

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION No. 2471
TO BE ANSWERED ON 13.12.2021

Air Purification Equipment

2471. SHRIMATI PRATIMA MONDAL:

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

- (a) the steps taken by the Government to harness technology for air purification;
- (b) whether the air purifier equipment in India have been calibrated to Indian air standards and if so, the details thereof; and
- (c) the details of air quality index recorded in the States in the past three years?

ANSWER

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

(a) and (b)

Major air purification technologies for mitigation of air pollution under examination include:

- Deployment and Evaluation of Air Purification Units for Traffic Junction Pollution Abatement in Delhi,
- Control of Dust Emissions using dust Suppressant,
- Demonstrate the effectiveness of Air Pollution Mitigation by Pariyayatra Filtration,
- Multiple antenna high density ion generators for pollution control.

The Hon'ble Supreme Court vide its order dated 13.01.2020 in Writ Petition (Civil) 13029/1985 had directed for installation of two smog towers. In compliance to the orders of the Hon'ble Supreme Court, two experimental pilot projects of smog tower are operational. The smog tower is intended for localized reduction of PM2.5 and PM10.

In addition to above, a Technology challenge for Identifying and Promoting Solutions for Mitigating Ambient Air Pollution have been initiated by the Govt. for inviting innovative technological solutions for control / abatement of urban ambient air pollution.

No ambient air purifier equipment has been calibrated to Indian air standards.

(c)

The details of Air Quality Index (AQI) calculated based on the measurement of pollutants in major cities in the States and UT in the past three years is given as Annexure - I.

Annexure I

ANNEXURE REFERRED TO IN REPLY TO (c) OF THE LOK SABHA UN-STARRED QUESTION NO. 2471 DUE FOR REPLY ON 13.12.2021 REGARDING 'AIR PURIFICATION EQUIPMENT' BY SHRIMATI PRATIMA MONDAL, HON'BLE MEMBER OF PARLIAMENT

AQI status of major cities in India(Year 2018-2020)

Amaravati (Maharashtra) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0-50)	52	100	191	286	278	347
Satisfactory	(51-100)	150	111	116			
Moderate	(101-200)	84	67	40			
Poor	(201-300)	16	21	10	16	21	11
Very Poor	(301-400)	0	0	1			
Severe	(>401)	0	0	0			
Total Number of Days		302	299	358	302	299	358

Visakhapatnam (Andhra Pradesh) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0-50)	13	11	52	268	189	309
Satisfactory	(51-100)	127	97	177			
Moderate	(101-200)	128	81	80			
Poor	(201-300)	34	21	19	35	25	23
Very Poor	(301-400)	1	4	4			
Severe	(>401)	0	0	0			
Total Number of Days		303	214	332	303	214	332

Guwahati (Assam) Comparative AQI Status 2019-2020							
AQI Category	Range	Number of days					
		2019	2020	2019	2020		
Good	(0-50)	81	138	250	273		
Satisfactory	(51-100)	89	60				
Moderate	(101-200)	80	75				
Poor	(201-300)	42	73	46	86		
Very Poor	(301-400)	3	13				
Severe	(>401)	1	0				
Total Number of Days		296	359	296	359		

Patna (Bihar) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0-50)	0	0	47	157	168	271
Satisfactory	(51-100)	56	92	107			
Moderate	(101-200)	101	76	117			

Poor	(201–300)	80	72	63	165	157	95
Very Poor	(301–400)	69	56	31			
Severe	(>401)	16	29	1			
Total Number of Days		322	325	366	322	325	366

Chandigarh (Punjab) Comparative AQI Status 2019-2020							
AQI Category	Range	Number of days					
		2019	2020	2019	2020	2019	2020
Good	(0–50)	2	121	80	361	23	3
Satisfactory	(51–100)	37	149				
Moderate	(101–200)	41	91				
Poor	(201–300)	22	3	103	364	103	364
Very Poor	(301–400)	1	0				
Severe	(>401)	0	0				
Total Number of Days		103	364	103	364	103	364

Delhi Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	0	2	5	159	182	227
Satisfactory	(51–100)	53	59	95			
Moderate	(101–200)	106	121	127			
Poor	(201–300)	113	103	75	206	183	139
Very Poor	(301–400)	73	56	49			
Severe	(>401)	20	24	15			
Total Number of Days		365	365	366	365	365	366

Ahmedabad (Gujarat) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	0	0	7	252	277	331
Satisfactory	(51–100)	85	56	155			
Moderate	(101–200)	167	221	169			
Poor	(201–300)	82	57	15	93	58	15
Very Poor	(301–400)	11	1	0			
Severe	(>401)	0	0	0			
Total Number of Days		345	335	346	345	335	346

Faridabad (Haryana) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	3	37	1	155	186	219
Satisfactory	(51–100)	46	46	80			
Moderate	(101–200)	106	103	138			
Poor	(201–300)	88	70	80			

Very Poor	(301–400)	74	35	45	183	128	139
Severe	(>401)	21	23	14			
Total Number of Days		338	314	358	338	314	358

Gurugram (Haryana) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	5	28	12	126	211	259
Satisfactory	(51–100)	30	69	87			
Moderate	(101–200)	91	114	160			
Poor	(201–300)	117	89	69	196	138	107
Very Poor	(301–400)	73	41	29			
Severe	(>401)	6	8	9			
Total Number of Days		322	349	366	322	349	366

Jorapokhar (Jharkhand) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	3	5	4	115	239	225
Satisfactory	(51–100)	28	115	94			
Moderate	(101–200)	84	119	127			
Poor	(201–300)	45	35	20	69	42	20
Very Poor	(301–400)	20	5	0			
Severe	(>401)	4	2	0			
Total Number of Days		184	281	245	184	281	245

Bengaluru (Karnataka) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	34	49	116	364	365	366
Satisfactory	(51–100)	264	207	216			
Moderate	(101–200)	66	109	34			
Poor	(201–300)	0	0	0	0	0	0
Very Poor	(301–400)	0	0	0			
Severe	(>401)	0	0	0			
Total Number of Days		364	365	366	364	365	366

Thiruvananthapuram (Kerala) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	99	111	166	346	324	364
Satisfactory	(51–100)	186	179	190			
Moderate	(101–200)	61	34	8			
Poor	(201–300)	2	0	0			

Very Poor	(301–400)	0	0	0	2	0	0
Severe	(>401)	0	0	0			
Total Number of Days		348	324	364	348	324	364

Bhopal (Madhya Pradesh) Comparative AQI Status 2019-2020					
AQI Category	Range	Number of days			
		2019	2020	2019	2020
Good	(0–50)	6	49	65	324
Satisfactory	(51–100)	13	105		
Moderate	(101–200)	46	170		
Poor	(201–300)	33	16	33	19
Very Poor	(301–400)	0	3		
Severe	(>401)	0	0		
Total Number of Days		98	343	98	343

Shillong (Meghalaya) Comparative AQI Status 2019-2020					
AQI Category	Range	Number of days			
		2019	2020	2019	2020
Good	(0–50)	34	192	39	261
Satisfactory	(51–100)	5	51		
Moderate	(101–200)	0	18		
Poor	(201–300)	0	0	0	0
Very Poor	(301–400)	0	0		
Severe	(>401)	0	0		
Total Number of Days		39	261	39	261

Aizawl (Mizoram) AQI Status 2020			
AQI Category	Range	Number of days	
		2020	2020
Good	(0–50)	162	190
Satisfactory	(51–100)	24	
Moderate	(101–200)	4	
Poor	(201–300)	0	0
Very Poor	(301–400)	0	
Severe	(>401)	0	
Total Number of Days		190	190

Kohima (Nagaland) AQI Status 2020			
AQI Category	Range	Number of days	
		2020	2020
Good	(0–50)	34	109
Satisfactory	(51–100)	65	
Moderate	(101–200)	10	

Poor	(201–300)	0	0
Very Poor	(301–400)	0	
Severe	(>401)	0	
Total Number of Days		109	109

Brajrajnagar (Orissa) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	12	1	37	181	212	203
Satisfactory	(51–100)	34	92	46			
Moderate	(101–200)	135	119	120			
Poor	(201–300)	38	49	25	45	52	25
Very Poor	(301–400)	7	3	0			
Severe	(>401)	0	0	0			
Total Number of Days		226	264	228	226	264	228

Amritsar (Punjab) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	26	41	49	272	313	306
Satisfactory	(51–100)	81	163	148			
Moderate	(101–200)	165	109	109			
Poor	(201–300)	14	25	25	19	29	32
Very Poor	(301–400)	2	4	7			
Severe	(>401)	3	0	0			
Total Number of Days		291	342	338	291	342	338

Jaipur (Rajasthan) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	7	13	26	330	346	353
Satisfactory	(51–100)	67	149	173			
Moderate	(101–200)	256	184	154			
Poor	(201–300)	31	18	11	34	19	12
Very Poor	(301–400)	3	1	1			
Severe	(>401)	0	0	0			
Total Number of Days		364	365	365	364	365	365

Chennai (Tamilnadu) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	15	43	60	353	352	365
Satisfactory	(51–100)	196	230	275			

Moderate	(101–200)	142	79	30			
Poor	(201–300)	8	12	0	8	12	0
Very Poor	(301–400)	0	0	0			
Severe	(>401)	0	0	0			
Total Number of Days		361	364	365	361	364	365

Hyderabad (Telengana) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	38	76	113	364	365	366
Satisfactory	(51–100)	156	135	158			
Moderate	(101–200)	170	154	95			
Poor	(201–300)	0	0	0	0	0	0
Very Poor	(301–400)	0	0	0			
Severe	(>401)	0	0	0			
Total Number of Days		364	365	366	364	365	366

Agartala (Tripura) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	0	0	0	0	0	42
Satisfactory	(51–100)	0	0	10			
Moderate	(101–200)	0	0	32			
Poor	(201–300)	0	0	8	0	0	8
Very Poor	(301–400)	0	0	0			
Severe	(>401)	0	0	0			
Total Number of Days		0	0	50	0	0	50

Lucknow (Uttar Pradesh) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	3	7	0	161	211	237
Satisfactory	(51–100)	72	88	132			
Moderate	(101–200)	86	116	105			
Poor	(201–300)	106	89	74	203	153	129
Very Poor	(301–400)	89	59	48			
Severe	(>401)	8	5	7			
Total Number of Days		364	364	366	364	364	366

Ghaziabad (Uttar Pradesh) Comparative AQI Status 2018-2020							
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	4	3	13			

Satisfactory	(51–100)	46	56	69	138	147	204
Moderate	(101–200)	88	88	122			
Poor	(201–300)	86	109	75			
Very Poor	(301–400)	82	70	61	217	216	161
Severe	(>401)	49	37	25			
Total Number of Days		355	363	365	355	363	365

Kolkata (West Bengal)		Comparative AQI Status 2018-2020					
AQI Category	Range	Number of days					
		2018	2019	2020	2018	2019	2020
Good	(0–50)	32	76	144			
Satisfactory	(51–100)	123	114	72	185	264	292
Moderate	(101–200)	30	74	76			
Poor	(201–300)	28	64	60			
Very Poor	(301–400)	35	30	14	64	99	74
Severe	(>401)	1	5	0			
Total Number of Days		249	363	366	249	363	366

Mumbai-Maharashtra		2018	2019	2020	2018	2019	2020
Good	(0–50)	1	58	119			
Satisfactory	(51–100)	143	170	104	266	336	346
Moderate	(101–200)	122	108	123			
Poor	(201–300)	16	26	20			
Very Poor	(301–400)	0	0	0	16	26	20
Severe	(>401)	0	0	0			
Total Number of Days		282	362	366	282	362	366