Pune		
59	Sangli		
60	Solapur		
61	Ulhasnagar		
62	Jammu	Jammu& Kashmir	Dr. Shweta Yadav, Department of Environmental Sciences, Central University of Jammu
63	Shrinagar		
64	Agra		
65	Allahabad		
66	Anpara		
67	Bareily		
68	Firozabad		
69	Gajraula		
70	Ghaziabad		
71	Jhansi		
72	Kanpur		
73	Khurja		
74	Lucknow		
75	Muradabad	Uttar Pradesh	Prof.SachidanandTripathi, IIT Kanpur

76	Noida		
77	Raebareli		
78	Varanasi		
79	Hyderabad	Telangana	Dr. Vijay Kanawade, IniversityCenter for Earth, Ocean & Atmospheric Sciences, University of Hyderabad, Dr. Asif Qureshi, Department of Civil Engineering, IIT Hyderabad
80	Nalgonda		
81	Pattencheru		
82		Haryana	Dr.Mayank Kumar, Department of Mechanical Engineering, IIT Delhi