



Air Quality Monthly Report

January, 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, NO_x 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

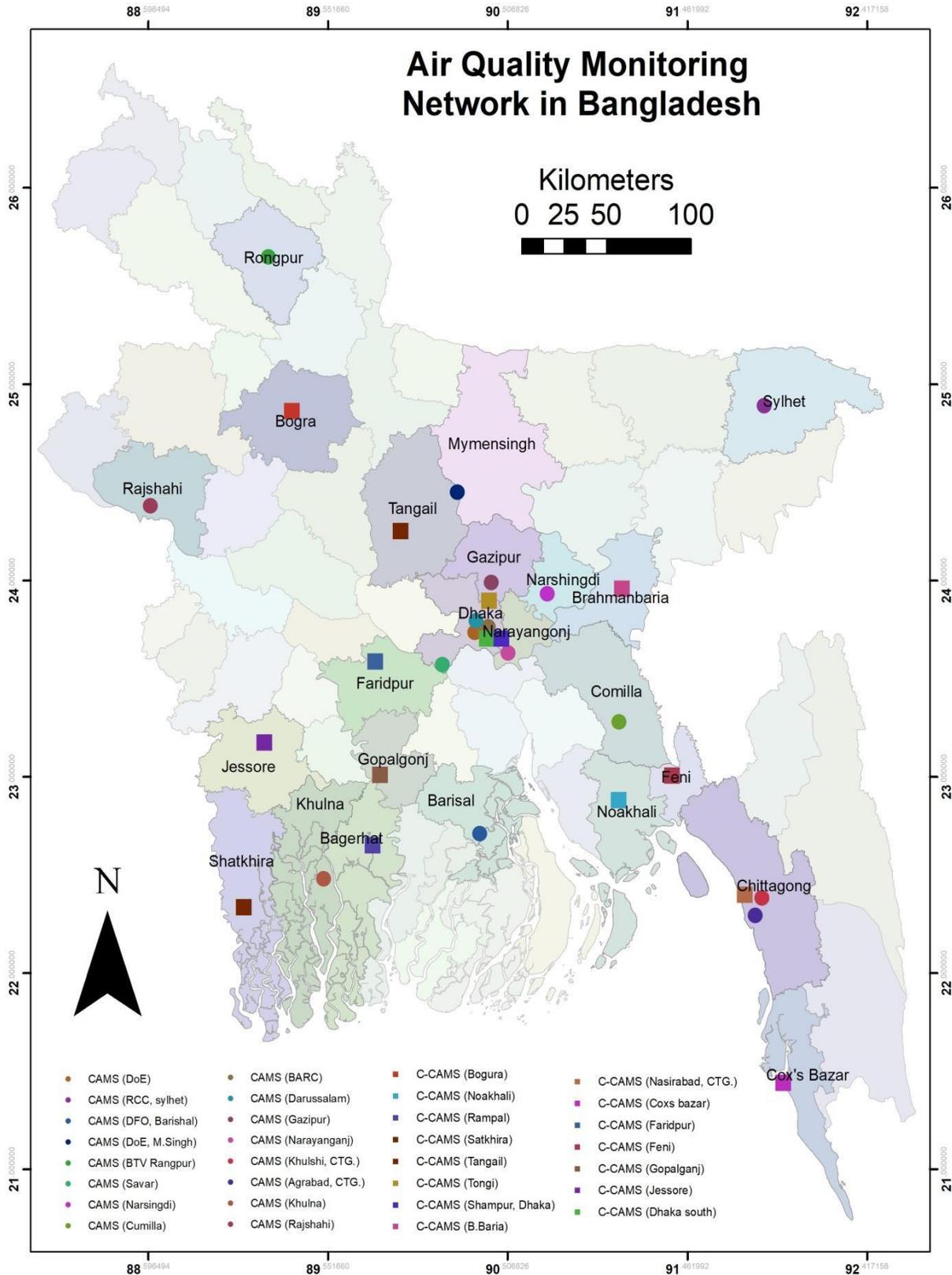
Pollutant	Limit Value	Averaging time
CO	5 mg/m ³	8 hours ^a
	20 mg/m ³	1 hour ^a
Pb	0.25 µg/m ³	Annual
	0.50 µg/m ³	24 hours
NO _x	40 µg/m ³	Annual
	80 µg/m ³	24 hours
PM ₁₀	50 µg/m ³	Annual ^b
	150 µg/m ³	24 hours ^c
PM _{2.5}	35 µg/m ³	Annual
	65 µg/m ³	24 hours
O ₃	180 µg/m ³	1 hour ^d
	100 µg/m ³	8 hours
SO ₂	--	Annual
	80 µg/m ³	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 & NO _x 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 & NO _x 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 January, 2025

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

Parameter	Summary	DoE	BARC	Darus-salam, Dhaka	Gazipur	Narayanganj	TV-Station, Chattogram	Agrabad, Chattogram	Sylhet	Khulna	Rajshahi	Barisal	Savar	Mymensingh	Rangpur	Cumilla	Narshingdi	
SO ₂ -24 hr (ppb)	Average	3.7	1.4	2.4	DNA	7.1	DNA	10.9	3.1	DNA	3.7	5.3	6.3	1.4	2.3	18.7	4.2	
	Max	11.2	5.8	2.8	DNA	13.3	DNA	12.3	3.3	DNA	9.7	6.5	15.4	2.1	11.6	34.8	17.5	
	Min	0.6	0.8	2.0	DNA	0.9	DNA	9.5	2.8	DNA	1.3	4.7	1.6	1.2	0.5	1.1	2.0	
	Excedance(Days)	0.0	0.0	0.0	DNA	0.0	DNA	0.0	0.0	DNA	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
	Data capture(%)	93.5	93.5	19.4	DNA	9.7	DNA	100.0	100.0	DNA	100.0	100.0	83.9	100.0	100.0	100.0	100.0	100.0
NO ₂ -24 hr (ppb)	Average	33.4	DNA	8.7	DNA	1.7	3.6	4.9	DNA	2.1	1.5	DNA	8.0	4.0	7.9	4.0	3.1	
	Max	74.9	DNA	13.9	DNA	2.0	4.4	6.8	DNA	3.2	3.9	DNA	12.1	4.3	12.7	4.1	4.5	
	Min	17.7	DNA	3.8	DNA	1.4	3.0	3.2	DNA	0.9	0.9	DNA	4.9	3.9	2.0	3.9	2.8	
	Excedance(Days)	7.0	DNA	0.0	DNA	0.0	0.0	0.0	DNA	0.0	0.0	DNA	0.0	0.0	0.0	0.0	0.0	
	Data capture(%)	96.8	DNA	100.0	DNA	80.6	100.0	100.0	DNA	100.0	100.0	DNA	100.0	100.0	54.8	100.0	100.0	
CO-8hr (ppm)	Average	1.2	2.1	2.8	DNA	1.4	2.8	DNA	2.6	2.0	2.7	DNA	2.2	1.1	0.9	2.3	0.9	
	Max	4.9	5.3	6.0	DNA	1.6	11.1	DNA	4.5	2.4	8.5	DNA	4.7	4.5	4.5	4.0	2.5	
	Min	0.1	0.4	0.3	DNA	0.9	0.1	DNA	1.5	1.5	0.6	DNA	1.1	0.4	0.1	0.2	0.4	
	Excedance(Hour)	6.0	19.0	53.0	DNA	0.0	43.0	DNA	7.0	0.0	97.0	DNA	6.0	3.0	2.0	0.0	0.0	
	Data capture(%)	88.4	94.4	99.1	DNA	99.1	98.1	DNA	98.8	96.4	99.1	DNA	99.1	99.1	96.5	98.7	99.1	
O ₃ -8hr (ppb)	Average	10.3	9.2	0.7	17.1	DNA	9.0	DNA	0.5	17.4	17.9	DNA	14.2	9.4	7.5	DNA	7.6	
	Max	38.6	129.1	0.9	168.0	DNA	28.5	DNA	0.6	60.4	57.2	DNA	61.2	29.6	59.5	DNA	45.0	
	Min	0.2	0.2	0.5	6.9	DNA	2.9	DNA	0.2	4.5	3.7	DNA	1.9	0.6	0.1	DNA	1.8	
	Excedance(Hour)	0.0	3.0	0.0	45.0	DNA	0.0	DNA	0.0	5.0	4.0	DNA	8.0	0.0	4.0	DNA	0.0	
	Data capture(%)	77.8	88.0	99.1	94.9	DNA	99.1	DNA	88.7	96.4	99.1	DNA	99.1	99.1	94.4	DNA	99.1	
PM _{2.5} -24hr (ug/m3)	Average	152.3	149.1	215.5	228.1	231.6	152.2	131.3	113.2	128.6	184.0	38.1	197.4	148.7	211.3	160.6	172.3	
	Max	246.7	233.2	350.5	444.4	381.5	259.0	249.5	249.7	213.9	488.5	54.6	288.5	210.4	357.7	253.5	263.3	
	Min	76.7	96.5	131.5	140.6	111.6	54.8	69.8	35.8	80.9	97.5	25.3	131.3	102.5	121.1	11.0	109.1	
	Excedance(Days)	30.0	30.0	27.0	15.0	31.0	29.0	30.0	24.0	31.0	31.0	0.0	31.0	31.0	31.0	30.0	31.0	
	Data capture(%)	96.8	96.8	87.1	48.4	100.0	100.0	96.8	87.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
PM ₁₀ -24hr (ug/m3)	Average	329.0	278.2	266.8	285.7	DNA	149.9	300.5	209.8	255.8	277.7	DNA	311.8	225.9	236.9	192.9	DNA	
	Max	521.8	476.3	382.1	458.7	DNA	399.1	373.5	326.8	485.8	403.4	DNA	415.0	356.1	403.3	269.8	DNA	
	Min	173.0	170.3	183.3	147.5	DNA	23.7	215.1	99.8	161.2	179.7	DNA	185.8	133.6	42.6	118.6	DNA	
	Excedance(Days)	25.0	30.0	22.0	30.0	DNA	13.0	12.0	25.0	27.0	31.0	DNA	31.0	28.0	27.0	5.0	DNA	
	Data capture(%)	80.6	96.8	71.0	100.0	DNA	77.4	38.7	90.3	87.1	100.0	DNA	100.0	100.0	100.0	22.6	DNA	
Solar rad. 1hr (W/m2)	Average	129.38	203.22	46.7	DNA	DNA	DNA	113.5	DNA	143.7	150.5	73.4	203.4	141.0	240.1	190.8	212.4	
	Max	538.80	667.6	244.7	DNA	DNA	DNA	543.5	DNA	1327.3	519.7	402.5	585.3	471.6	709.0	544.0	643.4	
	Min	0.20	0.1	7.2	DNA	DNA	DNA	7.4	DNA	0.0	0.0	6.0	0.0	0.0	0.1	0.0	0.0	
	Data capture(%)	28.49	59	100	DNA	DNA	DNA	98	DNA	81	47	99	55.1	53.6	46.1	54.3	52.3	
Relative Humidity 1hr (%)	Average	82.49	54.5	73.6	DNA	DNA	42.5	68.6	DNA	85.2	92.8	87.4	73.4	87.2	87.0	80.6	44.2	
	Max	99.02	78.1	97.3	DNA	DNA	42.6	100.0	DNA	100.0	93.2	89.3	99.4	99.5	99.8	100.0	89.7	
	Min	30.69	15.4	30.9	DNA	DNA	38.4	18.6	DNA	80.9	83.0	84.5	22.7	31.4	42.3	32.7	15.5	
	Data capture(%)	42.07	96.2	99.6	DNA	DNA	99	94	DNA	94	97	99	100.0	100.0	94.1	59.0	97.3	
Ambient Temp. 1hr (degreeC)	Average	18.36	15.9	DNA	DNA	DNA	24.3	20.2	DNA	19.9	19.7	21.3	18.0	18.2	16.6	18.8	18.4	
	Max	24.22	24.6	DNA	DNA	DNA	26.9	30.0	DNA	28.2	29.5	28.6	26.8	27.0	26.2	28.5	27.8	
	Min	12.75	8.7	DNA	DNA	DNA	22.0	7.1	DNA	13.0	12.2	12.3	11.9	11.5	7.1	12.2	7.8	
	Data capture(%)	32.26	100.0	DNA	DNA	DNA	99	33	DNA	95	97	43	99.9	100.0	92.3	98.5	99.1	
Rainfall 1hr (mm)	Average	DNA	0.00	0.00	DNA	DNA	DNA	DNA	DNA	DNA	0.00	DNA	0.00	0.00	0.00	0.00	0.00	
	Max	DNA	0.00	0.00	DNA	DNA	DNA	DNA	DNA	DNA	0.00	DNA	0.00	0.00	0.00	0.00	0.00	
	Min	DNA	0.00	0.00	DNA	DNA	DNA	DNA	DNA	DNA	0.00	DNA	0.00	0.00	0.00	0.00	0.00	
	Data capture(%)	DNA	100.00	39.92	DNA	DNA	DNA	DNA	DNA	DNA	100.00	DNA	100.00	100.00	100.00	100.00	100.00	

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

DNA= Data Not Available

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

Date	Dhaka	Chittagong	Gazipur	Narayangonj	Sylhet	Khulna	Rajshahi	Barisal	Savar	Mymensingh	Rangpur	Cumilla	Norshindi
01-01-2025	222	191	151	291	203	178	172	109	236	208	230	198	236
02-01-2025	192	171	DNA	270	195	174	205	115	212	175	207	164	236
03-01-2025	180	165	DNA	213	175	179	248	81	192	181	278	156	178
04-01-2025	193	179	DNA	272	170	183	310	96	187	184	210	158	185
05-01-2025	295	200	139	338	154	187	194	96	268	198	182	DNA	201
06-01-2025	219	179	162	DNA	128	190	197	DNA	237	190	188	140	218
07-01-2025	208	183	168	230	157	180	188	DNA	235	205	212	198	257
08-01-2025	207	188	142	264	185	191	177	119	189	189	195	205	240
09-01-2025	175	189	DNA	213	184	166	178	101	190	184	263	195	205
10-01-2025	200	196	DNA	258	189	187	199	106	236	209	248	273	211
11-01-2025	192	213	DNA	298	157	210	188	124	258	196	239	199	242
12-01-2025	195	188	242	265	101	222	214	117	249	201	198	194	195
13-01-2025	261	195	314	288	164	225	204	104	301	196	257	198	261
14-01-2025	212	211	265	288	171	188	210	116	241	187	229	233	233
15-01-2025	234	185	252	267	166	182	186	105	242	189	258	199	193
16-01-2025	225	179	230	312	180	182	187	105	235	197	220	193	200
17-01-2025	282	171	227	DNA	165	188	191	105	258	192	290	180	209
18-01-2025	209	161	230	DNA	163	182	213	107	238	204	277	211	211
19-01-2025	189	175	195	DNA	172	165	272	DNA	204	185	252	197	192
20-01-2025	220	189	240	DNA	186	173	273	DNA	253	196	276	229	217
21-01-2025	299	240	340	DNA	215	263	228	133	306	217	275	260	242
22-01-2025	367	251	463	DNA	252	200	196	129	341	241	261	300	303
23-01-2025	310	242	DNA	377	221	186	202	109	222	206	240	268	217
24-01-2025	295	203	DNA	362	DNA	190	224	110	250	212	201	222	209
25-01-2025	254	203	DNA	347	DNA	206	257	148	256	195	196	250	240
26-01-2025	224	181	DNA	283	DNA	169	252	115	246	195	325	224	222
27-01-2025	286	232	DNA	321	DNA	185	266	114	268	204	305	260	245
28-01-2025	282	293	262	272	DNA	223	293	113	283	238	330	298	258
29-01-2025	299	304	315	329	252	202	394	127	307	238	401	284	272
30-01-2025	264	260	272	205	192	170	364	DNA	333	260	377	256	231
31-01-2025	212	229	196	180	181	164	372	156	196	225	211	203	195

Table 7: Graphical representation of 24 hr. average of Sulfur-Di-Oxide (SO₂).

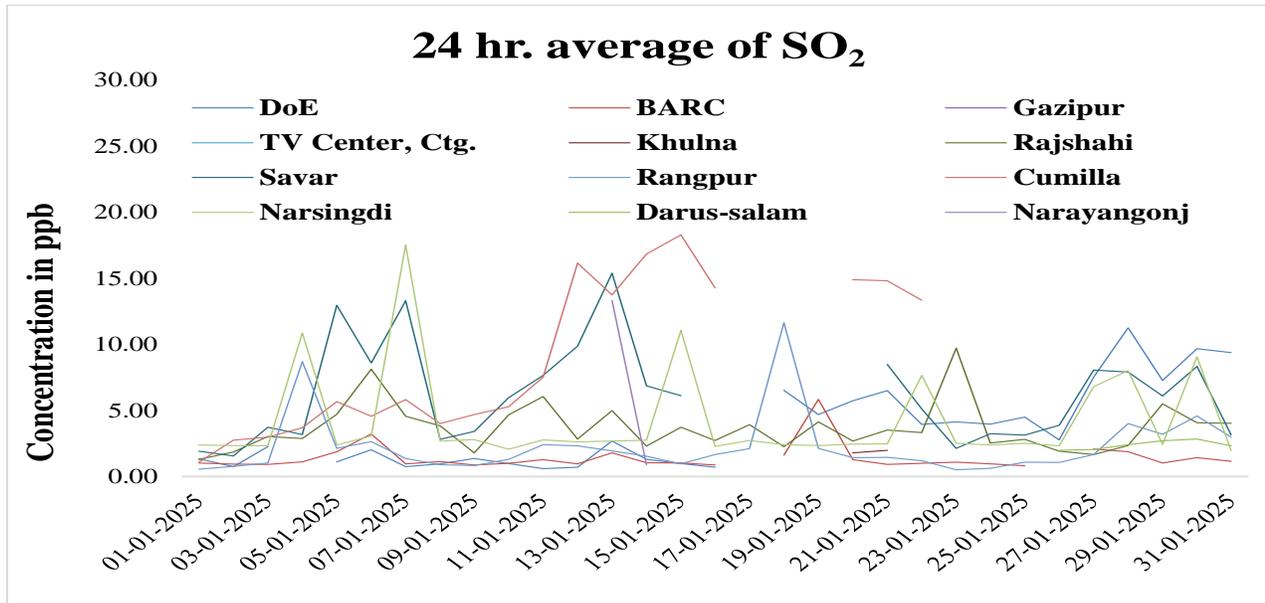


Table 8: Graphical representation of 24 hr. average of Nitrogen-Di-Oxide (NO₂).

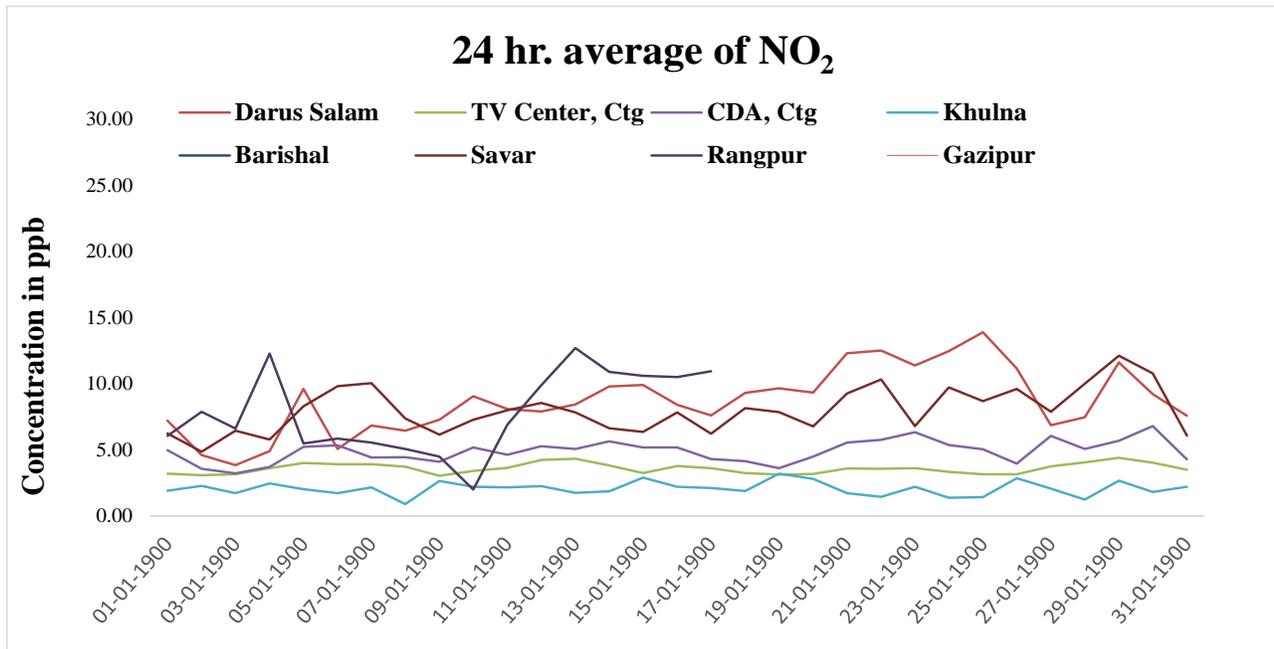


Table 9: Graphical representation of 8 hr. average of Carbon Mono-Oxide (CO)

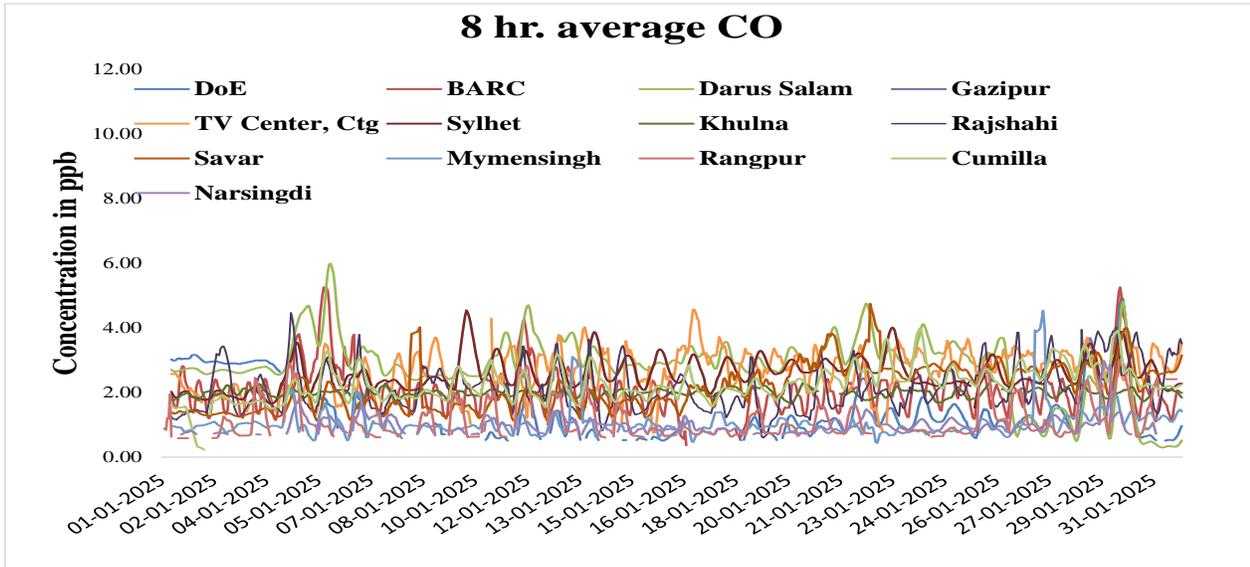


Table 10: Graphical representation of 8 hr. average of Ozone (O₃)

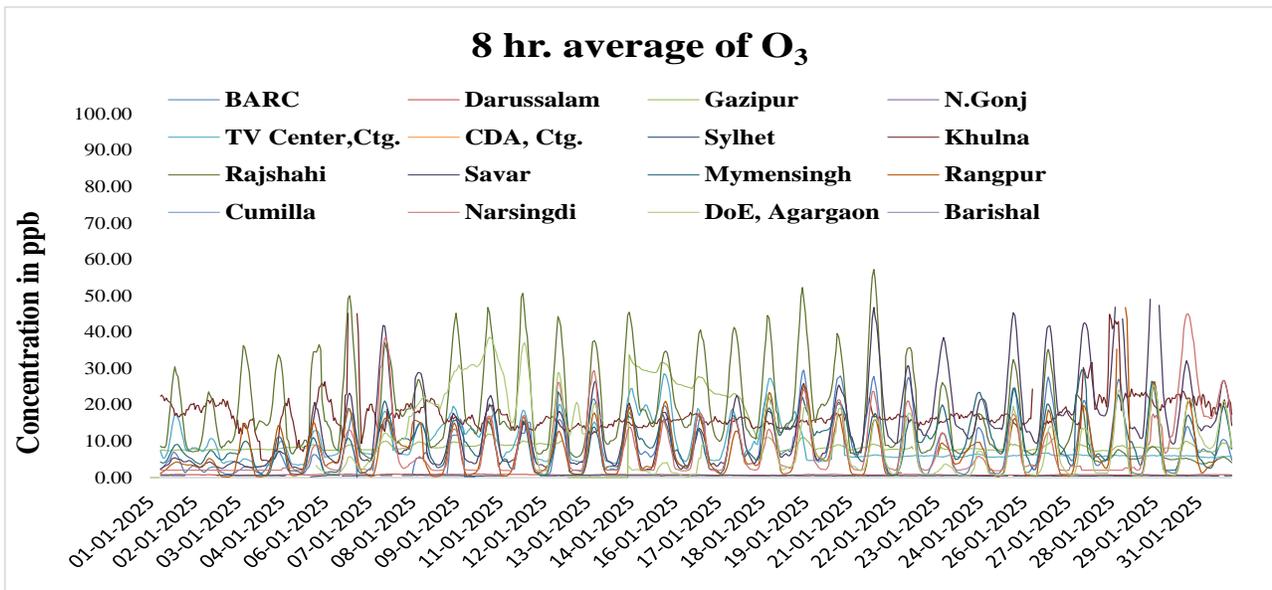


Table 11: Graphical representation of 24 hr. average concentration of PM₁₀.

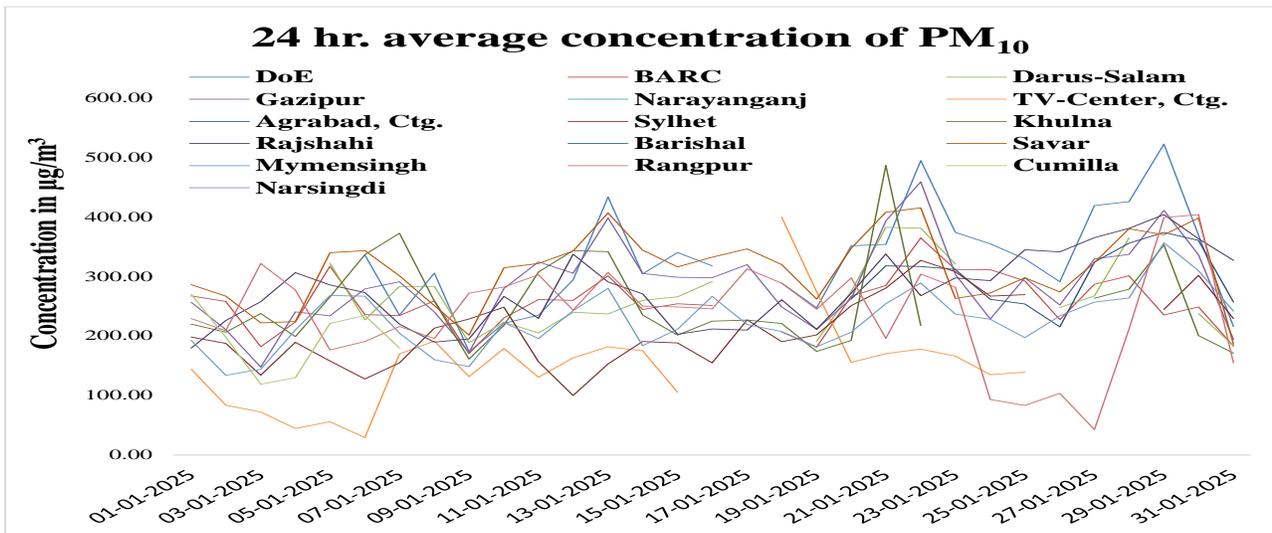
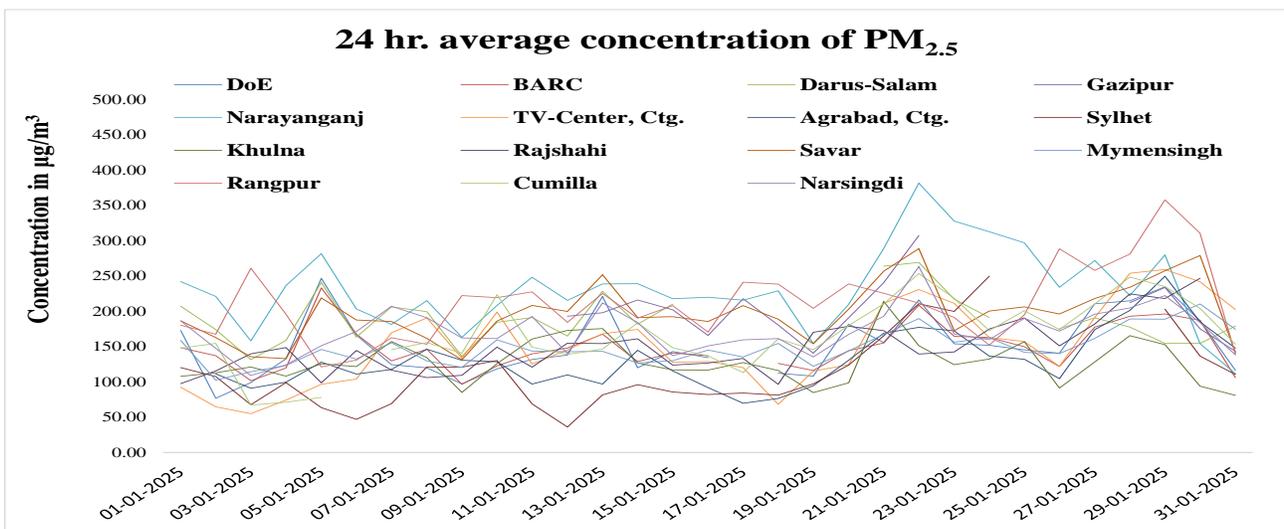


Table 12: Graphical representation of 24 hr. average concentration of PM_{2.5}.



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