Primaria Foeni

MONTHLY AIR-QUALITY REPORT

Timp de la: **01/12/2025, 00:00**
Timp până la: **30/12/2025, 23:59**

Numele dispozitivului: **Primaria Foeni**
Locația dispozitivului: **Primărie (Foeni), 307175 Foeni, Romania**

Parametrii: **EAQI , NO_2 , O_3 , SO_2 , $PM_{2.5}$, PM_{10} , Wind Speed , Wind Direction , CO , R. Humidity , PM_1 , PM_{100} , Pressure , Temperature**

Media indicelui de calitate al aerului (ICA): **398**

Prezentare generală zilnică: Parametrii indicelui de calitate al aerului (ICA)

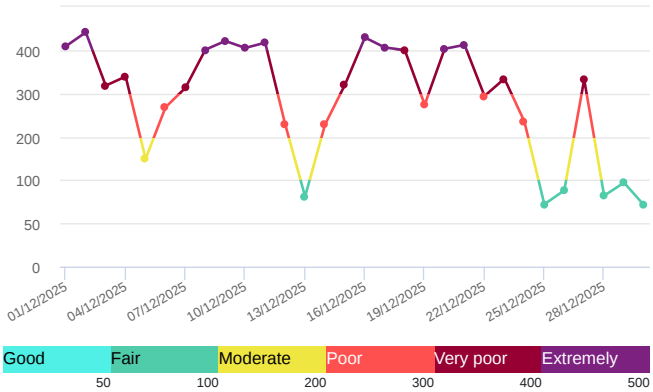
	EAQI AQI	NO_2 µg/m³	O_3 µg/m³	SO_2 ppb	$PM_{2.5}$ µg/m³	PM_{10} µg/m³
Average	398	17.98	51.45	11.39	60.42	149.15
Maximum	441	27.66	62.51	14.87	178.38	581.04
Date	02/12/2025	18/12/2025	30/12/2025	03/12/2025	02/12/2025	02/12/2025
Minimum	71	13.66	40.89	7.01	14.24	27.72
Date	30/12/2025	28/12/2025	18/12/2025	05/12/2025	30/12/2025	25/12/2025

Prezentare generală zilnică: Alți parametri

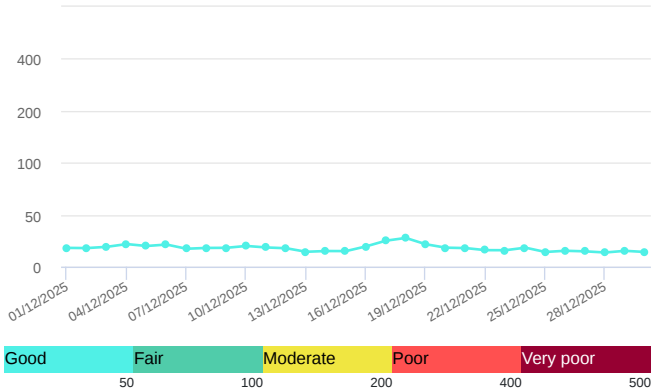
	Wind Speed m/s	Wind Direction degree	Battery %	CO ppb	R. Humidity %	PM1 µg/m³	PM100 µg/m³	Pressure HPa	Temperature °C
Average	0.32	115.76	100	451.73	85.62	38.89	223.62	1014.31	5.38
Maximum	5.11	126.72	100	776.82	92.34	65.35	982.4	1022.18	11.92
Date	05/12/2025	05/12/2025	01/12/2025	18/12/2025	09/12/2025	18/12/2025	02/12/2025	14/12/2025	05/12/2025
Minimum	0.2	193.03	99.99	325.09	75.17	12.53	31.28	1001.89	-0.27
Date	14/12/2025	14/12/2025	05/12/2025	26/12/2025	29/12/2025	30/12/2025	25/12/2025	05/12/2025	30/12/2025

Weekly Average

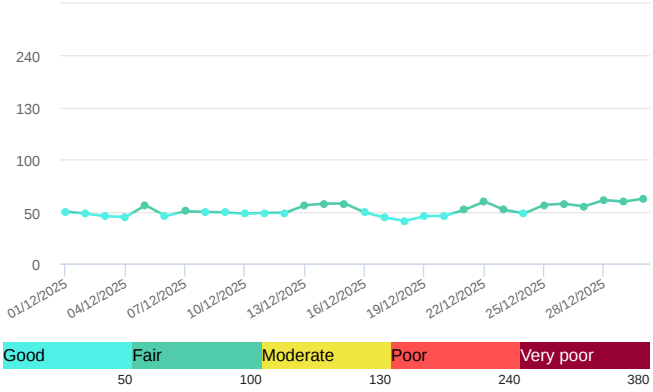
EAQI (AQI)



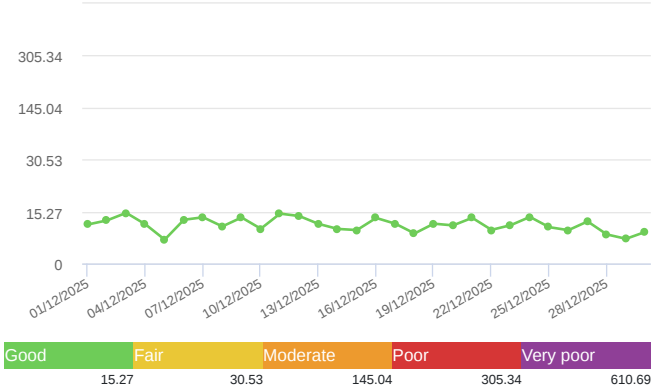
NO_2 (µg/m³)



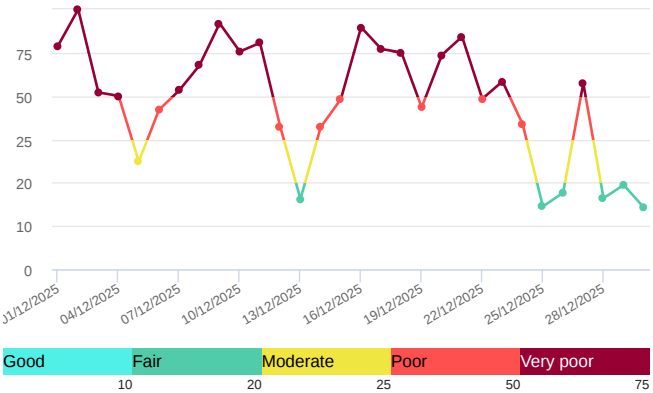
O_3 (µg/m³)



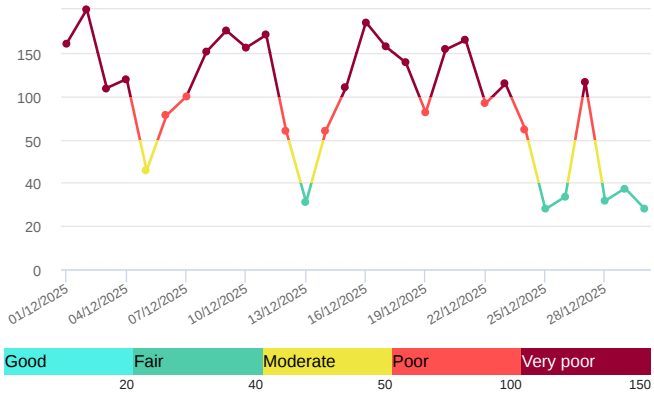
SO_2 (ppb)



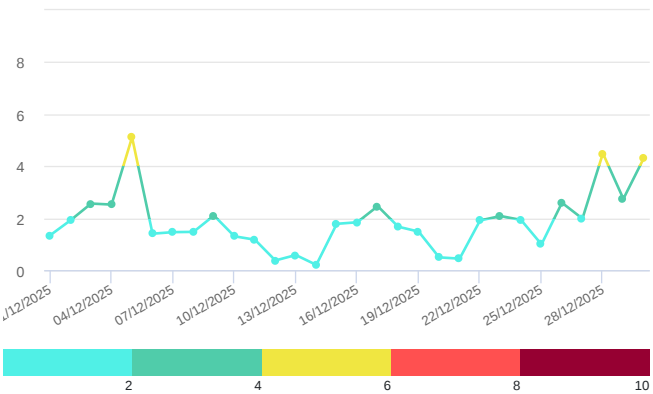
$PM_{2.5}$ (µg/m³)



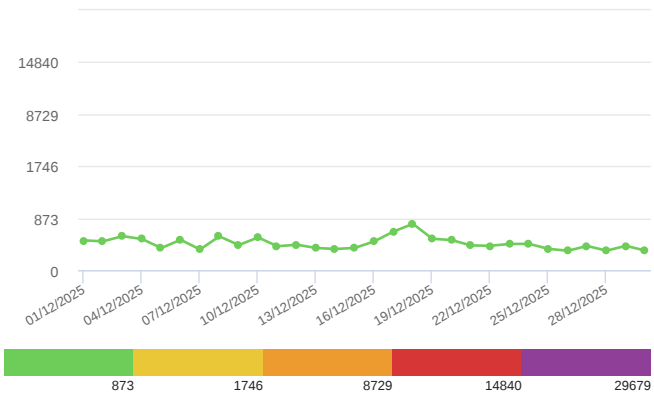
PM_{10} (µg/m³)



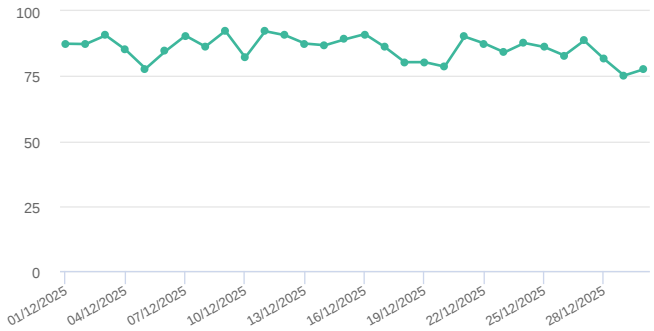
Wind Speed (m/s)



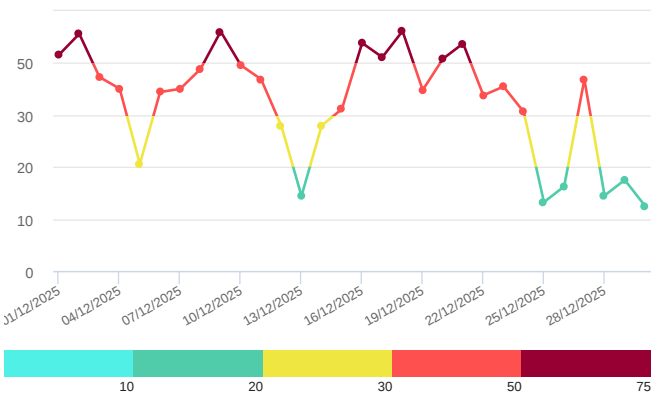
CO (ppb)



R. Humidity (%)

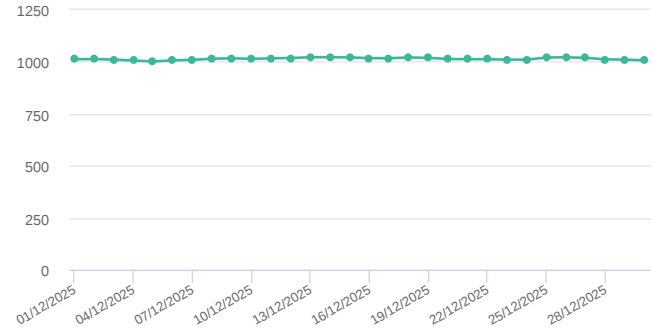


PM₁ (µg/m³)

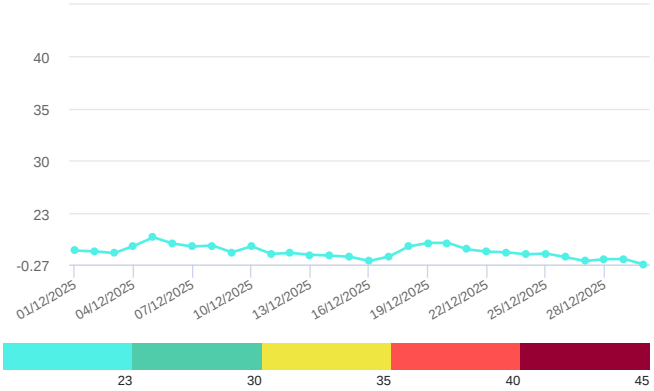


PM₁₀₀ (µg/m³)

Pressure (HPa)

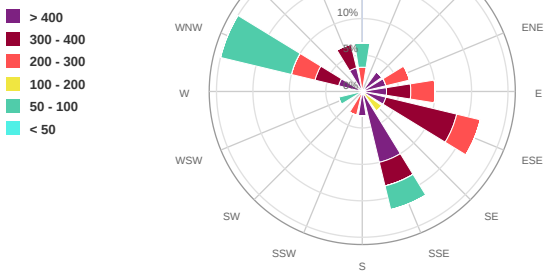


Temperature (°C)

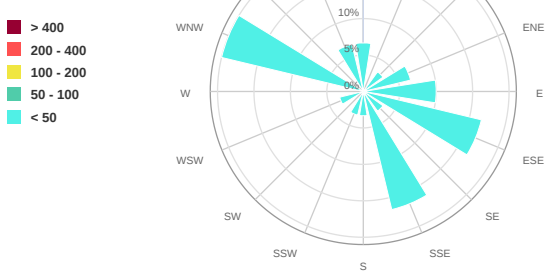


Weekly Average

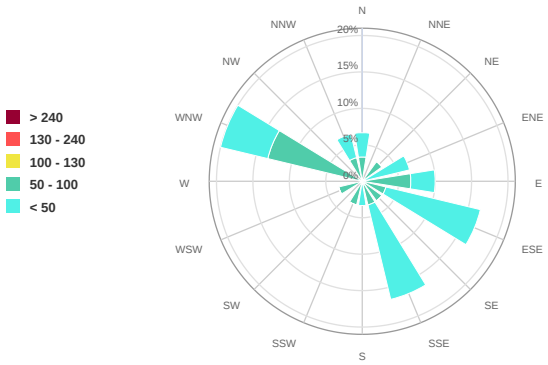
EAQI (AQI)



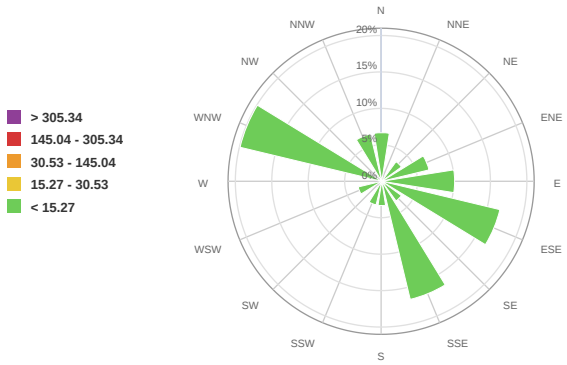
NO_2 (µg/m³)



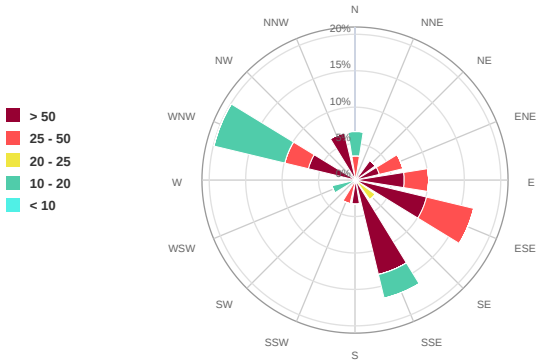
O_3 (µg/m³)



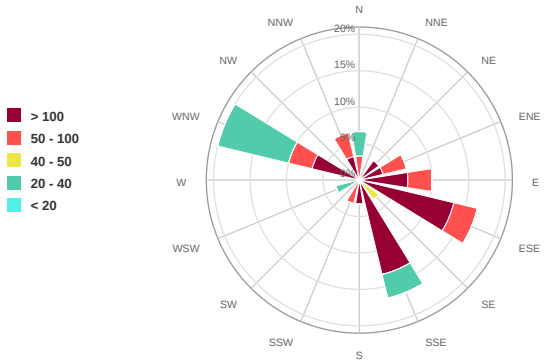
SO_2 (ppb)



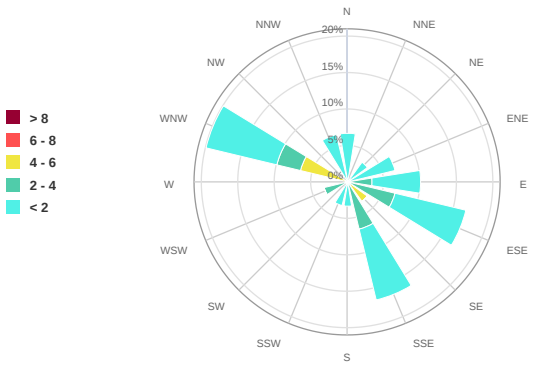
$PM_{2.5}$ (µg/m³)



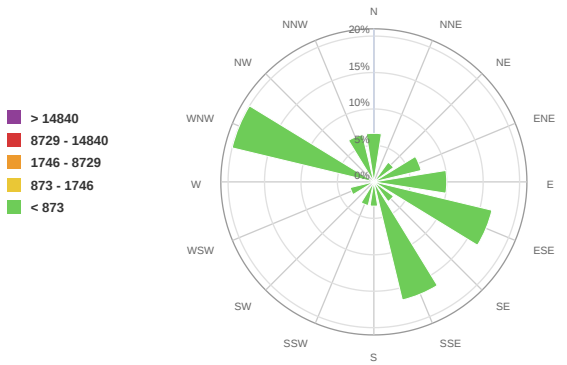
PM_{10} (µg/m³)



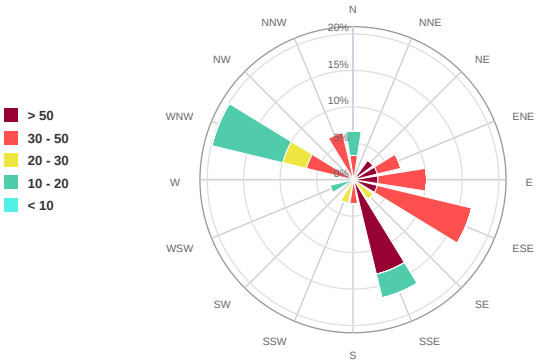
Wind Speed (m/s)



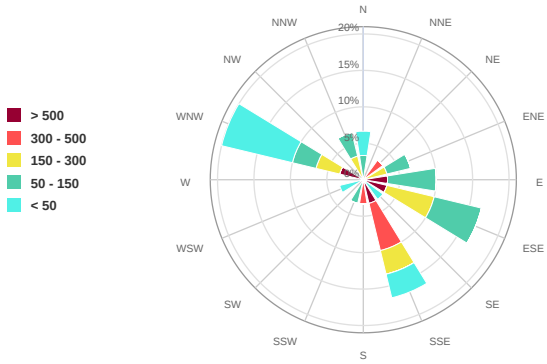
CO (ppb)



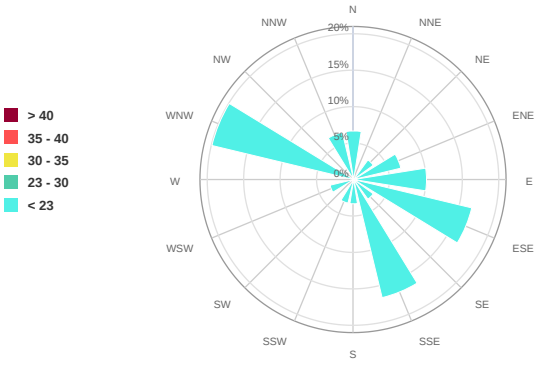
PM₁ (µg/m³)



PM₁₀₀ (µg/m³)



Temperature (°C)



Alerte

No alerts for the selected date and time range

Insights

- 30/12/2025, 23:59 **EAQI consistently reached 'Extremely Poor' levels in December**: The EAQI reached 'Extremely Poor' levels on 10 days out of 30, indicating severely degraded air quality. This suggests a persistent pollution issue.
- 30/12/2025, 23:59 **$PM_{2.5}$ concentrations exceeded safe limits, posing health risks**: $PM_{2.5}$ levels were frequently in the 'Poor' to 'Extremely Poor' range, with a peak of 178.38 µg/m³, significantly above the 'Good' threshold of 10 µg/m³.
- 30/12/2025, 23:59 **PM_{10} levels showed extreme pollution, surpassing limits**: PM_{10} values often exceeded the 'Poor' range, reaching a maximum of 581.04 µg/m³. This highlights severe particulate matter pollution. Good range: 0-20 µg/m³.
- 30/12/2025, 23:59 **O_3 levels mostly within acceptable ranges despite EAQI issues**: O_3 concentrations were generally within the 'Fair' to 'Moderate' zones, even on days with 'Extremely Poor' EAQI, suggesting other pollutants drive the overall AQI.
- 30/12/2025, 23:59 **NO_2 levels consistently remained within 'Fair' range**: NO_2 levels were consistently within the 'Fair' range, even on days with high EAQI, indicating it's not a primary driver of poor air quality.
- 30/12/2025, 23:59 **SO_2 concentrations mostly in 'Good' zone, low contributor**: SO_2 levels were primarily in the 'Good' zone throughout the period, suggesting it contributed the least to overall air quality degradation.
- 30/12/2025, 23:59 **Temperature fluctuations exhibit inverse correlation with EAQI**: Slight inverse correlation might exist between temperature and EAQI levels, requiring further investigation to establish causality, with lower temps during Extremely Poor air quality.
- 30/12/2025, 23:59 **High Humidity levels do not clearly correlate to EAQI**: High relative humidity (R. Humidity) does not appear to have a direct correlation to EAQI levels in a consistent manner across the recorded timeframe.
- 30/12/2025, 23:59 **Wind Speed Variation and Impact on Air Quality Levels**: Variable wind speeds recorded, from 0.2 to 5.11 m/s, may be affecting pollutant dispersal impacting localized air quality conditions with no clear pattern.
- 30/12/2025, 23:59 **Pressure (HPa) stability during period of high pollution.**: Pressure (HPa) exhibited relatively stable conditions throughout December, around 1010-1020, that don't strongly correlate with varying air quality.
- 16/12/2025, 23:59 **Highest EAQI recorded on December 16th**: The highest EAQI value of 429, categorized as 'Extremely Poor', was recorded on December 16th, coinciding with extremely high PM_{10} of 453.41 µg/m³.
- 13/12/2025, 23:59 **Lowest EAQI of moderate was on December 13**: The lowest EAQI value of 133, categorized as 'Moderate', was recorded on December 13th and it coincided with low particulate matter levels.
- 02/12/2025, 23:59 **December 2nd: Peak PM_{10} concentration observed.**: On December 2nd, the highest PM_{10} concentration of 581.04 µg/m³ was recorded, contributing to an 'Extremely Poor' EAQI.
- 16/12/2025, 23:59 **December 17: Peak $PM_{2.5}$ concentration.**: On December 17th, the highest $PM_{2.5}$ concentration of 135.68 µg/m³ was recorded, contributing to an 'Extremely Poor' EAQI.
- 30/12/2025, 23:59 **PM_1 correlates with $PM_{2.5}$ and PM_{10} but lower**: PM_1 follows similar trends to $PM_{2.5}$ and PM_{10}, but its concentration is consistently lower, indicating that a portion of $PM_{2.5}$ and PM_{10} consists of larger particles.
- 30/12/2025, 23:59 **Moderate Wind Speeds Correlate With Better Air Quality**: Moderate wind speeds, between 2.0 m/s and 3.0 m/s, seem to coincide with some of the 'Moderate' air quality days, indicating potential pollutant dispersal.
- 30/12/2025, 23:59 **Wind Direction shifts impact pollutant concentration**: Variable wind direction suggests that the source of pollutants may be shifting, influencing the concentration of $PM_{2.5}$ and PM_{10} at the monitoring location.
- 30/12/2025, 23:59 **Lower temperatures may trap pollutants**: Lower temperatures, often below 5°C, appear to correlate with periods of 'Extremely Poor' air quality, possibly due to reduced atmospheric mixing.
- 30/12/2025, 23:59 **PM_{100} concentrations generally higher than other PMs**: PM_{100} consistently exhibits the highest concentration compared to $PM_{2.5}$, PM_{10}, and PM_1, suggesting a prevalence of very large particulate matter.
- 30/12/2025, 23:59 **Battery levels consistent, not impacting data reliability**: Battery percentage consistently at 100% ensures reliability and accuracy of the collected air quality data during the whole month.
- 26/12/2025, 23:59 **Air quality improvements during Christmas period**: Around Christmas Day (December 25th), the EAQI improved to 'Moderate', suggesting a potential reduction in pollution sources during the holiday.
- 09/12/2025, 23:59 **December 9th exhibits extreme PM_{10} peak.**: December 9th shows a steep increase of PM_{10} to 369.70 µg/m³ and PM_{100} hitting 510.41 µg/m³, greatly increasing EAQI to 'Extremely Poor'.
- 10/12/2025, 23:59 **December 10: High $PM_{2.5}$ peak.**: December 10th exhibited another peak of $PM_{2.5}$, hitting a concerning value of 77.82 µg/m³, categorizing the air quality under 'Extremely Poor'.
- 22/12/2025, 23:59 **December 22: PM_{10} spike to 91.42 µg/m³**: December 22, marked with higher PM_{10} at 91.42 µg/m³, despite EAQI being 'Poor', demonstrates the influence on categorizing pollution levels.
- 30/12/2025, 23:59 **Consistent O_3 Levels with EAQI Fluctuations**: Throughout the period, O_3 levels remain relatively stable while EAQI fluctuates significantly, suggesting pollutants other than O_3 heavily influence EAQI readings.
- 05/12/2025, 23:59 **December 5th: Best Air Quality Day in the Sample**: December 5th had the best recorded air quality, classified as 'Moderate' with EAQI at 149, showing a marked decrease of pollutants than other days.
- 30/12/2025, 23:59 **$PM_{2.5}$ and PM_{10} Consistently Elevated Simultaneously**: The similar patterns in $PM_{2.5}$ and PM_{10} indicate a shared source contributing to both, implying similar polluting events causing these spikes.

- 30/12/2025, 23:59 **CO concentration is High across all samples**: CO levels consistently elevated, often above 400 ppb, suggesting a significant carbon monoxide pollution source is always active in the location monitored
- 30/12/2025, 23:59 **Elevated CO levels indicate combustion sources nearby.**: Consistently high CO concentrations, coupled with $PM_{2.5}$ increases, points to combustion processes (e.g., vehicle emissions, industrial activity, or biomass burning) as a source.
- 30/12/2025, 23:59 **Need to analyze CO and PM ratios.**: The consistent reading for both CO and PM across all samples implies that they may be coming from the same sources of pollution. The relationship should be analyzed more.

Parametrii indicelui de calitate al aerului (ICA)

Weekly Average

To Date	EAQI AQI	NO_2 µg/m³	O_3 µg/m³	SO_2 ppb	$PM_{2.5}$ µg/m³	PM_{10} µg/m³
01/12/2025, 23:59	409	18.08	49.92	11.45	91.54	245.88
02/12/2025, 23:59	441	17.92	47.9	12.66	178.38	581.04
03/12/2025, 23:59	318	19.12	45.47	14.87	52.07	109.19
04/12/2025, 23:59	339	21.77	44.76	11.5	50.07	119.63
05/12/2025, 23:59	149	19.92	56	7.01	22.44	42.81
06/12/2025, 23:59	268	21.31	45.67	12.84	42.05	77.71
07/12/2025, 23:59	313	17.24	50.23	13.57	53.25	99.62
08/12/2025, 23:59	401	18.07	49.65	10.89	67.64	159.6
09/12/2025, 23:59	421	18.13	49.05	13.52	144.91	369.7
10/12/2025, 23:59	405	19.93	47.76	10.21	77.82	201.07
11/12/2025, 23:59	417	18.52	48.71	14.65	98.35	326.75
12/12/2025, 23:59	229	17.74	48.76	13.94	32.24	59.44
13/12/2025, 23:59	81	14.37	56.02	11.64	16.24	31.02
14/12/2025, 23:59	228	15.03	57.62	10.15	31.95	60.63
15/12/2025, 23:59	320	15.01	57.72	9.82	48.2	109.76
16/12/2025, 23:59	429	19.48	48.95	13.38	135.68	453.41
17/12/2025, 23:59	406	25	44.26	11.68	83.93	209.51
18/12/2025, 23:59	400	27.66	40.89	8.82	75.38	138.67
19/12/2025, 23:59	274	21.6	45.58	11.7	43.42	80.9
20/12/2025, 23:59	403	18.29	45.79	11.19	73.7	181.09
21/12/2025, 23:59	412	17.92	51.7	13.41	113.16	275.94
22/12/2025, 23:59	294	15.91	59.53	9.88	48.4	91.42
23/12/2025, 23:59	334	15.86	51.57	11.26	58.43	114.11
24/12/2025, 23:59	235	18.28	48.2	13.68	33.69	61.3
25/12/2025, 23:59	72	14.17	56.42	10.68	14.48	27.72
26/12/2025, 23:59	88	15.29	57.52	9.79	17.69	33.53
27/12/2025, 23:59	332	14.76	54.93	12.36	57.35	116.21
28/12/2025, 23:59	82	13.66	61.01	8.53	16.41	31.63
29/12/2025, 23:59	97	15.23	59.52	7.25	19.47	37.41
30/12/2025, 23:59	71	14.15	62.51	9.27	14.24	27.76

Alți parametri

Weekly Average

To Date	Wind Speed m/s	Wind Direction degree	Battery %	CO ppb	R. Humidity %	PM_1 µg/m³	PM_{100} µg/m³	Pressure HPa	Temperature °C
01/12/2025, 23:59	1.34	150.21	100	498.55	87.42	53.99	379.24	1012.28	5.97
02/12/2025, 23:59	1.92	102.99	100	483.48	87.29	64.03	982.4	1013.26	5.67
03/12/2025, 23:59	2.56	120.52	100	570.4	90.63	44.61	147.27	1010.32	4.85
04/12/2025, 23:59	2.52	108.99	100	522.3	85.08	40.13	194.25	1006.01	8.11
05/12/2025, 23:59	5.11	126.72	99.99	371.22	77.82	20.58	49.2	1001.89	11.92
06/12/2025, 23:59	1.4	351.94	100	509.35	84.57	38.81	87.53	1006.94	9.1
07/12/2025, 23:59	1.46	340.2	100	346.97	90.52	40.07	108.32	1009.34	7.79
08/12/2025, 23:59	1.47	333.47	100	566.78	86.31	47.68	239.21	1014.84	8.26
09/12/2025, 23:59	2.1	149.11	100	420.88	92.34	65.16	510.41	1016.72	5.19
10/12/2025, 23:59	1.3	177	100	548.61	82.15	49.12	329.57	1014.06	7.93
11/12/2025, 23:59	1.17	287.46	100	400.28	92.23	43.75	590.05	1016.64	4.49
12/12/2025, 23:59	0.37	301.6	100	426.17	90.69	27.92	64.76	1018.27	4.93
13/12/2025, 23:59	0.58	150.63	100	371.85	87.48	14.42	34.26	1021.84	4.13
14/12/2025, 23:59	0.2	193.03	100	354.47	86.83	27.98	67.88	1022.18	3.74
15/12/2025, 23:59	1.78	113.18	100	372.61	89.11	32.27	152.62	1020.93	3.22
16/12/2025, 23:59	1.84	79.34	100	482.14	91.11	59.62	881.5	1017.67	1.35
17/12/2025, 23:59	2.46	148.86	100	648.16	86.15	52.77	344.23	1017.08	3.31
18/12/2025, 23:59	1.67	161.52	100	776.82	80.32	65.35	151.43	1020.96	7.8
19/12/2025, 23:59	1.48	118.25	100	525.49	80.33	39.59	90.39	1018.72	9.41
20/12/2025, 23:59	0.49	67.41	100	504.85	78.62	52.02	291.71	1013.4	9.43
21/12/2025, 23:59	0.44	54.86	100	413.81	90.15	59.4	377.75	1012.46	6.53
22/12/2025, 23:59	1.91	99.23	100	408.38	87.49	37.57	102.26	1012.59	5.5
23/12/2025, 23:59	2.08	91.53	100	439.52	84.1	40.93	133.98	1010.28	5.22
24/12/2025, 23:59	1.93	63.36	100	439.81	87.7	31.17	67.54	1010.78	4.28
25/12/2025, 23:59	0.99	355.32	100	356.75	86.16	13.24	31.28	1020.42	4.69
26/12/2025, 23:59	2.59	297.85	100	325.09	82.92	16.25	37.28	1021.83	3.03
27/12/2025, 23:59	1.98	282.34	100	404.76	88.63	43.66	150.38	1018.67	1.32
28/12/2025, 23:59	4.49	301.27	100	326.92	81.56	14.51	36.09	1011.77	2.16
29/12/2025, 23:59	2.74	238.11	100	407.61	75.17	17.5	43.4	1010.38	2.2
30/12/2025, 23:59	4.31	298.92	100	327.96	77.62	12.53	32.5	1006.82	-0.27