

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UN-STARRED QUESTION NO. 2064
TO BE ANSWERED ON 12.02.2021

Air Pollution in Urban and Industrial Areas

2064. SHRI HEMANT SRIRAM PATIL:
SHRI RAHUL RAMESH SHEWALE:
SHRI OMPRAKASH BHUPALSINH alias PAWAN RAJENIMBALKAR:

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

- (a) whether annual average of parameters of air pollution in urban and industrial areas have reached/crossed alarming levels in major cities of the country including Delhi;
- (b) if so, the details thereof, city-wise and the reasons therefor along with the reaction of the Government thereto;
- (c) the measures taken/being taken by the Government to curb air pollution in the said cities along with funds provided for the purpose during each of the last three years and the current year, State/UT-wise;
- (d) the modern techniques adopted by the Government to make the country pollution free along with achievements thereof; and
- (e) the other steps taken/being taken by the Government to bring air pollution under the permissible limits across the country along with achievements thereof?

ANSWER

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

(a) and (b) Ambient air quality in cities including Delhi in the country is monitored under National Ambient Air Quality monitoring (NAMP) programme through a network of manual and continuous ambient air quality monitoring stations. During year 2019, out of 50 metropolitan cities, all the cities were within National Standard with respect to parameter SO₂. 42 cities with respect to NO₂, 7 cities with respect to PM₁₀ were within the National Standard. The number of metro cities exceeding and within National Ambient Air Quality Standard (NAAQS) on the basis of annual average data of 2019 is given in Annexure- I.

Analysis of 50 metro cities / million plus urban agglomerations Ambient air quality data revealed that, SO₂ levels were within the National Ambient Air Quality Standard (NAAQS) in all cities during 2017-19. With respect to NO₂, 15 cities showed an increasing trend, 14 cities showed a decreasing concentration and 21 cities showed a fluctuating trend. With respect to PM₁₀, 06 cities showed an increasing trend, 15 cities showed a decreasing concentration, 29 cities showed a fluctuating trend. The three years ambient air quality data of metropolitan cities is given in Annexure – II.

Air pollution is a complex issue and apart from local emissions (like vehicular emission, road dust, burning of biomass/crop/garbage/MSW, Construction activities, industrial activity etc.) due to urbanization and related economic activities it also dependent on several other factors such as meteorology and regional transport of pollutants.

Based on air quality data, 122 non-attainment cities have been identified, and City Specific Clean Air Action Plans have been approved by CPCB for 111 non-attainment cities.

With respect to air pollution, Central Government is implementing National Clean Air Programme (NCAP) 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 PM₁₀ and PM_{2.5} concentrations by 2024 keeping 2017 as the base year for the comparison of concentration. Under NCAP, city specific action plans are prepared that highlighted the major reasons of air pollution in the respective cities.

(c), (d) and (e) City action plans for 111 cities have been prepared and approved for implementation. These action plans focus on city specific short/medium/long term actions to control air pollution from sources such as vehicular emission, road dust, burning of biomass/crop/garbage/Municipal Solid Waste, construction activities, industrial emission, etc. The city action plans of the non-attainment cities are available on www.cpcb.nic.in. The major measures being taken by the Government to curb air pollution are focused on:

- Strengthening of air quality monitoring network
- City Action plan based on Source Apportionment Studies
- Emission inventory
- Identification of hotspots
- Environmental regulatory activities
- Establishing and functioning of Air Quality Management cell at ULBs
- Public Grievance Redressal Portals to enable citizens to flag air quality issues in the city for appropriate action.
- Preparation of Emergency Response Systems to prevent air pollution emergencies
- More frequent compliance verification of emission norms
- Awareness and capacity building programs
- Three national and state level committees have been constituted namely Steering Committee, Monitoring Committee and Implementation Committee for overall guidance and direction for effective implementation of NCAP, reviewing proposed interventions, and to evaluate the progress made.

The Government has made the following budget provisions to curb air pollution in the said cities:

- Rs. 336.8 crore (Rs. 111 crores in the year 2020-21, Rs. 224.74 Crores in 2019-20 and Rs. 1.06 Crore in the year 2018-19) have been sanctioned to non-attainment cities under NCAP for initiating actions such as expansion of monitoring network, construction and demolition waste management facilities, non-motorised transport infrastructure, green buffers, mechanical street sweepers, composting units etc. The Details of Grants released to States for the year 2019-20 and 2020-21 is given at Annexure-III.
- ₹2200 crores have been released in the Budget of FY 2020-21 to tackle the burgeoning problem of air pollution. Further, an amount of Rs. 2,217 crores has been allocated for

42 urban centres with a million-plus population in this budget for improvement of air quality. The amount sanctioned as per recommendations of XV Finance Commission 2020-21 is given at part IV of Annexure-III.

- Rs. 7365.82 Crores was allocated for Solid Waste Management under Urban Swachh Bharat Mission from 2014-2019.
- A provision of Rs. 1,41,678 crores over a period of 5 years from 2021-2026 has been made for Urban Swachh Bharat Mission 2.0 with a focus on air pollution reduction by effectively managing waste from construction-and-demolition activities and bio-remediation of all legacy dump sites.
- Under Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme Rs. 1436 Crore have been allocated for non-motorised urban transport and Rs. 1768 Crores for green spaces and parks.
- ₹ 1726.67 crores have been released for crop residue management in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi, during the year 2018-21.

Various projects have been undertaken as a pilot studies regarding several techniques for controlling air pollution. All these projects are initiated in Delhi. Details of these studies are as under:

- i. 54 Air Purification units (WAYU) have been installed and operated of at 5 traffic intersections in Delhi for reduction in air pollution, caused due to heavy vehicular movement, at these locations. Efficiency of WAYU was observed as 32 – 49% for PM10 and 16 - 25% for PM2.5 at the outlet. CPCB is considering operation of new scaled up designs of these air purification units in Delhi in the upcoming winters. A revised proposal has been sought from CSIR-NEERI.
- ii. Demonstration project for usage of dust suppressants were conducted at 03 selected sites. About 50 - 60% initial reduction in dust concentration was observed at these sites after application of dust suppressant and about 30% reduction in dust concentration was observed for up to 6 hrs (PM10, PM2.5 and PM1). In view of the effectiveness of dust suppressant, an advisory was issued by CPCB to State Pollution Control Boards in NCR to consider issuing instructions to road owning agencies and govt. construction agencies for its use at unpaved roads, roads with heavy traffic and construction sites. Same has been reported to be used by EDMC at Mandoli Jail road, Sewadham road, Mandoli-Saboli Industrial area road.
- iii. A project was awarded for installation of a smog tower to IIT Bombay at AnandVihar, Delhi under the orders of the Hon'ble Supreme Court. Smog towers are large/medium scale air purification systems/structures designed to reduce air pollution. The smog tower at AnandVihar is intended for localized reduction in air pollution levels. 40 fans would be installed in the tower to provide a total flow of 960 m³/s and Clean Air Delivery Rate (CADR) of 864 m³/s, i.e. with 90% system filtration efficiency. Tata Projects Ltd is implementing the project on ground with technical support from IIT Bombay and, IIT Bombay in collaboration with IIT Delhi will validate the performance of the Tower for a period of two years.

The other measures taken/being taken by the Government to bring air pollution under the permissible limits across the country inter alia include:

- i. Vehicular Pollution Control

- Leapfrogging from BS-IV to BS-VI norms for fuel and vehicles since April, 2020.
 - Network of Metro rails for public transport are enhanced and more cities are covered.
 - Development of Expressway and Highways are also reducing the fuel consumption and pollution.
 - Introduction of cleaner/alternate fuels like CNG, LPG, ethanol blending in petrol.
 - Faster Adoption and Manufacturing of Electric Vehicles (FAME) -2 scheme has been rolled out
 - 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.
- ii. Industrial Pollution Control
- Stringent emission norms for Coal based Thermal Power Plants (TPPs).
 - Pet coke and furnace oil have been banned as fuel in Delhi and NCR States.
 - Industrial units shifting to PNG.
 - Installation of on-line continuous monitoring devices in highly polluting industries.
 - Shifting of Brick kilns to zig-zag technology for reduction of pollution
- iii. Waste Management
- Notifications of 6 waste management rules covering solid waste, plastic waste, e-waste, bio-medical waste, C&D waste and hazardous 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.
- iv. Crop Residue Management
- 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 Centres.
- v. Monitoring of Air Quality
- Expansion of air quality monitoring network under National Air Quality Monitoring Programme (NAMP)
 - Implementation of Air Quality Early Warning System for Delhi. The system provides alerts for taking timely actions.

ANNEXURE REFERRED IN REPLY TO PART (a) to (b) OF THE LOK SABHA UNSTARRED QUESTION NO. 2064 DUE FOR ANSWER ON 12.02.2021 REGARDING "AIR POLLUTION IN URBAN AND INDUSTRIAL AREAS" RAISED BY SHRI HEMANT SRIRAM PATIL, SHRI RAHUL RAMESH SHEWALE, SHRI OMPRAKASH BHUPALSINH alias PAWAN RAJENIMBALKAR, HON'BLE MEMBERS OF PARLIAMENT

Metro Cities exceeding and within NAAQS during 2019

Exceeding or within standard	Number of cities		
	SO ₂	NO ₂	PM ₁₀
Within NAAQS	50	42	7
Exceeding NAAQS	0	8	44

Note: NAAQS (annual): SO₂=50 µg/m³, NO₂=40 µg/m³, PM₁₀=60 µg/m³, (Residential / industrial / rural / other areas) and SO₂=20 µg/m³, NO₂=30 µg/m³, PM₁₀=60 µg/m³, (Ecologically sensitive area)

ANNEXURE REFERRED IN REPLY TO PART (a) to (b) OF THE LOK SABHA UNSTARRED QUESTION NO. 2064 DUE FOR ANSWER ON 12.02.2021 REGARDING "AIR POLLUTION IN URBAN AND INDUSTRIAL AREAS" RAISED BY SHRI HEMANT SRIRAM PATIL, SHRI RAHUL RAMESH SHEWALE, SHRI OMPRAKASH BHUPALSINH alias PAWAN RAJENIMBALKAR, HON'BLE MEMBERS OF PARLIAMENT

**Air quality status of million plus cities/ urban agglomerations for 2017, 2018 and 2019
(Annual average in $\mu\text{g}/\text{m}^3$)**

Sl. No	State	Sl. No	City	2017			2018			2019		
				SO ₂	NO ₂	PM ₁₀	SO ₂	NO ₂	PM ₁₀	SO ₂	NO ₂	PM ₁₀
1.	Andhra Pradesh	1.	Vijaywada	6	29	99	5	21	77	5	19	73
		2.	Vishakhapatnam	9	17	73	10	20	77	8	19	76
2.	Bihar	3.	Patna	5	39	156	5	51	207	3	51	237
3.	Chandigarh	4.	Chandigarh	2	16	109	2	17	102	2	19	97
4.	Chhattisgarh	5.	Durg-Bhillainagar	8	21	97	8	19	84	7	17	79
		6.	Raipur	10	27	103	14	20	65	16	30	69
5.	Delhi	7.	Delhi	18*	53*	266*	15*	44*	243*	14*	45*	218*
6.	Gujarat	8.	Ahmedabad	14	29	120	16	29	236	20	25	135
		9.	Rajkot	16	22	106	19	23	203	20	25	127
		10.	Surat	16	26	106	22	29	176	23	27	128
		11.	Vadodara	16	23	108	20	25	188	20	26	131
9.	Jharkhand	12.	Dhanbad	15	37	238	14	37	264	14	35	237
		13.	Jamshedpur	36	45	131	37	46	128	38	47	138
		14.	Ranchi	19	37	142	18	36	122	18	37	109
10.	Karnataka	15.	Bangalore	2	31	92	2	30	90	3	25	74
11.	Kerala	16.	Kochi	2	19	51	3	16	57	3	14	46
		17.	Kollam	3	6	43	3	5	47	3	6	45
		18.	Kozhikode	2	18	47	2	10	54	2	5	44
		19.	Malapuram	2	21	32	2	26	31	2	15	35
		20.	Thiruvananthapuram	10	26	49	9	24	49	9	16	42
12.	Madhya Pradesh	21.	Thissur	2	5	56	3	9	41	3	5	38
		22.	Bhopal	4	15	93	7	14	135	8	17	161
		23.	Gwalior	10	17	110	13	21	134	13	24	139
		24.	Indore	11	21	80	10	19	88	9	18	77
		25.	Jabalpur	10	21	74	7	17	119	7	16	84
13.	Maharashtra	26.	Aurangabad	10	33	83	13	35	70	13	36	74
		27.	Mumbai	3	18	151	2	21	166	2	27	125
		28.	Nagpur	9	27	102	10	28	103	10	32	101
		29.	Nashik	12	22	81	12	21	85	10	22	63
		30.	Pune	21	65	102	37	75	106	37	87	143
14.	Punjab	31.	Thane	18	47	125	17	44	108	20	37	128
		32.	Amritsar	11	27	168	13	34	177	13	34	170
		33.	Ludhiana	10	28	162	9	32	162	12	26	153
15.	Rajasthan	34.	Jaipur	8	30	177	8	32	165	7	27	141
		35.	Jodhpur	6	21	180	7	24	223	7	26	240
		36.	Kota	8	28	130	7	28	152	7	24	129

Sl. No	State	Sl. No	City	2017			2018			2019		
				SO ₂	NO ₂	PM ₁₀	SO ₂	NO ₂	PM ₁₀	SO ₂	NO ₂	PM ₁₀
16	Tamilnadu	37.	Chennai	9	17	62	9	16	78	9	19	73
		38.	Coimbatore	5	26	49	6	23	54	7	18	57
		39.	Madurai	14	23	67	12	20	84	13	18	79
		40.	Trichy	12	20	86	17	23	110	13	18	73
17	Telangana	41.	Hyderabad	6	28	108	5	30	105	5	37	99
18	Uttar Pradesh	42.	Agra	4	19	185	4	22	209	4	24	186
		43.	Allahabad	4	40	140	4	45	231	5	42	222
		44.	Ghaziabad	22	34	280	21	43	245	13	35	208
		45.	Kanpur	7	45	224	7	47	218	6	40	198
		46.	Lucknow	8	26	246	7	30	217	7	31	208
		47.	Meerut	7	52	153	7	58	177	9	63	213
19	West Bengal	48.	Varanasi	10	38	244	9	34	189	9	35	184
		49.	Asansol	12	37	163	13	35	146	15	44	184
		50.	Kolkata	6	41	120	6	44	148	8	42	104

NB. ‘*‘ CAAQMS data for Delhi;

National Ambient Air Quality Standard (NAAQS) for Residential, Industrial, Rural and others Areas (Annual average) for SO₂ = 50 µg/m³, NO₂ = 40 µg/m³, PM₁₀ = 60 µg/m³ & PM_{2.5} = 40 µg/m³ and SO₂ = 20 µg/m³, NO₂ = 30 µg/m³, PM₁₀ = 60 µg/m³ and PM_{2.5} = 40 µg/m³ for Ecologically sensitive area.

ANNEXURE REFERRED IN REPLY TO PART (c), (d) and (e) OF THE LOK SABHA UNSTARRED QUESTION NO. 2064 DUE FOR ANSWER ON 12.02.2021 REGARDING "AIR POLLUTION IN URBAN AND INDUSTRIAL AREAS" RAISED BY SHRI HEMANT SRIRAM PATIL, SHRI RAHUL RAMESH SHEWALE, SHRI OMPRAKASH BHUPALSINH alias PAWAN RAJENIMBALKAR, HON'BLE MEMBERS OF PARLIAMENT

I. Details of Grants received under NCAP during the Financial Year 2018-19, 2019-20 & 2020-21 (In Rs.)

S. No.	FY	Total Amount Sanctioned
1.	2018-19	1,06,00,000
2.	2019-20	2,24,96,20,000
3.	2020-21	1,13,00,00,000

II. Details of Grants released to States-FY:2019-20-Grant-in-Aid Capital- (Creation of Capital Assets) to SPCBs/PCCs as on 05.01.2021 (in Rs.. Cr)

State	City	Total funds sanctioned to SPCB/PCC	Total funds released to SPCB/PCC
Andhra Pradesh	Vijayawada	6.00	6.24
	Guntur	0.12	
	Kurnool	0.06	
	Nellore	0.06	
Chandigarh	Chandigarh	8.28	8.28
Chhattisgarh	Raipur	6.00	12.06
	Bhilai	6.00	
	Korba	0.06	
Gujarat*	Surat	6.00	12.00
	Ahmedabad	6.00	
Himachal Pradesh	Baddi	0.06	0.24
	Nalagarh	0.06	
	Paonta Sahib	0.06	
	Sunder Nagar	0.06	
Jammu & Kashmir	Jammu	0.12	0.12
Jharkhand*	Dhanbad	6.00	6.00
Karnataka	Bangalore	6.00	6.30
	Gulburga	0.12	
	Hubli-Dharwad	0.12	
	Devanagere	0.06	

State	City	Total funds sanctioned to SPCB/PCC	Total funds released to SPCB/PCC
Madhya Pradesh	Bhopal	10.00	20.60
	Gwalior	10.00	
	Indore	0.20	
	Ujjain	0.20	
	Sagar	0.10	
	Dewas	0.10	
Maharashtra*	Mumbai	9.50	39.85
	Nagpur	9.45	
	Navi Mumbai	9.45	
	Pune	9.45	
	Amravati	0.20	
	Aurangabad	0.20	
	Nashik	0.20	
	Kolhapur	0.20	
	Sangli	0.20	
	Solapur	0.20	
	Ulhasnagar	0.20	
	Akola	0.10	
	Badlapur	0.10	
	Chandrapur	0.10	
	Jalgaon	0.10	
	Jalna	0.10	
Latur	0.10		
Odisha	Twin city Bhubaneswar & Cuttack	6.00	6.18
	Balasore	0.06	
	Rourkela	0.06	
	Talcher	0.06	
Punjab	Ludhiana	6.00	12.48
	Amritsar	6.00	
	Jalandhar	0.12	
	Khanna	0.06	
	Gobindgarh	0.06	
	NayaNangal	0.06	
	Pathankot/Dera Baba	0.06	
	Patiala	0.06	
	DeraBassi	0.06	
Rajasthan	Jaipur	6.00	18.12

State	City	Total funds sanctioned to SPCB/PCC	Total funds released to SPCB/PCC
	Jodhpur	6.00	
	Kota	6.00	
	Alwar	0.06	
	Udaipur	0.06	
Telangana	Hyderabad	10.80	
	Nalgonda	0.10	11.00
	Patancheru	0.10	
Uttar Pradesh	Agra	9.45	
	Allahabad	9.45	
	Kanpur	9.45	
	Lucknow	9.45	
	Varanasi	9.47	
	Moradabad	0.20	
	Bareilly	0.20	48.47
	Firozabad	0.20	
	Jhansi	0.20	
	Khurja	0.10	
	Anpara	0.10	
	Gajraula	0.10	
	Raebareli	0.10	
Uttarakhand	Kashipur	0.06	
	Rishikesh	0.06	0.12
West Bengal	Kolkata	6.00	6.00
Bihar	Patna	10.00	
	Gaya	0.10	10.20
	Muzaffarpur	0.10	
Assam	Guwahati	0.12	
	Nagaon	0.06	
	Nalbari	0.06	0.36
	Sibsagar	0.06	
	Silchar	0.06	
Nagaland	Dimapur	0.06	
	Kohima	0.06	0.12

III. Details of Grant-In-Aid released - FY:2020-21 (Rs. in Crores)

State	City	State-wise Amount	Total State-wise Amount released (FY 2020-21)
Chandigarh	Chandigarh	5.00	0.00
Chhattisgarh	Korba	1.00	0.00
Bihar	Muzaffarpur	5.00	0.00
	Gaya	2.00	
Himachal Pradesh	Kala Amb	3.00	5.00
	Baddi&Nalagarh	3.00	
	Damtal	1.00	
	Parwanoo	1.00	
	Sunder Nagar	1.00	
	Paonta Sahib	1.00	
Jammu & Kashmir	Srinagar	5.00	8.00
	Jammu	3.00	
Tamil Nadu	Tuticorn	3.00	3.00
Andhra Pradesh	Srikakulam	2.00	0.00
	Chittoor	2.00	
	Ongole	2.00	
	Vizianagaram	2.00	
	Eluru	2.00	
	Rajamundry	2.00	
	Anantapur	2.00	
	Kadapa	1.00	
Telangana	Sangareddy	2.00	2.00
Odisha	Kalinga Nagar	3.00	3.00
Punjab	Patiala	4.00	0.00
	Jalandhar	4.00	
	Gobindgarh	3.00	
	NayaNangal	1.00	
Uttarakhand	Rishikesh	5.00	0.00
	Dehardun*	3.00	
	Kashipur	3.00	
West Bengal	Howrah*	5.00	13.00
	Haldia*	3.00	
	Durgapur*	3.00	
	Barrackpore	2.00	
Assam	Guwahati	5.00	0.00
	Silchar	2.00	
	Sibsagar	2.00	
	Nagaon	2.00	
	Nalbari	1.00	

State	City	State-wise Amount	Total State-wise Amount released (FY 2020-21)
Nagaland	Dimapur	3.00	6.00
	Kohima	3.00	
Meghalaya*	Byrnihat	3.00	3.00
	Total	111.00	43.00

**IV. Amount sanctioned as per recommendations of XV Finance Commission 2020-21
(Rs.Cr)**

State	U.A	Amount Sanctioned	Amount Released
Andhra Pradesh	Vijayawada U.A	62	31
	Visakhapatnam	73	37
Bihar	Patna U.A.	204	102
Chhattisgarh	Durg Bhilainagar U.A.	52	26
	Raipur U.A.	55	28
Gujarat	Ahmadabad U.A.	182	91
	Rajkot U.A.	40	20
	Surat U.A.	131	66
	Vadodara U.A.	52	26
Haryana	Faridabad	48	24
Jharkhand	Dhanbad U.A.	52	26
	Jamshedpur U.A.	58	29
	Ranchi U.A.	49	25
Karnataka	Bruhat Bangalore U.A.	279	140
Madhya Pradesh	Bhopal U.A.	88	44
	Gwalior U.A.	51	26
	Indore U.A.	101	51
	Jabalpur U.A.	59	30
Maharashtra	Aurangabad U.A.	32	16
	Greater Mumbai U.A.	488	244
	Nagpur U.A.	66	33
	Nashik U.A.	41	21
	Pune U.A.	134	67
	Vasai-Virar City	32	16
Punjab	Amritsar U.A.	38	19
	Ludhiana	52	26
Rajasthan	Jodhpur U.A.	62	31
	Jaipur	165	83
	Kota	54	27
Tamil Nadu	Chennai U.A.	181	91
	Madurai U.A.	31	16
	Tiruchirappalli U.A.	21	11
Telangana	Hyderabad U.A.	234	117
Uttar Pradesh	Agra U.A.	90	45
	Allahabad U.A.	62	31
	Ghaziabad U.A.	121	61
	Kanpur U.A.	148	74

State	U.A	Amount Sanctioned	Amount Released
	Lucknow U.A.	148	74
	Meerut U.A.	72	36
	Varanasi U.A.	73	37
West Bengal	Asansol U.A.	34	17
	Kolkata U.A.	385	193
Total (in Rs Cr)		4400	2,200

U.A – Urban Agglomerate