1	2	3
22.	Jodhpur	2
23.	Hyderabad	5
24.	Kolkata	-
25.	Chandigarh	2
26.	Bangalore	4
27.	Dhanbad	2
28.	Twin city Bhubaneswar and Cuttack	3
	TOTAL	65

Air pollution in the country

2399. SHRI SANJAY SINGH: Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

(a) details of increase in air pollution in India in comparison with global scenario;

(b) effects of air pollution on human health specially in metropolitan cities; and

(c) details of steps to be taken to control the air pollution?

THE MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE (SHRI BABUL SUPRIYO): (a) The ambient air quality data for metropolitan cities / million plus urban agglomerations during 2016-18 is given in Statement (*See* below). Analysis of ambient air quality data during 2016-18 revealed that SO_2 levels were within the National Ambient Air Quality Standard (NAAQS) in all 50 cities during 2016-18. With respect to NO_2, 17 cities showed an increasing trend, 16 cities showed a decreasing concentration, 16 cities showed a fluctuating trend and 1 city revealed steady concentration. With respect to PM_{10}, 14 cities showed an increasing trend, 14 cities showed a decreasing concentration, 22 cities showed a fluctuating trend. With respect to $PM_{2.5}$, trends are available for 17 cities and out of 17 cities, 08 cities showed an increasing trend, 04 cities showed a decreasing concentration, 05 cities showed a fluctuating trend.

(b) Though air pollution is one of the triggering factors for respiratory ailments and associated diseases, there are no conclusive data available in the country to establish direct correlation of death/ disease exclusively due to air pollution.

(c) The Central Government has taken a number of initiatives for prevention, control and abatement of air pollution. These include.

Plans and Directions

- Comprehensive Action Plan (CAP) identifying timelines and implementing agency for actions identified for prevention, control and mitigation of air pollution in Delhi and NCR has been notified.
- Graded Response Action Plan for different levels of air pollution in Delhi and NCR has been notified.
- National Clean Air Programme (NCAP) under the Central Sector "Control of Pollution" Scheme as a time bound national level strategy to tackle air pollution problem across the country in comprehensive manner has been launched.
- 102 non-attainment cities for formulation and implementation of city specific action plan under NCAP have been identified.

Monitoring

- Setting up of monitoring network for assessment of ambient air quality.
- 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 and Western Peripheral Expressway to divert non-destined traffic from Delhi.
- Streamlining the issuance of Pollution Under Control Certificate.

Industry

- Badarpur thermal power plant has been closed from 15th October, 2018.
- 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.

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.
- 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 and Climate Change (MoEF&CC) 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.

As a result of these steps, in Delhi, the number of 'Good', 'Satisfactory', and 'Moderate' days has increased to 159 in 2018, as compared to 152 in 2017 and 106 in 2016, and the number of 'Poor', 'Very Poor' and 'Severe' days has reduced to 206, compared to 213 in 2017 and 246 in 2016. Analysis of Ambient air quality data of Delhi monitored under Continuous Ambient Air Quality Monitoring Stations (CAAQMS) during 2016-2018 revealed that there is reduction of 7.3 % in PM2.5 levels in 2018 over 2017 and 14.8% over 2016 and reduction of 8.6% in PM10 levels in 2018 over 2017 and 16.5% over 2016.

Statement

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	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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.	Chhattisgarh	5.	Durg-Bhillai nagar	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 and Kashmir	13.	Srinagar	-	-	-	-	-	-	-	-	-	-	153	-
9.	Jharkhand	14.	Dhanbad	15	37	226	-	15	37	238	-	14	37	264	-
		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.	Thiruvanantha-puram	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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		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	-
		40.	Chennai	10	18	65	25	9	17	62	32	9	16	78	34

16.	Tamil Nadu	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
		45.	Agra	5	22	198	-	4	19	185	124	4	22	209	106
		46.	Allahabad	4	37	196	-	4	40	140	-	4	45	231	-
18.	Uttar Pradesh	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_{25} = 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_{25} = 40 µg/m^3 for Ecologically sensitive area. The data furnished in the table for year 2018 is as available on date.