Air Quality Monthly Report

April, 2025

Department of Environment
Ministry of Environment Forest and Climate Change, Bangladesh.

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Introduction:

Department of Environment (DoE), Bangladesh has established a countrywide air quality monitoring (AQM) network. The continuous monitoring of 6 (six) criteria pollutants ($PM_{2.5}$, PM_{10}, SO_2, CO, NOx and O_3) is being done by 31(thirty one) Continuous Air Monitoring Stations (CAMS) and Compact Continuous Air Monitoring Stations (C-CAMS) located in the divisional and industrial districts of the country. The network encompasses all the regions of the country - Dhaka, Narayanganj, Gazipur, Savar, Mymensing, Narsindi in the center, Chittagong in the south-east. Khulna, Cumilla and Barisal in the south, Rajshahi in the west, and Sylhet in the north-east regions, Rangpur in the north west of the country. And C-CAMS are located in Faridpur, Jashore, Satkhira, Bagerhat, Gopalganj, Tangail, Bogura, Tongi, BUET campus, Brahmanbaria, Feni, Noakhali, BSRM (Chattogram), Cox's-Bazar, Nagor Bhaban, Dhaka. The data and information generated from those stations are automatically collected in the central server and are disseminated through DoE website. Air Quality Index (AQI) for each city is calculated and published online daily for notifying the people about the status of air quality in their respective city.

Quality Assurance/Quality Control (QA/QC) methods and procedures are implemented with full documentation and are validated through an international certified calibration reference laboratory. Forms and log sheets document every activity in the air monitoring stations and document all maintenance, calibration, operation and other activities such as all visits to the stations. This monthly report provides an overview and analysis of air quality monitoring data in Bangladesh for the month wise monitoring results.

The report summarizes the data of different CAMS located in different cities of Bangladesh.

Standards of Ambient Air Quality

The Government of Bangladesh has enacted Air Pollution (Control) Rules – 2022 with ambient air quality standards. This report establishes the Air Quality Index (AQI) followed by USEPA guideline to evaluate air pollution.

Table 1: National Ambient Air Quality Standards (NAAQS) for Bangladesh

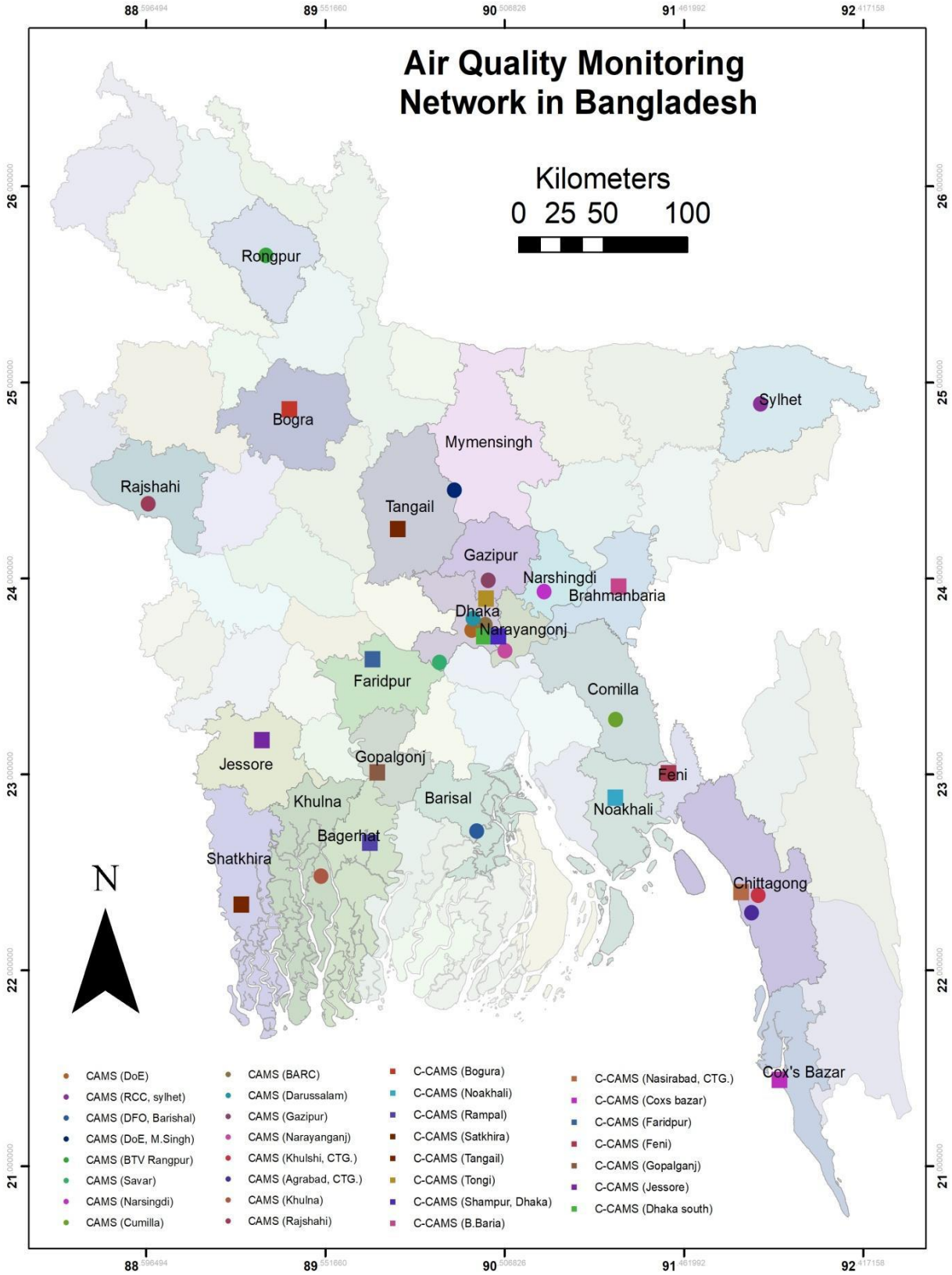
Pollutant	Limit Value	Averaging time
CO	5 mg/m³	8 hours[a]
	20 mg/m³	1 hour[a]
Pb	0.25 µg/m³	Annual
	0.50 µg/m³	24 hours
NO_x	40 µg/m³	Annual
	80 µg/m³	24 hours
PM_{10}	50 µg/m³	Annual[b]
	150 µg/m³	24 hours[c]
$PM_{2.5}$	35 µg/m³	Annual
	65 µg/m³	24 hours
O_3	180 µg/m³	1 hour[d]
	100 µg/m³	8 hours
SO_2	--	Annual
	80 µg/m³	24 hours[a]

Table 2: Air quality index (AQI) in Bangladesh

AQI Value	Level of Health Concern	Colors
	English	
0-50	Good	Green
51-100	Moderate	Yellow
101-150	Unhealthy for Sensitive Group	Orange
151-200	Unhealthy	Red
201-300	Very Unhealthy	Purple
301+	Hazardous	Maroon

Location Map of Air Monitoring Station

Figure 1: Locations Map of Continuous Air Monitoring Stations (CAMS) under Department of Environment in Bangladesh.



Station Information

Table 3: Overview of the locations and capacity of the CAMS

City	ID	Location	Latitude/ Longitude	Monitoring Capacity	Year of Est.	Type	Inlet & Met tower Height(m)
Dhaka	CAMS-1	Dept of Environment	23°.77'73.94"N 90°.37'26.03"E	PM_{10}, $PM_{2.5}$, SO_2, CO, O_3 & NOx with Meteorological Parameters	2012	UB/Res	4.8 & 8
	CAMS-2	Farmgate	23°.75'94.10"N 90°.38'86.79"E		2008	Rd/Com	8.8 & 11
	CAMS-3	Darussalam	23°.78'07.75"N 90°.35'54.10"E		2012	UB/Com	8.8 & 11
Gazipur	CAMS-4	Gazipur	23°.99'41.28"N 90°.42'23.15"E		2012	SUB	8.8 & 11
Narayanganj	CAMS-5	Narayanganj	23°.62'60.79"N 90°.50'72.00"E		2012	UB industry	8.8 & 11
Chattogram	CAMS-6	TV Station, Khulshi	22°.36'04.87"N 91°.80'04.54"E		2006	UB1	4.8 & 7
	CAMS-7	Agrabad	22°.32'30.20"N 91°.80'23.36"E		2012	UB/Res	8.8 & 11
Khulna	CAMS-8	Boyra	22°.83'57.75"N 89°.52'90.56"E		2008	UB	6.8 & 10
Rajshahi	CAMS-9	Sapura	24°.38'33.20"N 88°.60'80.07"E		2008	Rd/Res	6.8 & 10
Sylhet	CAMS-10	Red Crecent Campus	24°.88'83.34"N 91°.86'73.47"E		2012	Rd/UB/Res	13.8 & 15
Barishal	CAMS-11	DFO Office Campus	22°.71'02.87"N 90°.36'25.98"E		2012	UB/Res	6.8 & 10
Mymensingh	CAMS-12	DoE Office, Divisional Headquarter	24°.76'24.58"N 90°.40'21.02"E		2019	UB	8.8 & 11
Rangpur	CAMS-13	BTV Rangpur Station	25°.74'73.71"N 89°.22'89.31"E		2019	UB	8.8 & 11
Savar	CAMS-14	Atomic Energy Research Institute	23°.95'37.04"N 90°.27'97.94"E		2019	SUB	10.8 & 14
Narsingdi	CAMS-15	Sadar Upazila Complex	23°.93'24.56"N 90°.71'65.98"E		2019	SUB	8.8 & 11
Cumilla	CAMS-16	Court Area	23°.47'29.88"N 91°.18'06.71"E		2019	UB	8.8 & 11

UB: Urban; Rd: Road; Res: residential; Com: Commercial; SUB: Suburban; Rural: Rural

Table 4: Overview of the locations and capacity of the C-CAMS

City	ID	Location	Lat/Lon	Year of Est.	Type	Monitoring Capacity	Inlet & Met tower Height(m)
Faridpur	C-CAMS-17	Sadar, Faridpur (Municipal Office)	23°.60'64.11"N 89°.83'88.19"E		SUB		9 & 11
Jashore	C-CAMS-18	Sadar, Jashore (circuit house)	23°.16'22.16"N 89°.20'63.70"E		SUB		12 & 14
Satkhira	C-CAMS-19	Shyamnagar, Satkhira	22°.31'59.96"N 89°.04'31.70"E		Rural		5.2 & 7.2
Bagerhat	C-CAMS-20	Rampal, Bagerhat (Maytree Super Thermal Power Project)	22°.59'60.86"N 89°.55'37.20"E		Rural/Industrial		5.7 & 7.7
Gopalganj	C-CAMS-21	Sadar, Gopalganj	23°.00'88.53"N 89°.82'91.60"E		SUB		22 & 24
Tangail	C-CAMS-22	Sadar, Tangail (DoE office)	24°.24'97.96"N 89°.92'93.57"E		SUB		15 & 17
Bogura	C-CAMS-23	Sadar, Bogura (DoE Office)	24°.86'17.79"N 89°.36'11.46"E		SUB		9 & 11
Tongi	C-CAMS-24	BSCIC, Tongi, Gazipur	23°.89'41.74"N 90°.41'12.10"E		Com/ Industrial	PM_{10}, $PM_{2.5}$, SO_2, CO, O_3& NOx with Meteorological Parameters	18 & 20
BUET	C-CAMS-25	Department of Chemical Engineering, BUET, Dhaka	23°.72'75.91"N 90°.39'27.97"E	2020	UB		10 & 12
Brahmanbaria	C-CAMS-26	Sadar, B.Baria (municipal Office)	23°.97'43.71"N 91°.10'97.69"E		SUB		18 & 20
Feni	C-CAMS-27	Sadar, Feni (DoE Office)	23°.00'62.97"N 91°.38'13.05"E		SUB		18 & 20
Noakhali	C-CAMS-28	Maijdi Bazar, Noakhali (DoE Office)	22°.88'11.48"N 91°.09'69.66"E		SUB		15 & 17
Chattogram BSRM	C-CAMS-29	BSRM, Nasirabad, Chattogram	22°.37'28.38"N 91°.81'80.54"E		UB/Industrial		12 & 14
Cox's-Bazar	C-CAMS-30	Saymon Road, Sadar, Cox's-Bazar (DoE Office)	21°.44'22.08"N 91°.97'10.83"E		SUB		9 & 11
Nagor Bhaban, Dhaka	C-CAMS-31	Nagar Bhaban, DSCC, Dhaka	23°.72'40.75"N 90°.40'91.42"E		UB/Com		13 & 15

UB: Urban; Rd: Road; Res: residential; Com: Commercial; SUB: Suburban; Rural: Rural

Summary of Components
Month of April, 2025

Table 5: Summary of components, Month of April, 2025

Parameter	Summary	DoE	BARC	Darus-salam, Dhaka	Gazipur	Narayanganj	TV-Station, Chattagram	Agrabad, Chattagram	Sylhet	Khulna	Rajshahi	Barisal	Savar	Mymensingh	Rangpur	Cumilla	Narshingdi
SO_2 -24 hr (ppb)	Average	13.1	4.8	4.1	5.6	DNA	12.3	6.0	1.2	9.2	7.8	4.0	4.7	1.4	4.2	2.7	3.0
	Max	25.3	9.9	4.5	7.2	DNA	24.3	7.7	1.3	18.0	16.3	8.6	11.8	2.5	9.3	3.3	9.6
	Min	0.8	2.7	3.9	5.0	DNA	5.0	4.5	1.1	0.4	3.7	3.5	2.0	0.3	0.1	0.2	1.7
	Excedance(Days)	0.0	0.0	0.0	0.0	DNA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Data capture(%)	93.5	93.5	54.8	74.2	DNA	93.5	90.3	96.8	93.5	96.8	96.8	93.5	96.8	93.5	96.8	96.8
NO2 -24 hr (ppb)	Average	14.8	24.7	3.9	DNA	DNA	1.8	7.1	DNA	2.0	4.1	DNA	5.5	3.9	5.4	3.8	3.5
	Max	32.1	41.6	6.7	DNA	DNA	2.1	12.0	DNA	2.6	7.0	DNA	7.3	4.0	19.7	4.1	6.1
	Min	3.5	13.2	2.3	DNA	DNA	1.7	3.5	DNA	1.5	0.1	DNA	2.6	3.7	2.2	3.6	2.7
	Excedance(Days)	0.0	0.0	0.0	DNA	DNA	0.0	0.0	DNA	0.0	0.0	DNA	0.0	0.0	0.0	0.0	0.0
	Data capture(%)	96.8	93.5	90.3	DNA	DNA	96.8	87.1	DNA	96.8	96.8	DNA	93.5	96.8	67.7	96.8	35.5
CO-8hr (ppm)	Average	0.6	1.3	DNA	DNA	DNA	1.8	3.4	DNA	2.0	3.0	19.47	1.6	1.3	1.5	2.7	0.4
	Max	1.8	5.4	DNA	DNA	DNA	6.0	4.1	DNA	2.5	7.5	30.6	3.0	3.7	5.0	7.5	3.1
	Min	0.4	0.0	DNA	DNA	DNA	0.2	1.0	DNA	1.2	1.4	11.0	0.3	0.2	0.7	0.3	0.1
	Excedance(Hour)	0.0	8.0	DNA	DNA	DNA	38.0	1.0	DNA	0.0	71.0	713.0	0.0	0.0	9.0	140.0	0.0
	Data capture(%)	95.8	87.4	DNA	DNA	DNA	66.3	40.3	DNA	95.8	95.8	95.8	92.5	93.4	85.5	83.2	95.6
O_3-8hr (ppb)	Average	16.9	13.2	0.5	15.6	5.3	5.6	DNA	0.5	12.6	17.5	DNA	24.3	17.9	12.9	DNA	15.6
	Max	50.5	37.6	1.0	15.6	5.3	22.9	DNA	0.6	49.4	55.8	DNA	55.9	48.9	31.1	DNA	45.0
	Min	0.7	0.9	0.1	15.6	5.3	2.8	DNA	0.4	3.7	3.3	DNA	5.0	2.3	1.8	DNA	1.6
	Excedance(Hour)	0.0	0.0	0.0	0.0	0.0	0.0	DNA	0.0	0.0	6.0	DNA	15.0	0.0	0.0	DNA	0.0
	Data capture(%)	96.8	87.4	86.6	1.1	1.1	95.8	DNA	79.7	95.8	95.8	DNA	92.9	94.0	82.1	DNA	95.8
$PM_{2.5}$ -24hr (ug/m3)	Average	57.2	61.2	60.0	DNA	72.5	40.0	137.5	48.3	31.0	77.4	11.6	73.9	70.0	95.6	48.6	66.4
	Max	110.8	106.5	130.1	DNA	176.4	147.8	195.8	73.0	92.4	145.9	15.3	107.6	136.5	167.3	177.8	117.7
	Min	33.7	37.5	31.0	DNA	30.7	9.5	52.0	20.4	9.0	37.4	9.2	41.7	33.3	39.4	15.8	35.3
	Excedance(Days)	8.0	10.0	8.0	DNA	13.0	4.0	27.0	4.0	3.0	17.0	0.0	17.0	15.0	23.0	4.0	15.0
	Data capture(%)	96.8	93.5	80.6	DNA	90.3	96.8	90.3	61.3	96.8	96.8	22.6	93.5	96.8	93.5	96.8	96.8
PM_{10} -24hr (ug/m3)	Average	92.9	121.4	125.4	93.6	152.0	63.7	224.1	99.2	71.3	107.2	DNA	128.0	91.4	162.9	95.4	DNA
	Max	207.9	229.3	212.9	161.3	271.3	139.2	312.9	148.9	102.1	211.5	DNA	198.1	191.3	279.6	166.9	DNA
	Min	17.1	66.5	83.9	45.4	85.3	30.7	101.7	54.3	10.3	54.2	DNA	80.4	16.0	79.0	37.3	DNA
	Excedance(Days)	6.0	6.0	5.0	2.0	12.0	0.0	24.0	0.0	0.0	4.0	DNA	2.0	9.0	14.0	5.0	DNA
	Data capture(%)	96.8	93.5	74.2	71.0	83.9	93.5	90.3	51.6	80.6	96.8	DNA	41.9	96.8	93.5	96.8	DNA
Solar rad. 1hr (W/m2)	Average	215.14	196.34	157.9	0.4	DNA	793.6	130.8	4.3	257.0	203.2	101.9	295.2	237.1	347.5	276.6	276.6
	Max	675.70	813.6	1019.5	1.7	DNA	797.3	597.8	4.6	1415.9	884.6	700.1	901.1	895.3	997.3	876.5	913.0
	Min	0.90	0.1	991.6	0.0	DNA	359.2	9.0	3.9	0.3	0.0	5.8	0.0	0.0	0.1	0.0	0.0
	Data capture(%)	48.39	76	87	16	DNA	94	81	93	51	63	96	58.3	65.1	45.0	66.0	62.5
Relative Humidity 1hr (%)	Average	62.77	55.1	68.7	16.3	DNA	42.5	72.3	39.7	96.7	94.6	81.5	68.7	88.3	77.5	79.6	46.7
	Max	90.44	78.0	97.4	17.0	DNA	43.3	100.0	39.8	99.9	95.4	87.0	99.4	99.5	99.8	100.0	77.5
	Min	29.01	15.1	32.6	15.4	DNA	36.3	21.1	39.6	93.1	84.0	61.3	22.4	35.1	26.4	32.1	17.6
	Data capture(%)	96.37	88.8	86.6	1	DNA	94	78	93	72	94	96	91.5	96.0	78.1	76.5	96.6
Ambient Temp. 1hr (degreeC)	Average	30.24	28.6	20.9	7.9	DNA	22.5	26.3	DNA	30.7	31.4	11.6	27.6	26.6	26.5	27.8	27.2
	Max	40.95	35.2	43.0	10.6	DNA	25.4	42.8	DNA	38.5	42.2	25.4	34.7	34.3	34.5	35.6	34.2
	Min	19.12	21.0	7.1	7.0	DNA	20.3	7.3	DNA	22.6	13.1	7.3	16.4	19.6	12.2	20.9	20.2
	Data capture(%)	96.37	89.8	24	6	DNA	93	44	DNA	97	94	11	89.8	95.7	72.8	96.8	94.6
Rainfall 1hr (mm)	Average	DNA	0.09	DNA	DNA	DNA	DNA	DNA	DNA	0.02	0.01	DNA	DNA	0.05	0.1	0.06	0.23
	Max	DNA	23.60	DNA	DNA	DNA	DNA	DNA	DNA	4.60	1.80	DNA	DNA	3.60	28.7	7.62	16.10
	Min	DNA	0.00	DNA	DNA	DNA	DNA	DNA	DNA	0.00	0.00	DNA	DNA	0.00	0.0	0.00	0.00
	Data capture(%)	DNA	96.77	DNA	DNA	DNA	DNA	DNA	DNA	96.77	96.77	DNA	DNA	96.37	97.1	96.77	96.0

CAMS= Continuous Air Monitoring Station, NAAQS=National Ambient Air Quality Standard, a=Refurbisment CAMS, PM= Particulate Matter

DNA= Data Not Available

Table 6: Air Quality Index (AQI) Month of April, 2025

Date	Dhaka	Chattogram	Gazipur	Narayanganj	Sylhet	Khulna	Rajshahi	Barishal	Savar	Mymensingh	Rangpur	Cumilla	Norshindi
01-04-2025	158	DNA	DNA	372	311	86	179	DNA	166	173	210	153	161
02-04-2025	149	151	DNA	119	399	62	191	DNA	157	165	185	153	156
03-04-2025	144	153	DNA	136	151	83	189	DNA	163	178	184	154	161
04-04-2025	160	154	DNA	159	158	94	198	DNA	173	193	197	160	169
05-04-2025	168	93	DNA	150	152	91	190	DNA	177	185	216	152	166
06-04-2025	163	124	DNA	131	114	69	179	DNA	169	169	192	138	162
07-04-2025	166	174	DNA	144	130	DNA	157	DNA	132	153	173	153	152
08-04-2025	157	172	DNA	151	155	DNA	169	DNA	180	174	184	171	165
09-04-2025	133	183	DNA	85	134	DNA	120	DNA	139	167	187	124	144
10-04-2025	130	DNA	DNA	110	117	60	110	DNA	158	172	168	116	162
11-04-2025	127	DNA	DNA	84	68	96	153	DNA	146	142	144	105	154
12-04-2025	130	DNA	DNA	90	118	85	167	DNA	152	157	161	100	156
13-04-2025	154	96	DNA	157	DNA	123	151	DNA	162	97	154	129	156
14-04-2025	172	DNA	DNA	182	DNA	155	150	DNA	166	93	151	153	173
15-04-2025	171	DNA	DNA	161	DNA	78	152	DNA	169	114	176	194	173
16-04-2025	172	DNA	DNA	152	DNA	169	170	DNA	173	161	177	146	158
17-04-2025	159	DNA	DNA	102	DNA	105	105	DNA	158	134	164	78	132
18-04-2025	170	DNA	DNA	148	DNA	85	150	DNA	DNA	131	152	75	130
19-04-2025	161	DNA	DNA	144	DNA	141	166	DNA	DNA	152	166	112	150
20-04-2025	165	116	DNA	95	DNA	125	162	DNA	171	157	177	62	148
21-04-2025	142	116	DNA	105	DNA	75	164	DNA	154	149	156	58	129
22-04-2025	137	116	DNA	82	DNA	72	160	DNA	154	155	145	69	136
23-04-2025	133	116	DNA	75	DNA	75	153	DNA	150	156	186	67	132
24-04-2025	133	86	DNA	DNA	DNA	75	161	57	151	153	176	62	125
25-04-2025	128	88	DNA	DNA	DNA	54	156	42	123	136	166	71	115
26-04-2025	105	63	DNA	DNA	DNA	35	151	38	116	140	161	82	100
27-04-2025	131	60	DNA	DNA	DNA	77	141	49	151	111	160	112	111
28-04-2025	142	82	DNA	DNA	73	81	149	38	164	131	155	128	147
29-04-2025	162	85	DNA	DNA	81	74	152	42	153	151	DNA	151	163
30-04-2025	210	136	189	191	93	68	151	54	DNA	173	110	166	183

Table 7: Graphical representation of 24 hr. average of Sulfur-Di-Oxide (SO_2).

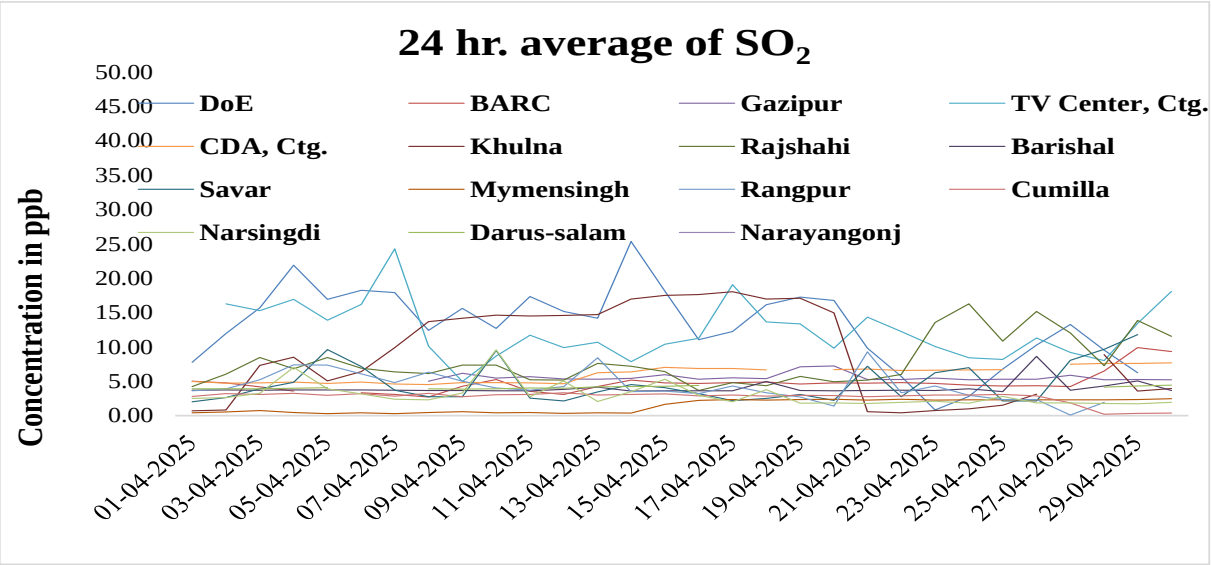


Table 8: Graphical representation of 24 hr. average of Nitrogen-Di-Oxide (NO_2).

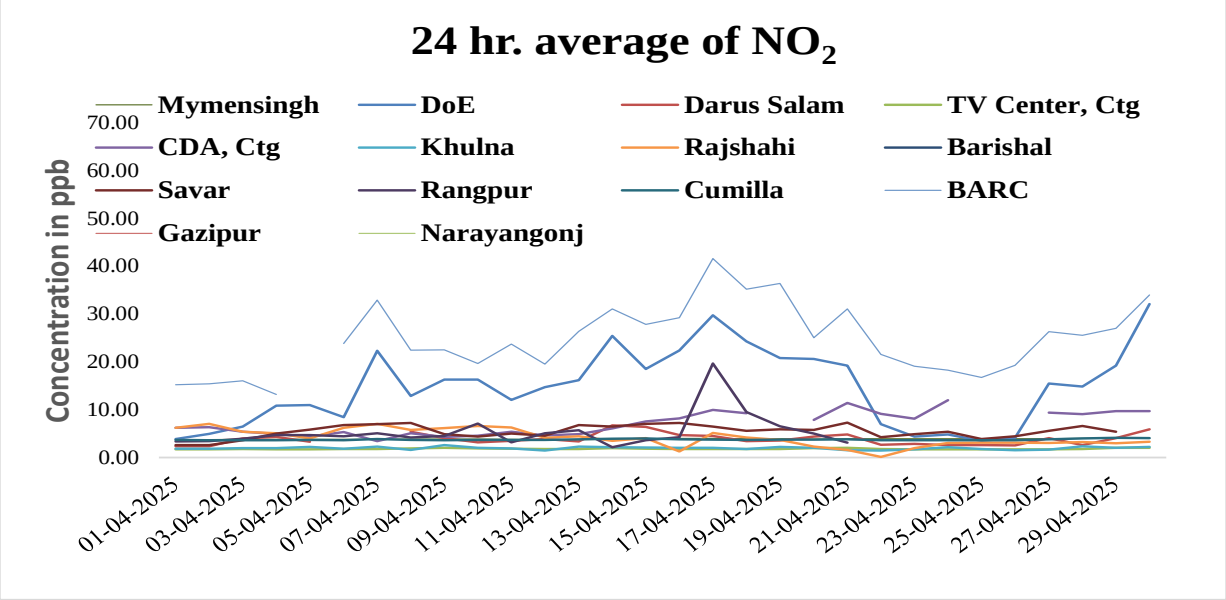


Table 9: Graphical representation of 8 hr. average of Carbon Mono-Oxide (CO)

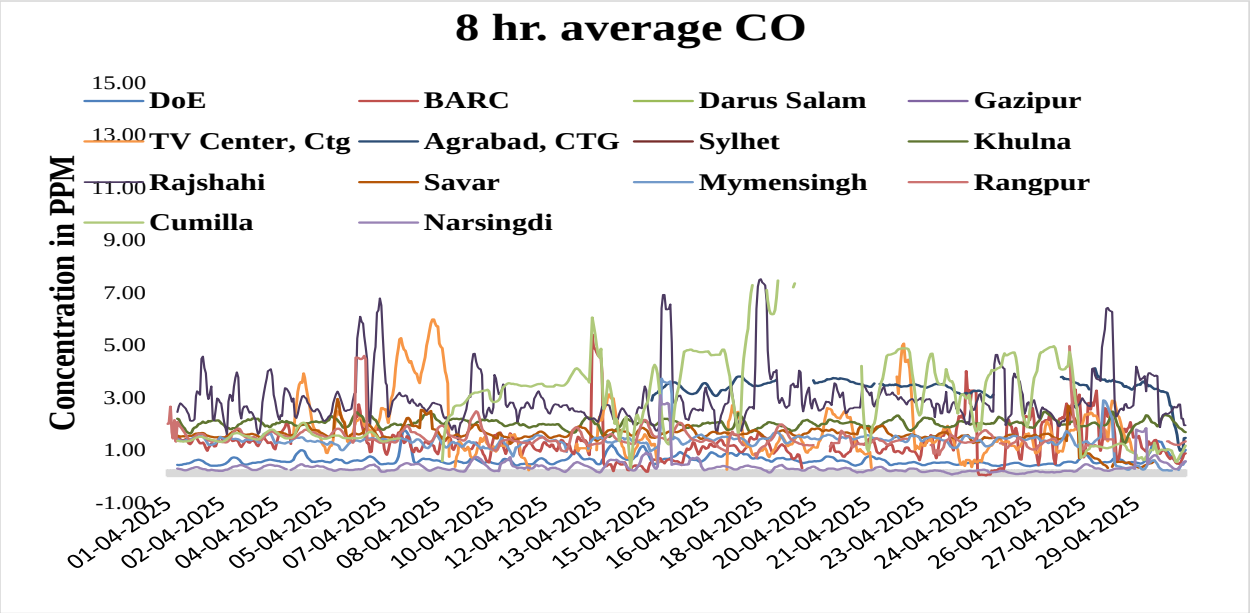


Table 10: Graphical representation of 8 hr. average of Ozone (O_3)

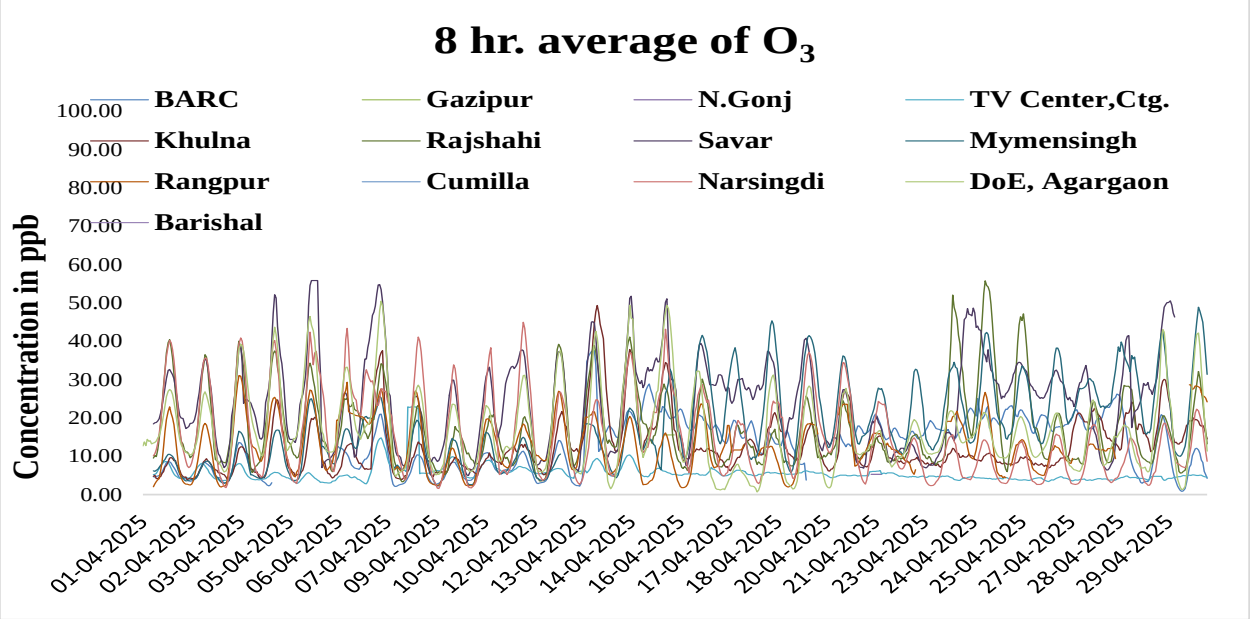


Table 11: Graphical representation of 24 hr. average concentration of PM_{10}.

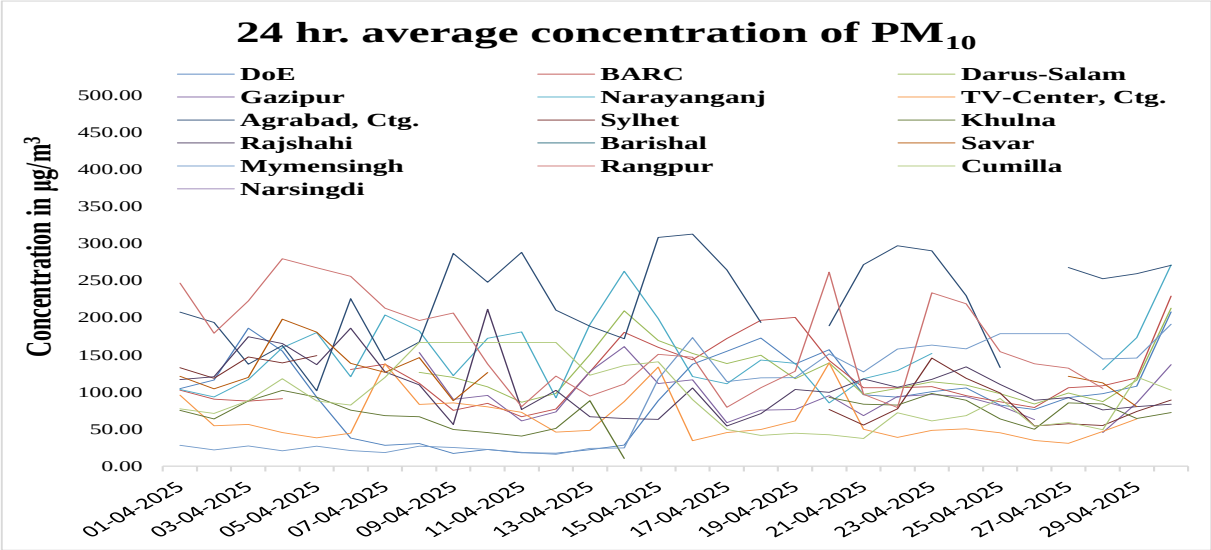
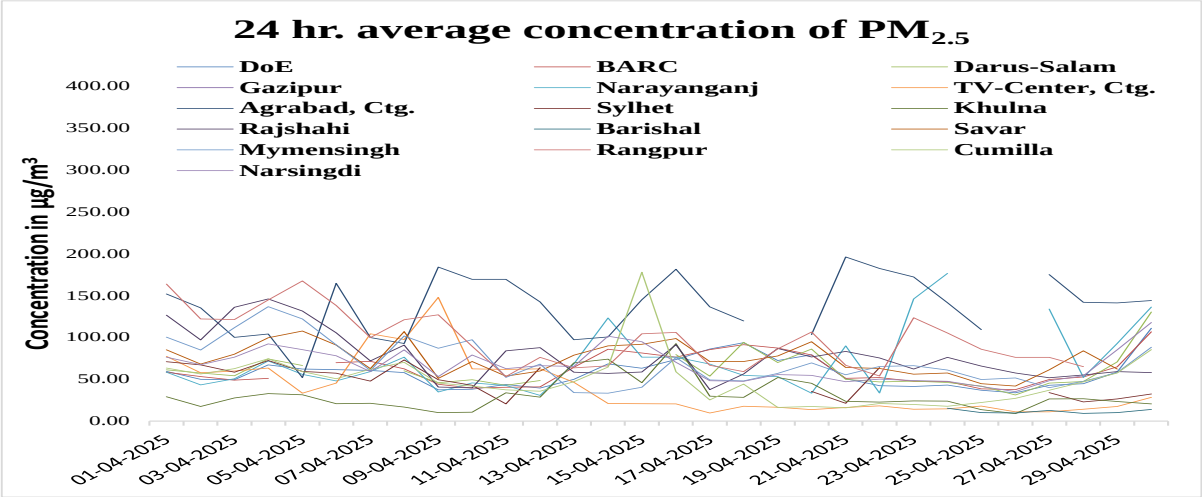


Table 12: Graphical representation of 24 hr. average concentration of $PM_{2.5}$.



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