Supplementary Information

Scheme S1. Essential steps of extraction and preliminary treatment of data.

Preliminary treatment of extracted datasets

1. **datasets** of average hourly measurements of 17 stations x 12 months x (28-31) days x 24 hours in 2022
2. → **2 subsets** of a) 17 x 12 x (20 - 27) x 19 hourly data (06am - 12pm); b) 17 x 12 x (20 - 27) x 5 hourly data (01am - 05am)
3. → **2 subsets** of a) 17 x 12 x (20 - 27) mean daily data of working days; b) 17 x 12 x (20 - 27) mean nightly data of working days → t-test
4. → **1 subset** of 17 x 12 x (20 - 27) mean daily (06 am - 12 pm) data relative to working days
5. → **17** annual **subsets**, station by station
6. → **17 x 12 subsets** station by station, month by month
7. *elimination of outliers*
8. **box plots** and **summary statistics**

Scheme S2. Essential steps of statistical elaboration of data.

Elaboration procedure

1. **clustering** of stations relative to annual and monthly data

after execution of normality test on the data distribution:

2. **significance tests** on different groups of data subsets, according to the pursued goal:

parametric tests:

one-way ANOVA and post-ANOVA (Games- Howell)

non-parametric tests:

Kruskal-Wallis and Dunn test

t-tests and Mann-Whitney tests in specific cases

3. **comparison** of the results obtained by parametric and non-parametric tests

4. **conclusions** from the results of different tests →

- seasonality
- station siting
- categorisation chosen for the stations

In Tables reporting summary statistics (Tables S1–S13) the values of monthly mean, standard deviation, minimum and maximum, first quartile, median, third quartile, and interquartile range for N data are reported.

Table S1. Summary statistics for the distributions of the daily NO_2 mean concentrations ($\mu g/m^3$) in 2022. N is the number of data in the sample; Mean is the yearly mean and StDev is the estimated standard deviation of the sample, assumed to be extracted from a normal population; Minimum and Maximum indicate the lowest and highest values of the sample, respectively; Q1, Median, and Q3 indicate the first quartile, the median, and the third quartile values of the distribution of the sample, respectively; IQR is the interquartile range, i.e., the difference between Q3 and Q1.

Station	N	Mean	StDev	Minimum	Q1	Median	Q3	Maximum	IQR
		($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
RB-Mo	299	13.20	7.49	2.95	7.79	10.23	17.58	42.32	9.79
RB-Mn	304	14.15	6.93	2.91	8.80	12.07	18.47	35.76	9.66
RB-Ra	300	12.23	6.50	2.31	7.50	10.32	16.42	33.95	8.92
SB-Mo	302	24.56	10.63	7.26	15.79	22.16	32.36	54.63	16.57
SB-Mn1	304	17.10	11.43	4.68	8,23	12.11	23.14	53.95	14.92
SB-Mn2	299	20.57	8.90	6.25	13.08	20.16	26.44	53.63	13.36
SB-Ra	299	12.41	8.01	1.21	5.93	10.21	18.16	39.10	12.23
UB-Mo1	304	23.23	11.60	5.05	13.66	21.55	31.41	60.26	17.75
UB-Mo2	301	18.74	8.34	4.16	12.18	17.47	24.84	38.69	12.66
UB-Mn1	304	21.22	10.79	7.68	12,22	17.82	28.52	58.35	16.30
UB-Mn2	303	21.24	10.36	4.77	12.71	19.66	27.79	55.06	15.08
UB-Ra1	304	18.75	10.82	2.63	9.77	15.13	26.66	51.36	16.89
UB-Ra2	302	17.30	9.30	2.56	9.66	14.03	23.80	47.58	14.14
UT-Mo1	304	36.13	12.89	13.00	26.61	34.55	45.01	75.00	18.42
UT-Mo2	296	44.24	9.98	14.26	37.45	44.58	51.49	65.26	14.04
UT-Mn	303	22.15	10.07	8.22	14.17	20.31	27.75	64.98	13.58
UT-Ra	296	25.45	10.50	7.21	16.92	23.13	33.01	54.58	16.09

Table S2. Summary statistics for daily NO_2 mean concentration ($\mu g/m^3$) in January 2022.

Station	N	Mean ($\mu g/m^3$)	StDev ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Q1 ($\mu g/m^3$)	Median ($\mu g/m^3$)	Q3 ($\mu g/m^3$)	Maximum ($\mu g/m^3$)	IQR ($\mu g/m^3$)
RB-Mo	22	27.29	8.39	14.00	21.80	27.63	32.96	43.32	11.16
RB-Mn	24	23.97	5.90	14.10	20.11	22.90	28.37	35.76	8.26
RB-Ra	24	21.94	5.53	14.05	16.78	21.32	24.72	32.79	7.95
SB-Mo	24	37.72	6.82	25.39	32.47	37.38	41.58	52.86	9.11
SB-Mn1	24	28.32	7.03	16.85	23.03	27.11	30.93	46.27	7.90
SB-Mn2	24	38.56	10.29	23.46	30.93	37.66	45.76	61.51	14.83
SB-Ra	24	22.45	4.07	14.89	19.33	22.29	25.38	31.58	6.05
UB-Mo1	24	39.87	10.32	23.30	33.78	39.14	49.25	60.26	15.47
UB-Mo2	23	31.52	5.02	21.16	28.21	33.47	35.74	38.69	7.53
UB-Mn1	24	36.61	9.12	22.64	28.64	35.70	43.21	58.35	14.57
UB-Mn2	24	32.93	7.69	20.37	26.16	32.26	38.13	49.11	11.97
UB-Ra1	24	31.57	5.97	19.74	25.88	32.47	36.09	42.47	10.21
UB-Ra2	24	38.48	9.31	24.21	30.62	37.08	46.89	54.63	16.28
UT-Mo1	24	52.13	13.37	28.68	45.17	49.50	62.07	75.00	16.89
UT-Mo2	20	43.64	7.83	27.42	37.58	43.95	50.11	55.68	12.53
UT-Mn	24	39.54	10.37	24.33	31.37	38.15	47.08	65.08	15.71
UT-Ra	24	37.12	6.97	26.21	32.71	36.50	41.14	53.63	8.43

Table S3. Summary statistics for daily NO_2 mean concentration ($\mu g/m^3$) in February 2022.

Station	N	Mean ($\mu g/m^3$)	StDev ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Q1 ($\mu g/m^3$)	Median ($\mu g/m^3$)	Q3 ($\mu g/m^3$)	Maximum ($\mu g/m^3$)	IQR ($\mu g/m^3$)
RB-Mo	24	18.70	6.55	5.44	14.43	18.92	24.56	27.53	10.13
RB-Mn	24	18.67	6.02	6.89	13.80	18.59	23.53	28.62	9.73
RB-Ra	24	15.76	5.39	3.42	11.97	16.45	19.18	27.63	7.21
SB-Mo	24	37.21	8.84	19.11	31.69	36.55	43.58	53.95	11.89
SB-Mn1	24	25.70	8.13	9.12	19.76	26.49	32.73	38.13	12.97
SB-Mn2	24	33.27	7.20	15.22	30.45	33.76	38.11	44.42	7.66
SB-Ra	24	18.33	6.01	4.42	13.55	20.50	22.33	30.74	8.78
UB-Mo1	24	36.42	8.60	22.84	29.59	35.97	42.59	52.74	13.00
UB-Mo2	24	29.25	6.47	17.37	23.51	31.16	34.96	38.26	11.45
UB-Mn	24	33.84	8.20	16.40	29.45	33.28	40.34	51.37	10.89
UB-Mn2	24	34.59	7.66	20.57	29.76	34.49	40.50	51.36	10.74
UB-Ra	24	29.67	8.05	8.26	26.38	29.97	34.00	47.58	7.62
UB-Ra2	24	27.71	7.59	12.53	21.12	28.50	34.17	39.00	13.05
UT-Mo1	24	50.76	9.91	33.26	44.30	50.13	55.89	70.95	11.59
UT-Mo2	24	52.04	9.33	32.94	43.27	52.58	60.41	64.37	17.14
UT-Mn	23	33.82	7.71	20.47	28.83	32.61	41.48	50.49	12.66
UT-Ra	24	39.13	8.27	19.16	36.25	40.71	43.71	54.58	7.46

Table S4. Summary statistics for daily NO_2 mean concentration ($\mu g/m^3$) in March 2022.

Station	N	Mean ($\mu g/m^3$)	StDev ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Q1 ($\mu g/m^3$)	Median ($\mu g/m^3$)	Q3 ($\mu g/m^3$)	Maximum ($\mu g/m^3$)	IQR ($\mu g/m^3$)
RB-Mo	27	12.33	4.08	6.47	8.68	12.11	14.74	21.89	6.05
RB-Mn	27	12.79	3.84	6.65	10.41	12.06	16.76	19.85	6.36
RB-Ra	27	11.49	3.53	5.17	9.32	10.89	14.11	18.42	4.79
SB-Mo	26	35.12	12.11	16.26	24.83	36.26	46.48	53.22	21.66
SB-Mn1	27	19.42	6.31	9.28	13.54	18.36	25.70	30.37	12.16
SB-Mn2	27	29.00	8.84	12.22	21.63	30.61	33.69	44.80	12.06
SB-Ra	27	13.30	4.31	4.05	10.79	13.32	16.53	21.16	5.74
UB-Mo1	27	31.99	10.35	13.05	24.26	35.74	39.68	46.63	15.42
UB-Mo2	27	28.43	3.26	22.05	26.74	28.05	31.32	33.84	4.58
UB-Mn1	27	28.99	11.52	13.73	17.18	25.52	39.05	50.40	21.87
UB-Mn2	27	30.61	9.59	15.05	22.32	32.54	38.76	45.98	16.45
UB-Ra1	27	24.98	6.96	10.53	20.05	25.58	30.42	37.26	10.37
UB-Ra2	25	20.80	3.44	15.05	18.45	21.00	22.71	30.16	4.26
UT-Mo1	27	48.33	10.02	30.95	41.00	48.00	58.74	66.16	17.74
UT-Mo2	27	48.03	6.05	36.45	44.95	47.16	52.84	58.16	7.89
UT-Mn	27	29.60	8.90	14.61	21.82	27.66	36.91	47.48	15.09
UT-Ra	27	36.43	7.12	22.74	31.11	37.74	41.42	47.63	10.32

Table S5. Summary statistics for daily NO_2 mean concentration ($\mu g/m^3$) in April 2022.

Station	N	Mean ($\mu g/m^3$)	StDev ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Q1 ($\mu g/m^3$)	Median ($\mu g/m^3$)	Q3 ($\mu g/m^3$)	Maximum ($\mu g/m^3$)	IQR ($\mu g/m^3$)
RB-Mo	24	8.49	1.83	3.95	7.64	8.53	9.61	12.42	1.96
RB-Mn	24	9.51	2.27	5.44	8.09	8.84	11.04	15.21	2.95
RB-Ra	24	7.45	2.84	2.67	5.05	7.84	9.93	11.95	4.88
SB-Mo	24	20.41	4.39	10.21	17.82	19.89	23.13	29.95	5.32
SB-Mn1	24	10.31	2.55	5.63	8.49	10.68	12.51	15.47	4.02
SB-Mn2	22	18.58	4.13	10.42	15.81	18.82	21.22	26.11	5.42
SB-Ra	24	8.81	3.22	3.00	5.71	10.05	11.41	14.12	5.70
UB-Mo1	24	16.96	5.55	6.53	13.51	17.26	20.61	28.47	7.09
UB-Mo2	24	21.90	5.08	8.89	20.22	21.97	25.97	28.81	5.75
UB-Mn1	24	15.40	3.24	8.74	12.91	15.71	17.45	21.26	4.54
UB-Mn2	24	14.89	4.94	7.37	10.72	14.26	18.14	26.42	7.42
UB-Ra1	24	12.11	5.14	3.53	7.72	12.82	16.53	19.74	8.80
UB-Ra2	24	12.00	4.65	2.56	8.74	11.79	15.32	21.68	6.58
UT-Mo1	24	30.31	7.90	13.21	24.11	29.79	36.28	44.79	12.17
UT-Mo2	24	44.03	12.54	14.26	35.70	48.24	52.45	57.79	16.75
UT-Mn	23	18.93	2.50	14.84	16.14	19.13	20.89	24.68	4.75
UT-Ra	24	19.70	6.61	7.53	14.81	20.13	23.91	31.42	9.09

Table S6. Summary statistics for daily NO_2 mean concentration ($\mu g/m^3$) in May 2022.

Station	N	Mean ($\mu g/m^3$)	StDev ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Q1 ($\mu g/m^3$)	Median ($\mu g/m^3$)	Q3 ($\mu g/m^3$)	Maximum ($\mu g/m^3$)	IQR ($\mu g/m^3$)
RB-Mo	26	6.55	2.30	2.95	5.00	6.18	7.75	13.05	2.75
RB-Mn	26	6.52	1.62	2.91	5.28	6.83	7.81	9.59	2.53
RB-Ra	25	5.51	1.58	2.31	4.16	5.68	6.82	7.68	2.66
SB-Mo	26	16.05	3.73	8.74	14.07	15.08	18.40	23.79	4.33
SB-Mn1	26	7.74	1.77	5.01	6.34	7.43	9.62	11.04	3.28
SB-Mn2	26	16.70	4.68	6.88	13.27	17.03	20.55	24.56	7.28
SB-Ra	26	6.93	2.94	1.21	4.79	6.97	9.51	13.05	4.72
UB-Mo1	26	15.15	4.56	6.95	12.21	14.89	17.93	26.89	5.72
UB-Mo2	26	14.27	2.82	8.84	12.20	13.87	16.64	19.84	4.45
UB-Mn1	26	10.73	1.86	7.68	8.99	10.96	12.34	13.72	3.35
UB-Mn2	26	10.04	2.70	4.77	7.78	9.88	12.44	15.05	4.66
UB-Ra1	26	9.42	3.05	2.68	7.53	8.78	11.59	15.79	4.07
UB-Ra2	25	7.74	2.26	2.95	6.33	8.00	10.03	11.28	3.70
UT-Mo1	26	28.24	6.62	14.58	25.04	27.45	33.12	41.83	8.08
UT-Mo2	26	49.57	8.40	30.37	43.74	48.32	56.49	65.26	12.75
UT-Mn	26	13.90	2.24	10.05	12.02	13.94	15.64	17.84	3.63
UT-Ra	26	17.44	3.30	11.53	15.25	17.18	19.29	26.47	4.04

Table S7. Summary statistics for daily NO_2 mean concentration ($\mu g/m^3$) in June 2022.

Station	N	Mean ($\mu g/m^3$)	StDev ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Q1 ($\mu g/m^3$)	Median ($\mu g/m^3$)	Q3 ($\mu g/m^3$)	Maximum ($\mu g/m^3$)	IQR ($\mu g/m^3$)
RB-Mo	24	7.41	1.71	4.79	6.26	7.26	8.87	11.16	2.60
RB-Mn	25	11.76	2.47	7.39	10.27	11.64	13.47	17.03	3.20
RB-Ra	25	8.15	2.41	4.05	6.79	8.05	9.74	14.63	2.95
SB-Mo	25	15.57	3.06	10.05	13.79	14.84	18.24	20.89	4.45
SB-Mn1	25	8.60	2.13	6.17	6.91	8.01	9.72	13.64	2.81
SB-Mn2	25	11.20	3.96	6.25	8.43	9.96	12.87	22.04	4.44
SB-Ra	24	5.47	2.10	2.33	4.18	5.68	6.55	10.68	2.37
UB-Mo1	25	13.51	4.25	7.00	9.88	13.21	16.66	22.16	6.78
UB-Mo2	25	11.84	3.16	6.16	9.76	11.68	13.53	19.42	3.76
UB-Mn1	25	12.60	2.39	9.22	10.23	12.40	14.17	17.65	3.94
UB-Mn2	25	12.29	2.67	8.36	10.47	12.03	14.07	18.99	3.60
UB-Ra1	24	9.86	3.08	5.79	7.50	9.47	11.92	18.00	4.42
UB-Ra2	25	10.94	3.04	6.05	8.61	10.42	12.39	16.84	3.79
UT-Mo1	25	24.93	5.01	16.37	20.97	23.63	28.89	35.79	7.92
UT-Mo2	25	42.88	11.83	15.53	34.68	41.79	54.24	58.63	19.55
UT-Mn	25	13.73	2.75	8.61	11.57	13.61	15.47	19.16	3.90
UT-Ra	24	17.13	5.26	8.26	13.42	16.71	19.42	31.42	6.00

Table S8. Summary statistics for daily NO_2 mean concentration ($\mu g/m^3$) in July 2022.

Station	N	Mean ($\mu g/m^3$)	StDev ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Q1 ($\mu g/m^3$)	Median ($\mu g/m^3$)	Q3 ($\mu g/m^3$)	Maximum ($\mu g/m^3$)	IQR ($\mu g/m^3$)
RB-Mo	26	9.70	1.69	7.00	8.18	9.74	11.22	12.58	3.04
RB-Mn	26	11.17	2.49	6.21	9.96	10.71	12.61	17.11	2.64
RB-Ra	25	10.94	3.69	5.42	8.29	9.89	13.53	19.53	5.24
SB-Mo	26	14.40	3.15	8.27	12.64	14.42	17.01	21.05	4.37
SB-Mn1	26	8.79	2.34	4.68	7.22	8.50	10.25	12.95	3.03
SB-Mn2	26	11.55	3.25	7.11	9.42	11.16	13.76	20.16	4.34
SB-Ra	26	4.81	1.70	1.50	3.78	4.97	6.18	7.63	2.41
UB-Mo1	26	10.67	3.84	5.05	6.70	10.47	13.39	19.00	6.70
UB-Mo2	24	11.39	2.17	7.42	10.07	11.67	12.91	16.00	2.84
UB-Mn1	26	12.83	2.99	8.26	10.55	11.95	15.00	18.89	4.45
UB-Mn2	26	13.14	3.27	7.84	10.30	13.50	14.96	20.53	4.66
UB-Ra1	26	8.48	2.50	2.63	7.04	8.76	10.16	12.53	3.12
UB-Ra2	26	9.91	1.87	7.21	8.53	9.26	11.05	14.05	2.53
UT-Mo1	26	23.66	5.04	15.47	19.46	24.13	26.97	33.05	7.51
UT-Mo2	26	48.88	9.47	29.68	40.41	47.45	58.79	61.95	18.38
UT-Mn	26	13.18	2.69	9.32	10.72	12.79	15.51	19.89	4.79
UT-Ra	26	16.81	3.99	8.26	14.93	17.03	18.47	23.68	3.54

Table S9. Summary statistics for daily NO_2 mean concentration ($\mu g/m^3$) in August 2022.

Station	N	Mean ($\mu g/m^3$)	StDev ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Q1 ($\mu g/m^3$)	Median ($\mu g/m^3$)	Q3 ($\mu g/m^3$)	Maximum ($\mu g/m^3$)	IQR ($\mu g/m^3$)
RB-Mo	25	8.01	1.72	5.33	6.96	7.95	8.95	12.44	1.99
RB-Mn	25	7.92	2.13	3.51	6.59	8.05	9.55	12.77	2.95
RB-Ra	26	9.61	2.33	5.33	8.04	9.58	10.92	15.53	2.89
SB-Mo	26	14.12	3.00	7.26	12.24	14.05	16.58	18.68	4.34
SB-Mn1	26	7.58	1.64	4.83	6.22	7.53	9.15	11.36	2.93
SB-Mn2	26	11.20	2.66	7.23	9.13	10.67	14.03	15.08	4.89
SB-Ra	22	5.77	1.61	2.84	4.46	5.68	7.00	9.11	2.54
UB-Mo1	26	11.78	3.55	5.42	9.66	11.68	13.93	20.21	4.28
UB-Mo2	26	8.05	2.41	4.16	6.07	7.68	10.32	12.58	4.25
UB-Mn1	26	11.20	2.99	7.69	9.15	10.43	12.83	19.49	3.69
UB-Mn2	26	12.52	3.36	7.07	9.82	11.62	15.15	20.12	5.33
UB-Ra1	25	10.29	1.90	6.95	8.93	10.26	11.82	14.32	2.89
UB-Ra2	26	10.08	1.71	7.76	8.50	9.69	11.53	13.47	3.03
UT-Mo1	26	22.40	5.75	13.00	17.59	21.16	27.28	32.42	9.68
UT-Mo2	24	36.42	10.72	20.11	27.01	36.87	42.55	60.53	15.54
UT-Mn	26	12.41	2.72	8.22	10.44	11.95	14.25	18.12	3.81
UT-Ra	25	19.34	4.10	13.42	15.61	18.47	22.72	27.42	7.12

Table S10. Summary statistics for daily NO_2 mean concentration ($\mu g/m^3$) in September 2022.

Station	N	Mean ($\mu g/m^3$)	StDev ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Q1 ($\mu g/m^3$)	Median ($\mu g/m^3$)	Q3 ($\mu g/m^3$)	Maximum ($\mu g/m^3$)	IQR ($\mu g/m^3$)
RB-Mo	26	8.71	2.06	5.95	6.78	8.42	10.45	13.37	3.67
RB-Mn	26	9.58	2.01	5.78	7.75	9.44	11.45	12.95	3.70
RB-Ra	26	8.28	1.73	5.05	7.06	8.18	9.88	10.89	2.82
SB-Mo	25	20.19	4.42	11.13	16.11	20.37	24.18	27.00	8.08
SB-Mn1	26	9.20	2.36	5.35	6.77	9.40	11.04	13.93	4.28
SB-Mn2	26	16.02	4.33	8.82	13.04	15.95	18.30	27.28	5.26
SB-Ra	26	6.91	2.06	3.58	5.76	6.71	8.10	11.84	2.33
UB-Mo1	26	17.38	3.97	10.00	14.13	17.24	20.70	23.21	6.57
UB-Mo2	26	14.41	4.65	7.53	11.27	13.66	16.18	27.26	4.92
UB-Mn1	26	14.72	3.76	8.16	11.64	13.81	17.30	23.50	5.66
UB-Mn2	26	17.04	3.91	10.86	13.84	16.21	20.73	25.16	6.89
UB-Ra1	26	10.59	2.30	7.16	8.70	9.82	12.28	15.61	3.58
UB-Ra2	26	10.40	3.38	4.72	8.12	9.84	12.41	19.84	4.29
UT-Mo1	26	30.69	5.17	21.05	27.25	30.92	35.04	41.16	7.79
UT-Mo2	26	42.24	9.52	24.16	34.71	46.32	49.34	55.16	14.63
UT-Mn	26	17.29	4.04	11.97	13.65	16.38	19.66	27.04	6.01
UT-Ra	24	14.89	4.54	7.21	10.54	14.93	18.11	24.63	7.56

Table S11. Summary statistics for daily NO_2 mean concentration ($\mu g/m^3$) in October 2022.

Station	N	Mean ($\mu g/m^3$)	StDev ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Q1 ($\mu g/m^3$)	Median ($\mu g/m^3$)	Q3 ($\mu g/m^3$)	Maximum ($\mu g/m^3$)	IQR ($\mu g/m^3$)
RB-Mo	25	11.36	3.01	6.56	9.24	11.06	13.29	18.42	4.05
RB-Mn	26	14.22	3.62	9.24	11.34	13.18	16.84	22.53	5.50
RB-Ra	24	9.35	2.79	3.78	7.12	9.38	11.64	13.94	4.53
SB-Mo	26	29.71	6.97	12.68	24.96	29.95	35.39	39.74	10.43
SB-Mn1	26	14.86	4.37	7.68	11.42	13.87	19.21	22.74	7.79
SB-Mn2	26	23.98	4.24	12.84	22.29	24.11	26.63	31.21	4.34
SB-Ra	26	11.06	2.99	4.16	9.09	10.87	13.49	17.21	4.39
UB-Mo1	26	27.30	5.12	19.68	23.37	27.13	31.04	38.79	7.67
UB-Mo2	25	19.33	3.57	9.53	18.03	18.91	20.86	28.79	2.83
UB-Mn1	26	24.12	6.13	10.05	19.99	23.19	28.39	36.05	8.41
UB-Mn2	25	24.84	3.14	18.21	22.76	24.08	27.05	33.05	4.29
UB-Ra1	26	17.40	4.40	6.79	14.58	16.97	20.96	25.94	6.38
UB-Ra2	26	15.10	3.72	5.26	13.16	14.03	16.49	24.11	3.33
UT-Mo1	26	43.25	7.01	29.26	38.55	43.97	47.79	57.11	9.24
UT-Mo2	23	41.19	5.27	30.84	37.14	42.24	43.59	53.26	6.45
UT-Mn	25	26.97	4.59	19.58	23.95	26.00	29.39	38.16	5.45
UT-Ra	22	23.02	5.45	13.58	19.37	22.92	28.01	33.05	8.64

Table S12. Summary statistics for daily NO_2 mean concentration ($\mu g/m^3$) in November 2022.

Station	N	Mean ($\mu g/m^3$)	StDev ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Q1 ($\mu g/m^3$)	Median ($\mu g/m^3$)	Q3 ($\mu g/m^3$)	Maximum ($\mu g/m^3$)	IQR ($\mu g/m^3$)
RB-Mo	25	20.49	5.13	8.89	17.50	19.79	25.24	29.00	7.74
RB-Mn	25	21.53	5.00	12.09	18.53	21.09	25.13	32.00	6.60
RB-Ra	25	18.08	6.23	5.21	13.94	17.26	23.19	32.42	9.25
SB-Mo	25	30.45	6.50	20.56	25.11	29.84	35.18	40.95	10.08
SB-Mn1	25	22.35	5.92	11.72	17.59	21.77	27.11	34.44	9.52
SB-Mn2	22	26.76	5.43	17.56	23.45	25.78	30.26	41.20	6.82
SB-Ra	25	19.89	7.18	5.68	15.37	18.79	24.50	36.47	9.13
UB-Mo1	25	30.27	6.76	18.84	25.13	30.11	35.03	44.16	9.89
UB-Mo2	25	19.53	5.06	9.05	16.24	19.00	22.50	31.00	6.26
UB-Mn1	25	28.27	6.16	16.95	23.43	28.05	34.51	40.09	11.08
UB-Mn2	25	24.91	5.37	16.87	20.21	24.99	29.26	34.70	9.06
UB-Ra1	25	26.45	7.22	9.76	23.39	25.63	30.42	41.26	7.03
UB-Ra2	25	24.86	6.25	11.32	21.24	23.42	28.92	38.11	7.68
UT-Mo1	25	41.30	7.69	29.84	35.95	39.05	48.03	54.95	12.08
UT-Mo2	25	41.33	8.35	27.16	35.18	42.11	48.18	57.21	13.00
UT-Mn	25	25.23	5.12	14.05	22.33	24.90	29.11	36.81	6.79
UT-Ra	25	31.08	6.59	12.89	27.39	31.16	35.02	43.63	7.62

Table S13. Summary statistics for daily NO_2 mean concentration ($\mu g/m^3$) in December 2022.

Station	N	Mean ($\mu g/m^3$)	StDev ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Q1 ($\mu g/m^3$)	Median ($\mu g/m^3$)	Q3 ($\mu g/m^3$)	Maximum ($\mu g/m^3$)	IQR ($\mu g/m^3$)
RB-Mo	25	22.62	5.07	11.63	19.21	22.47	26.47	32.68	7.26
RB-Mn	25	23.15	5.53	11.42	18.72	23.22	27.17	31.89	8.44
RB-Ra	25	20.75	5.46	10.53	17.16	19.11	25.03	33.95	7.87
SB-Mo	25	33.49	7.01	23.32	28.16	31.68	37.97	50.68	9.82
SB-Mn1	25	24.05	5.12	16.21	19.32	24.84	29.13	33.05	9.82
SB-Mn2	24	28.05	4.45	21.08	25.82	27.32	29.84	40.16	4.03
SB-Ra	24	25.83	5.16	17.44	22.50	24.84	29.75	39.11	7.25
UB-Mo1	25	29.09	4.80	21.47	24.95	29.42	34.05	36.32	9.11
UB-Mo2	25	15.63	2.86	9.84	13.63	16.00	17.68	20.37	4.05
UB-Mn1	24	27.61	4.60	19.88	24.07	26.58	31.31	36.26	7.25
UB-Mn2	25	26.32	3.90	18.00	24.01	26.37	29.03	33.68	5.01
UB-Ra1	25	28.97	5.56	20.00	24.08	27.68	33.03	40.06	8.94
UB-Ra2	25	26.39	4.22	20.06	23.32	26.11	29.61	35.58	6.29
UT-Mo1	25	38.88	5.56	30.11	34.34	38.37	43.54	51.16	9.19
UT-Mo2	25	40.59	6.45	23.53	36.71	39.89	45.34	51.00	8.63
UT-Mn	25	24.28	3.92	15.89	21.53	23.42	26.89	31.74	5.37
UT-Ra	25	32.80	5.44	22.47	28.58	32.16	37.70	44.00	9.12

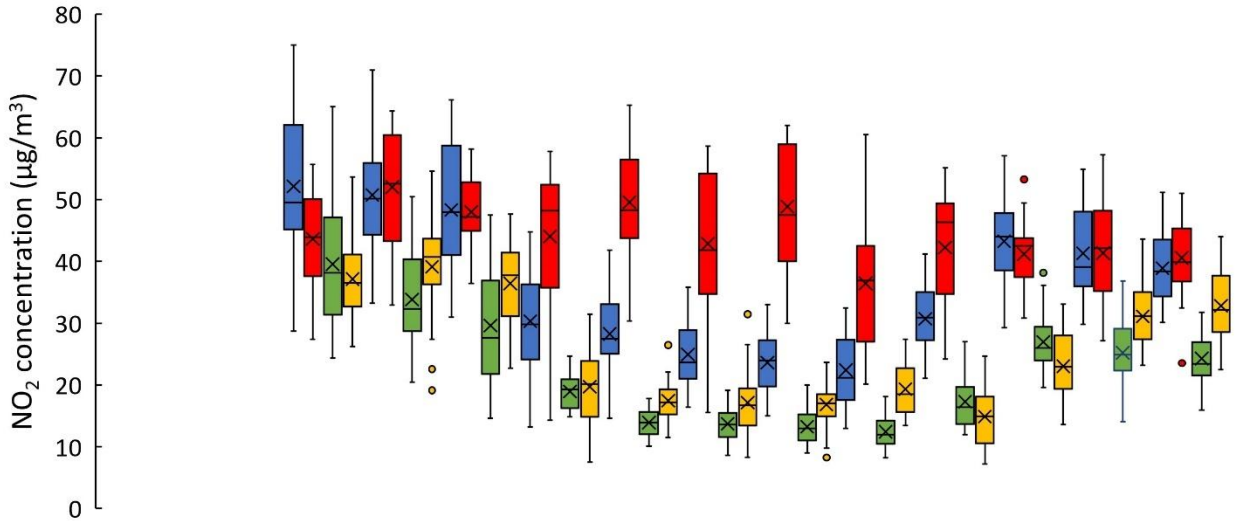

Figure S1. Month-by-month box plot showing the distributions of daily NO_2 mean concentrations, from January to December 2022, in UT stations of the provinces of Modena, Mantova and Ravenna. For each month, from left to right, UT-Mo1 (blue), UT-Mo2 (red), UT-Mn (green), UT-Ra (yellow). Outliers are shown.

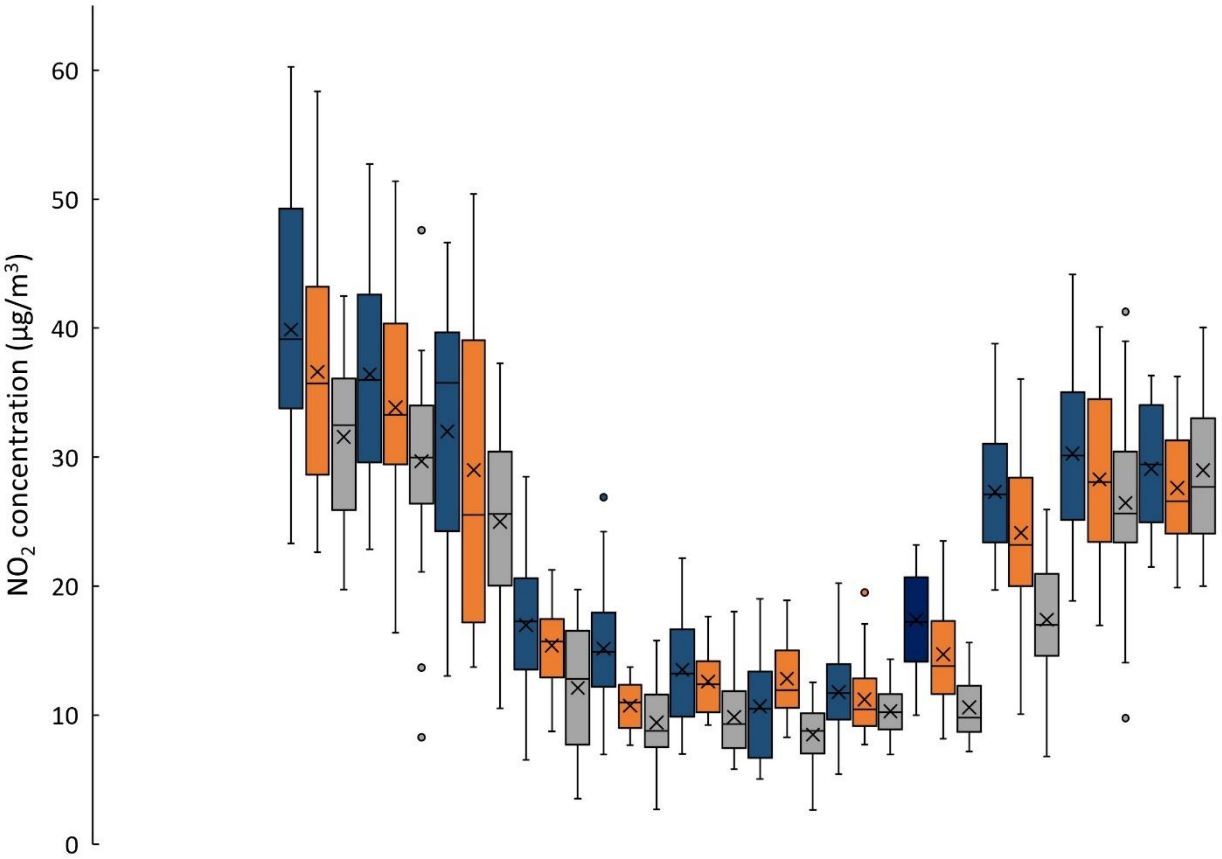

Figure S2. Month-by-month box plot showing the distributions of daily NO_2 mean concentrations, from January to December 2022, in UB stations, limitedly to those located in the cities of Modena, Mantova and Ravenna. For each month, from left to right, UB-Mo1 (blue), UB-Mn1 (orange), UB-Ra1 (grey). Outliers are shown.

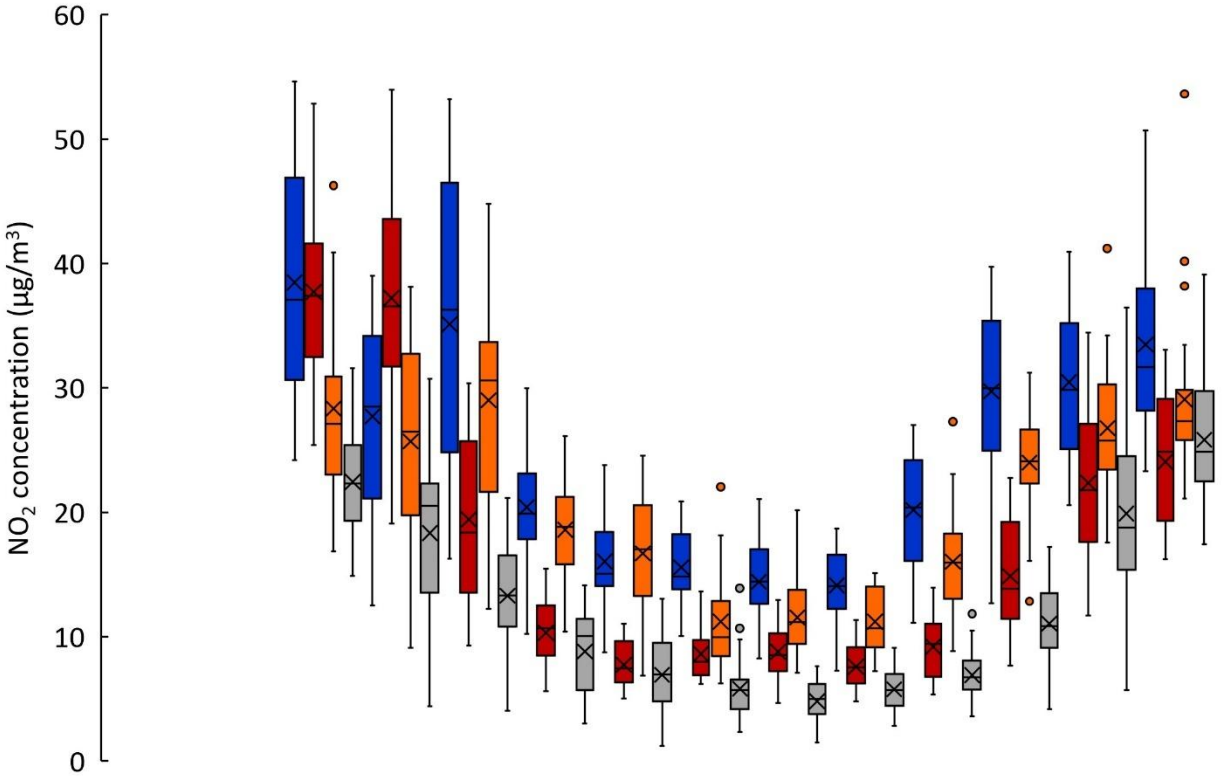

Figure S3. Month-by-month box plot showing the distributions of daily NO_2 mean concentrations, from January to December, in SB stations of the provinces of Modena, Mantova and Ravenna. For each month, from left to right, SB-Mo (blue), SB-Mn1 (red), SB-Mn2 (orange), SB-Ra (grey). Outliers are shown.

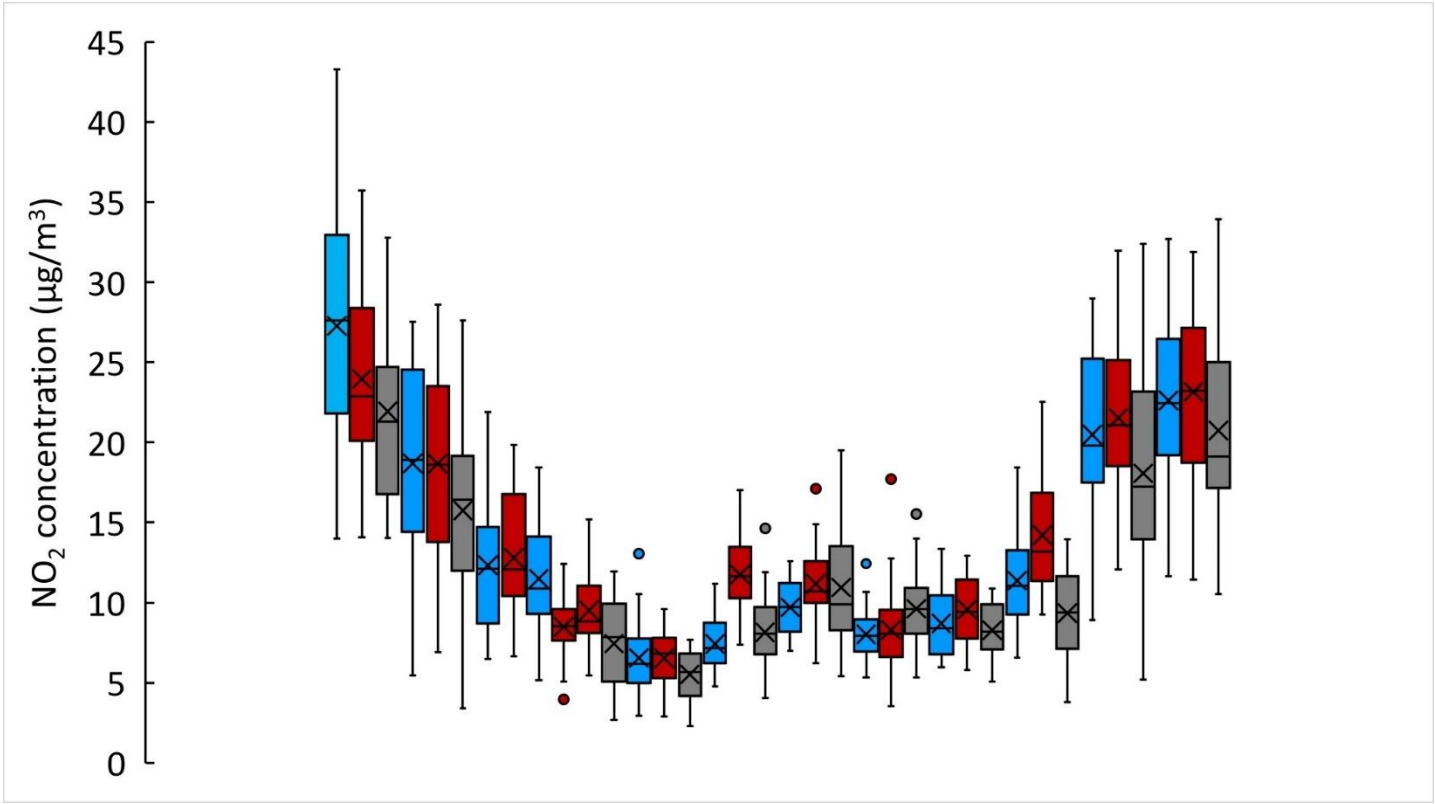

Figure S4. Month-by-month box plot showing the distributions of daily NO_2 mean concentrations, from January to December 2022, in RB stations of the provinces of Modena, Mantova and Ravenna. For each month, from left to right, RB-Mo (light blue), RB-Mn (red), RB-Ra (grey). Outliers are shown.

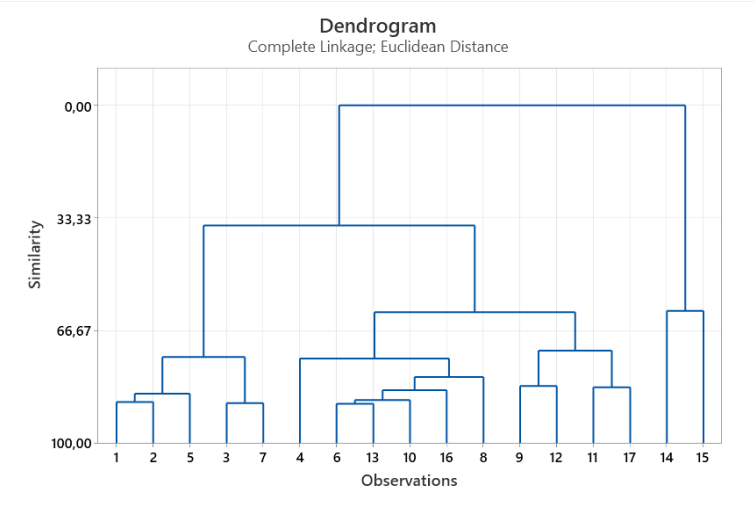

Figure S5. Dendrogram of daily NO_2 mean concentrations detected in seventeen stations of the provinces of Modena, Mantova and Ravenna in January 2022.

Table S14. Clusters derived from the dendrogram reported in Figure S5.

Number of clusters	Composition of the clusters	Similarity level (%)
1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	0
2	1 2 3 4 5 6 7 8 9 10 11 12 13 16 17 - 14 15	0 - 35.61
4	1 2 3 5 7 - 4 6 8 10 13 16 9 11 12 17 - 14 15	35.61 - 60.91
5	1 2 3 5 7 - 4 6 8 10 13 16 – 9 11 12 17 - 14 - 15	60.91 -72.66
6	1 2 3 5 7 - 4 6 8 10 13 16 – 9 12 - 11 17 - 14 - 15	72.66 - 75

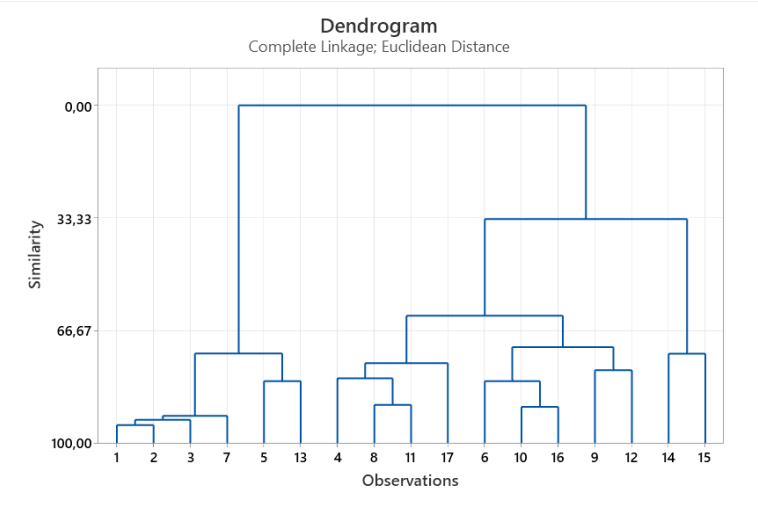

Figure S6. Dendrogram of daily NO_2 mean concentrations detected in seventeen stations of the provinces of Modena, Mantova and Ravenna in March 2022.

Table S15. Clusters derived from the dendrogram reported in Figure S6.

Number of clusters	Composition of the clusters	Similarity level (%)
1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	0
2	1 2 3 5 7 13 – 4 6 8 9 10 11 12 14 15 16 17	0 – 33.74
3	1 2 3 5 7 13 - 4 6 8 9 10 11 12 16 17 – 14 15	33.74 - 62.34
4	1 2 3 5 7 13 – 4 8 11 17 - 6 9 10 12 16 – 14 15	62. 34 – 71.61
5	1 2 3 5 7 13 – 4 8 11 17 – 6 10 16 – 9 12 - 14 15	71.61 – 73.53

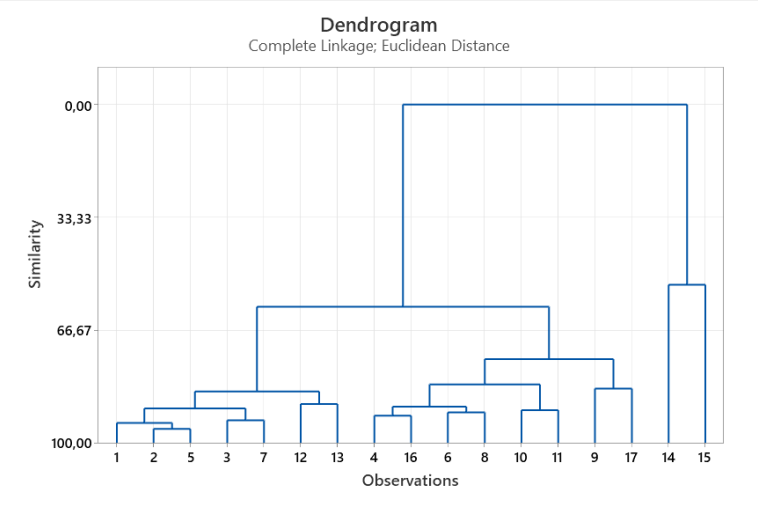

Figure S7. Dendrogram of daily NO_2 mean concentrations detected in seventeen stations of the provinces of Modena, Mantova and Ravenna in April 2022.

Table S16. Clusters derived from the dendrogram reported in Figure S7.

Number of clusters	Composition of the clusters	Similarity level (%)
1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	0
2	1 2 3 4 5 6 7 8 9 10 11 12 13 16 17 – 14 15	0 – 53.28
3	1 2 3 4 5 6 7 8 9 10 11 12 13 16 17 – 14 - 15	53.28 – 59. 77
4	1 2 3 5 7 12 13 – 4 6 8 9 10 11 16 17 – 14 -15	59.77 - 75.29
6	1 2 3 5 7 12 13 - 4 6 8 10 11 16 - 9 17 – 14 -15	75.29 – 82.77

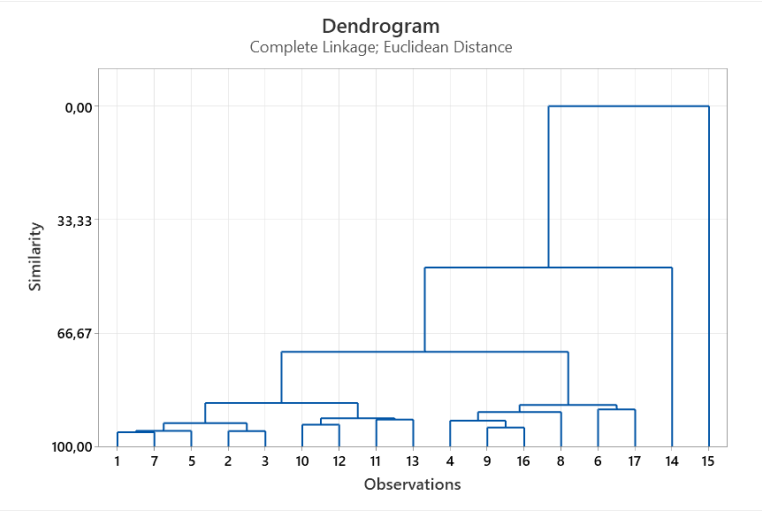

Figure S8. Dendrogram of daily NO_2 mean concentrations detected in seventeen stations of the provinces of Modena, Mantova and Ravenna in May 2022.

Table S17. Clusters derived from the dendrogram reported in Figure S8.

Number of clusters	Composition of the clusters	Similarity level (%)
1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	0
2	1 2 3 4 5 6 7 8 9 10 11 12 13 14 16 17 - 15	0 - 47.45
3	1 2 3 4 5 6 7 8 9 10 11 12 13 16 17 - 14 - 15	47.45 – 72.23
4	1 2 3 5 7 10 11 12 13 – 4 6 8 9 16 17 – 14 - 15	72.23 – 87.25
5	1 2 3 5 7 - 10 11 12 13 - 4 6 8 9 16 17 – 14 - 15	87.25 – 87.86
6	1 2 3 5 7 - 10 11 12 13 - 4 8 9 16 – 6 17 – 14 - 15	87.86 - 89.13

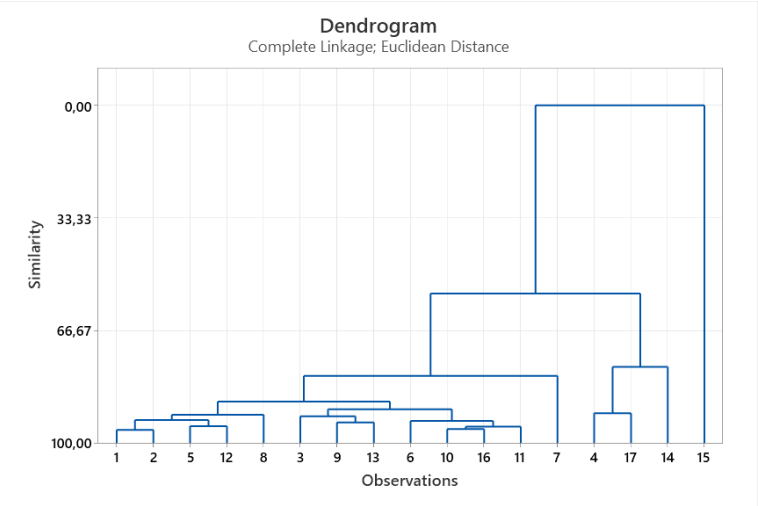

Figure S9. Dendrogram of daily NO_2 mean concentrations detected in seventeen stations of the provinces of Modena, Mantova and Ravenna in July 2022.

Table S18. Clusters derived from the dendrogram reported in Figure S9.

Number of clusters	Composition of the clusters	Similarity level (%)
1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	0
2	1 2 3 4 5 6 7 8 9 10 11 12 13 14 16 17 -15	0 - 55.75
3	1 2 3 5 6 7 8 9 10 11 12 13 16 – 4 14 17 -15	55.75 – 77.49
4	1 2 3 5 6 7 8 9 10 11 12 13 16 – 4 17 - 14 -15	77.49 - 80.13
5	1 2 3 5 6 8 9 10 11 12 13 16 – 7 - 4 17 - 14 -15	80.13 - 87.78
6	1 2 5 8 12 – 3 6 9 10 11 13 16 – 7 – 4 17 – 14 - 15	87.78 – 90.06

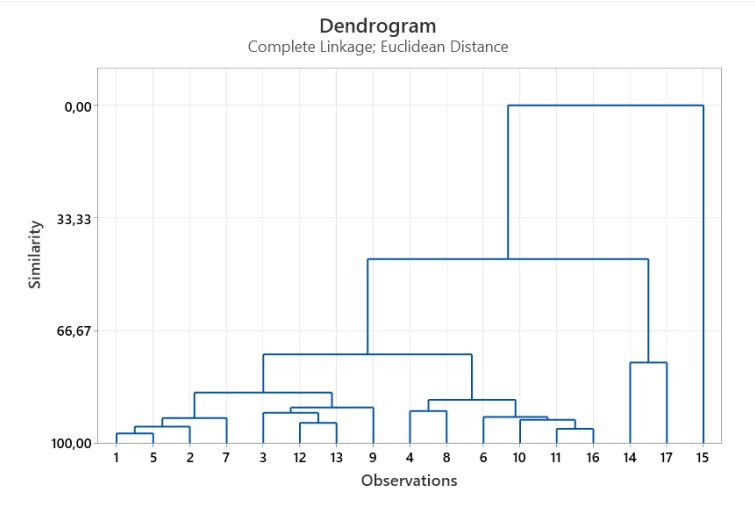

Figure S10. Dendrogram of daily NO_2 mean concentrations detected in seventeen stations of the provinces of Modena, Mantova and Ravenna in August 2022.

Table S19. Clusters derived from the dendrogram reported in Figure S10.

Number of clusters	Composition of the clusters	Similarity level (%)
1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	0
2	1 2 3 4 5 6 7 8 9 10 11 12 13 14 16 17 - 15	0 – 45.55
3	1 2 3 4 5 6 7 8 9 10 11 12 13 16 - 14 17 - 15	45.55 – 73.79
4	1 2 3 5 7 9 12 13 – 4 6 8 10 11 16 – 14 17 - 15	73.79 – 76.17
5	1 2 3 5 7 9 12 13 – 4 6 8 10 11 16 – 14 - 17 - 15	76.17 - 85.09
6	1 2 5 7 – 3 9 12 13 – 4 6 8 10 11 16 – 14 - 17 - 15	85.09 – 87.27
7	1 2 5 7 - 3 9 12 13 – 4 6 8 10 11 16 – 14 – 17 – 15	87.27 – 89.55

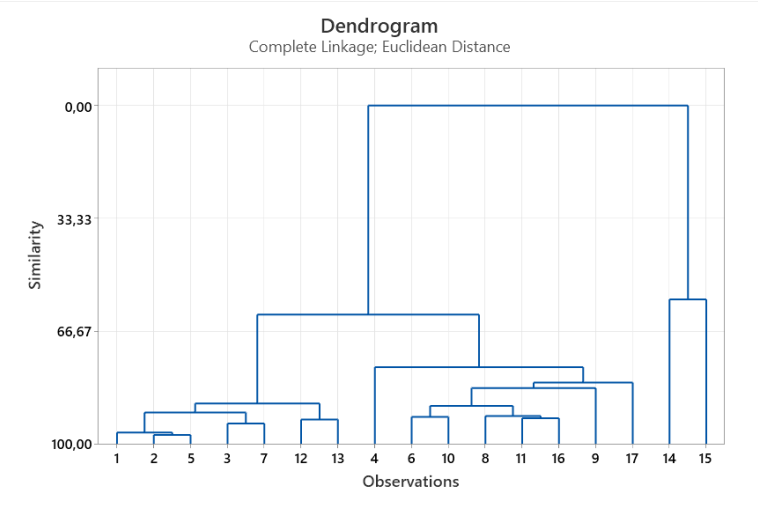

Figure S11. Dendrogram of daily NO_2 mean concentrations detected in seventeen stations of the provinces of Modena, Mantova and Ravenna in September 2022.

Table S20. Clusters derived from the dendrogram reported in Figure S11.

Number of clusters	Composition of the clusters	Similarity level (%)
1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	0
2	1 2 3 4 5 6 7 8 9 10 11 12 13 16 17 – 14 15	0 – 57.35
3	1 2 3 4 5 6 7 8 9 10 11 12 13 16 17 – 14 - 15	57.35 – 61.81
4	1 2 3 5 7 12 13 - 4 6 8 9 10 11 16 17 – 14 - 15	61.81 – 77.36
5	1 2 3 5 7 12 13 - 6 8 9 10 11 16 17 - 4 – 14 - 15	77.36 - 81.91
6	1 2 3 5 7 12 13 - 6 8 9 10 11 16 - 17 - 4 – 14 - 15	81.91 – 83.53

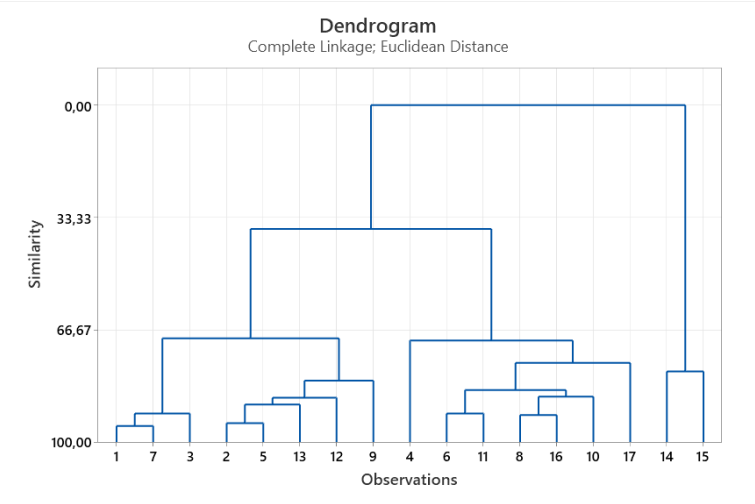

Figure S12. Dendrogram of daily NO_2 mean concentrations detected in seventeen stations of the provinces of Modena, Mantova and Ravenna in October 2022.

Table S21. Clusters derived from the dendrogram reported in Figure S12.

Number of clusters	Composition of the clusters	Similarity level (%)
1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	0
2	1 2 3 4 5 6 7 8 9 10 11 12 13 16 17 – 14 15	0 – 36.78
3	1 2 3 5 7 9 12 13 – 4 6 8 10 11 16 17 – 14 15	36.78 – 69.85
4	1 2 3 5 7 9 12 13 – 6 8 10 11 16 17 – 4 – 14 15	69.85 - 76.49
5	1 2 3 5 7 9 12 13 – 6 8 10 11 16 - 17 – 4 – 14 15	76. 49 – 79. 05
7	1 3 7 - 2 5 9 12 13 - 6 8 10 11 16 - 17 - 4 - 14 - 15	79.05 - 81.77

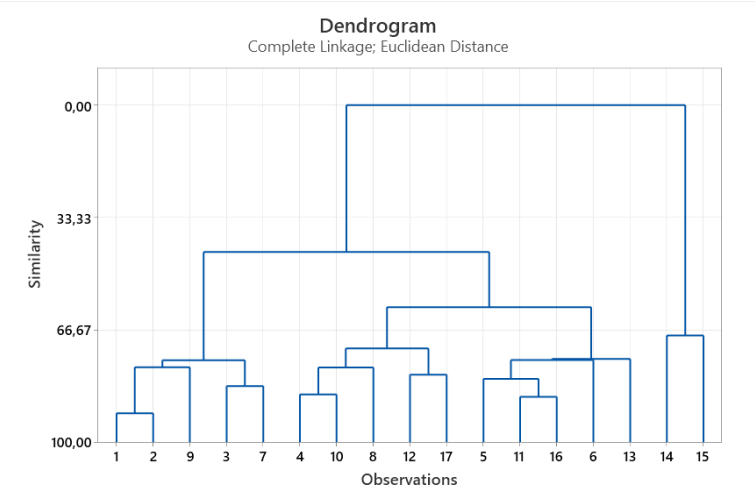

Figure S13. Dendrogram of daily NO_2 mean concentrations detected in seventeen stations of the provinces of Modena, Mantova and Ravenna in November 2022.

Table S22. Clusters derived from the dendrogram reported in Figure S13.

Number of clusters	Composition of the clusters	Similarity level (%)
1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	0
2	1 2 3 4 5 6 7 8 9 10 11 12 13 16 17 – 14 15	0 – 43.62
3	1 2 3 7 9 – 4 5 6 8 10 11 12 13 16 17 – 14 15	43.62 – 60.00
4	1 2 3 7 9 – 4 8 10 12 17 – 5 6 11 13 16 – 14 15	60.00 - 68.39
5	1 2 3 7 9 – 4 8 10 12 17 – 5 6 11 13 16 – 14 - 15	68.39 – 72.24

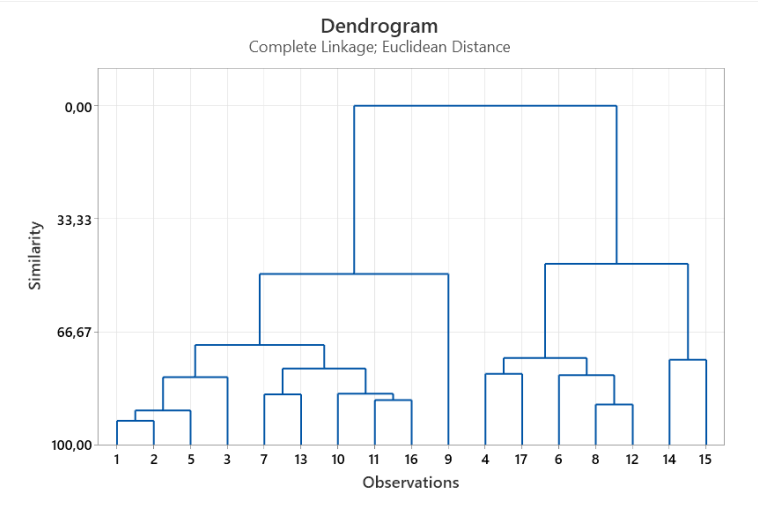

Figure S14. Dendrogram of daily NO_2 mean concentrations detected in seventeen stations of the provinces of Modena, Mantova and Ravenna in December 2022.

Table S23. Clusters derived from the dendrogram reported in Figure S14.

Number of clusters	Composition of the clusters	Similarity level (%)
1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	0
2	1 2 3 5 7 9 10 11 13 16 – 4 6 8 12 14 15 17	0 – 46.67
3	1 2 3 5 7 9 10 11 13 16 – 4 6 8 12 17 – 14 15	46.67 – 49.65
4	1 2 3 5 7 10 11 13 16 – 9 - 4 6 8 12 17 – 14 15	49.65 – 70.59
5	1 2 3 5 – 7 10 11 13 16 – 9 - 4 6 8 12 17 – 14 15	70.59 – 74.41

Table S24. p-values from Kolmogorov-Smirnov test for normality on daily NO_2 mean concentrations are reported. p-values smaller than 0.05 which do allow the rejection of H_0, at a significance level of 0.05, are in red.

Station	Annual	January	February	March	April	May	June	July	August	September	October	November	December
RB-Mo	<0.010	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150
RB-Mn	<0.010	>0.150	>0.150	0.093	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150
RB-Ra	<0.010	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	0.091	>0.150	>0.150
SB-Mo	<0.010	>0.150	>0.150	>0.150	>0.150	0.069	>0.150	>0.150	>0.150	>0.150	0.046	>0.150	>0.150
SB-Mn1	<0.010	>0.150	>0.150	>0.150	>0.150	>0.150	0.112	>0.150	>0.150	>0.150	0.040	>0.150	>0.150
SB-Mn2	<0.010	>0.150	>0.150	>0.150	>0.150	>0.150	<0.010	>0.150	>0.150	>0.150	>0.150	>0.150	0.078
SB-Ra	<0.010	>0.150	0.034	>0.150	0.031	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150
UB-Mo1	<0.010	>0.150	>0.150	0.076	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150
UB-Mo2	<0.010	>0.150	>0.150	>0.150	0.105	0.092	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150
UB-Mn1	<0.010	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	0.140	0.066	0.110	>0.150	>0.150	>0.150
UB-Mn2	<0.010	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	0.095	0.059	0.133	>0.150	>0.150
UB-Ra1	<0.010	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	0.064	>0.150	0.129	>0.150
UB-Ra2	<0.010	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	0.070	>0.150	>0.150	<0.010	>0.150	>0.150
UT-Mo1	<0.010	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	0.035	>0.150
UT-Mo2	>0.150	>0.150	>0.150	>0.150	0.037	>0.150	>0.150	0.125	0.085	<0.010	<0.030	>0.150	>0.150
UT-Mn	<0.010	>0.150	>0.150	0.102	>0.150	>0.150	>0.150	>0.150	>0.150	>0.150	0.092	>0.150	>0.150
UT-Ra	<0.010	>0.150	0.147	>0.150	>0.150	>0.150	0.065	0.121	>0.150	>0.150	>0.150	>0.150	>0.150

Table S25. Post-ANOVA grouping of stations using Games-Howell method at 95% confidence level. The monthly N data used are the daily NO_2 mean concentrations in January 2022. ID identifies the number of stations reported in dendrograms. N is the number of data.

Station	ID	N	Mean ($\mu g/m^3$)	Grouping				
UT-Mo1	14	24	52.13	A				
UT-Mo2	15	20	43.64	A	B			
UB-Mo1	8	24	39.87	A	B	C		
UT-Mn	16	24	39.54	A	B	C		
SB-Mn2	6	24	38.56		B	C		
UB-Ra2	13	24	38.48		B	C		
SB-Mo	4	24	37.72		B	C		
UT-Ra	17	24	37.12		B	C		
UB-Mn1	10	24	36.61		B	C	D	
UB-Mn2	11	24	32.93			C	D	
UB-Ra1	12	24	31.57			C	D	
UB-Mo2	9	23	31.52			C	D	
SB-Mn1	5	24	28.32				D	E
RB-Mo	1	22	27.29				D	E
RB-Mn	2	24	23.97					E
SB-Ra	7	24	22.45					E
RB-Ra	3	24	21.94					E

Table S26. Post-ANOVA grouping of stations using Games-Howell method at 95% confidence level. The monthly N data used are the daily mean NO_2 concentrations in March 2022.

Station	ID	N	Mean ($\mu g/m^3$)	Grouping					
UT-Mo1	14	27	48.33	A					
UT-Mo2	15	27	48.03	A					
UT-Ra	17	27	36.43		B				
SB-Mo	4	26	35.12		B	C			
UB-Mo1	8	27	31.99		B	C	D		
UB-Mn1	10	27	30.60		B	C	D		
UT-Mn	16	27	29.60		B	C	D		
SB-Mn2	6	27	29.00		B	C	D		
UB-Mn2	11	27	28.99		B	C	D	E	
UB-Mo2	9	27	28.43			C	D		
UB-Ra1	12	27	24.98				D	E	F
UB-Ra2	13	25	20.80					E	F
SB-Mn1	5	27	19.42						F
SB-Ra	7	27	13.30							G
RB-Mn	2	27	12.79							G
RB-Mo	1	27	12.34							G
RBRa	3	27	11.49							G

Table S27. Post-ANOVA grouping of stations using Games-Howell method at 95% confidence level. The monthly N data used are the daily mean NO_2 concentrations in April 2022.

Station	ID	N	Mean ($\mu g/m^3$)	Grouping						
UT-Mo2	15	24	44.03	A						
UT-Mo1	14	24	30.31		B					
UB-Mo2	9	24	21.90			C				
SB-Mo	4	24	20.41			C				
UT-Ra	17	24	19.70			C	D	E		
UT-Mn	16	23	18.93			C	D			
SB-Mn2	6	22	18.58			C	D	E		
UB-Mo1	8	24	16.96			C	D	E	F	
UB-Mn1	10	24	15.40					E	F	
UB-Mn2	11	24	14.89				D	E	F	
UB-Ra1	12	24	12.11						F	G
UB-Ra2	13	24	12.00						F	G
SB-Mn1	5	24	10.31							G
RB-Mn	2	24	9.51							G
SB-Ra	7	24	8.81							G
RB-Mo	1	24	8.49							G
RB-Ra	3	24	7.44							

Table S28. Post-ANOVA grouping of stations using Games-Howell method at 95% confidence level. The monthly N data used are the daily mean NO_2 concentrations in May 2022.

Station	ID	N	Mean ($\mu g/m^3$)	Grouping								
UT-Mo2	15	26	49.57	A								
UT-Mo1	14	26	28.24		B							
UT-Ra	17	26	17.44			C						
SB-Mn2	6	26	16.70			C	D					
SB-Mo	4	26	16.05			C	D					
UB-Mo1	8	26	15.15			C	D					
UB-Mo2	9	26	14.27				D					
UT-Mn	16	26	13.90				D					
UB-Mn1	10	26	10.73					E				
UB-Mn2	11	26	10.04					E	F			
UB-Ra1	12	26	9.42					E	F	G		
UB-Ra2	13	25	7.74						F	G	H	
SB-Mn1	5	26	7.74						F	G	H	
SB-Ra	7	26	6.93							G	H	I
RB-Mo	1	26	6.55								H	I
RB-Mn	2	26	6.52								H	I
RB-Ra	3	26	5.27									I

Table S29. Post-ANOVA grouping of stations using Games-Howell method at 95% confidence level. The N data used are the daily mean NO_2 concentrations in July 2022.

Station	ID	N	Mean ($\mu g/m^3$)	Grouping							
UT-Mo2	15	26	48.88	A							
UT-Mo1	14	26	23.62		B						
UT-Ra	17	26	16.81			C					
SB-Mo	4	26	14.38			C	D				
UT-Mn	16	26	13.23				D	E			
UB-Mn2	11	26	13.15			C	D	E			
UB-Mn1	10	26	12.69				D	E			
SB-Mn2	6	26	11.54				D	E	F	G	
UB-Mo2	9	24	11.42					E	F		
RB-Mn	2	26	11.12					E	F	G	
RB-Ra	3	25	10.94				D	E	F	G	H
UB-Mo1	8	26	10.73					E	F	G	H
UB-Ra2	13	26	9.92						F	G	H
RB-Mo	1	26	9.69						F	G	H
SB-Mn1	5	26	8.81							G	H
UB-Ra1	12	26	8.48								H
SB-Ra	7	26	4.81								I

Table S30. Post-ANOVA grouping of stations using Games-Howell method at 95% confidence level. The N data used are the daily mean NO_2 concentrations in August 2022.

Station	ID	N	Mean ($\mu g/m^3$)	Grouping								
UT-Mo2	15	24	36.42	A								
UT-Mo1	14	26	22.40		B							
UT-Ra	17	25	19.34		B							
SB-Mo	4	26	14.12			C						
UB-Mn2	11	26	12.52			C	D	E	F			
UT-Mn	16	26	12.41			C	D					
UB-Mo1	8	26	11.78			C	D	E	F			
UB-Mn1	10	26	11.20			C	D	E	F			
SB-Mn2	6	26	11.20				D	E	F			
UB-Ra1	12	25	10.28				D	E	F			
UB-Ra2	13	26	10.08						F	G		
RB-Ra	3	26	9.61					E	F	G	H	
UB-Mo2	9	26	8.05							G	H	
RB-Mo	1	25	8.01								H	
RB-Mn	2	25	7.92								H	
SB-Mn1	5	26	7.58								H	
SB-Ra	7	22	5.78									I

Table S31. Post-ANOVA grouping of stations using Games-Howell method at 95% confidence level. The N data used are the daily mean NO_2 concentrations in September 2022.

Station	ID	N	Mean ($\mu g/m^3$)	Grouping						
UT-Mo2	15	26	42.24	A						
UT-Mo1	14	26	30.69		B					
SB-Mo	4	25	20.19			C				
UB-Mo1	8	26	17.38			C	D			
UT-Mn	16	26	17.29			C	D			
UB-Mn2	11	26	17.04			C	D			
SB-Mn2	6	26	16.02			C	D			
UT-Ra	17	24	14.88				D			
UB-Mn1	10	26	14.72				D			
UB-Mo2	9	26	14.41				D	E		
UB-Ra1	12	26	10.59						F	
UB-Ra2	13	26	10.40					E	F	G
RB-Mn	2	26	9.58						F	G
SB-Mn1	5	26	9.20						F	G
RB-Mo	1	26	8.71						F	G
RB-Ra	3	26	8.28							G
SB-Ra	7	26	6.91							

Table S32. Post-ANOVA grouping of stations using Games-Howell method at 95% confidence level. The N data used are the daily mean NO_2 concentrations in October 2022.

Station	ID	N	Mean ($\mu g/m^3$)	Grouping						
UT-Mo1	14	26	43.25	A						
UT-Mo2	15	23	41.19	A						
SB-Mo	4	26	29.71		B					
UB-Mo1	8	26	27.30		B	C				
UT-Mn	16	25	26.97		B	C				
UB-Mn2	11	25	24.84		B	C				
UB-Mn1	10	26	24.12		B	C	D			
SB-Mn2	6	26	23.98		B	C				
UT-Ra	17	22	23.02			C	D			
UB-Mo2	9	25	19.33				D	E		
UB-Ra1	12	26	17.40					E	F	
UB-Ra2	13	26	15.10						F	
SB-Mn1	5	26	14.86						F	G
RB-Mn	2	26	14.22						F	G
RB-Mo	1	25	11.36							G
SB-Ra	7	26	11.06							G
RB-Ra	3	24	9.35							

Table S33. Post-ANOVA grouping of stations using Games-Howell method at 95% confidence level. The N data used are the daily mean NO_2 concentrations in November 2022.

Station	ID	N	Mean ($\mu g/m^3$)	Grouping					
UT-Mo2	15	25	41.33	A					
UT-Mo1	14	25	41.30	A					
UT-Ra	17	25	31.08		B				
SB-Mo	4	25	30.45		B				
UB-Mo1	8	25	30.27		B				
UB-Mn1	10	25	28.27		B	C			
SB-Mn2	6	22	26.76		B	C	D		
UB-Ra1	12	25	26.45		B	C	D	E	
UT-Mn	16	25	25.23		B	C	D	E	
UB-Mn2	11	25	24.91		B	C	D	E	F
UB-Ra2	13	25	24.86		B	C	D	E	F
SB-Mn1	5	25	22.35			C	D	E	F	G
RB-Mn	2	25	21.53				D	E	F	G
RB-Mo	1	25	20.49					E	F	G
SB-Ra	7	25	19.89					E	F	G
UB-Mo2	9	25	19.53						F	G
RB-Ra	3	25	18.08							G

Table S34. Post-ANOVA grouping of stations using Games-Howell method at 95% confidence level. The N data used are the daily mean NO_2 concentrations in December 2022.

Station	ID	N	Mean ($\mu g/m^3$)	Grouping							
UT-Mo2	15	25	40.59	A							
UT-Mo1	14	25	38.88	A	B						
SB-Mo	4	25	33.49		B	C					
UT-Ra	17	25	32.80			C					
UB-Mo1	8	25	29.09			C	D				
UB-Ra1	12	25	28.97			C	D	E			
SB-Mn2	6	24	28.05			C	D	E	F		
UB-Mn1	10	24	27.61			C	D	E	F	G	
UB-Ra2	13	25	26.39				D	E	F	G	
UB-Mn2	11	25	26.32				D	E	F	G	
SB-Ra	7	24	25.83				D	E	F	G	H
UT-Mn	16	25	24.28					E	F	G	H
SB-Mn1	5	25	24.05				D	E	F	G	H
RB-Mn	2	25	23.15						F	G	H
RB-Mo	1	25	22.62							G	H
RB-Ra	3	25	20.75								H
UB-Mo2	9	25	15.64								I

Table S35. Comparison of daily NO_2 mean concentrations ($\mu g/m^3$) in SB, UB and UT stations in the provinces of Modena, Mantova and Ravenna: post-ANOVA grouping using Games-Howell method at 95% confidence level is reported. Stations which do not share a letter are significantly different.

Period	SB stations Games-Howell grouping	UB stations Games-Howell grouping	UT stations Games-Howell grouping
Annual	**Station** **N** **Mean** **Grouping** SB-Mo 302 24.56 A SB-Mn2 299 20.57 B SB-Mn1 304 17.10 C SB-Ra 299 12.41 D	**Station** **N** **Mean** **Grouping** UB-Mo1 304 23.23 A UB-Mn2 303 21.24 A UB-Mn1 304 21.22 A B UB-Ra1 304 18.75 B C UB-Mo2 301 18.74 C UB-Ra2 302 17.30 C	**Station** **N** **Mean** **Grouping** UT-Mo2 296 44.24 A UT-Mo1 304 36.13 B UT-Ra 296 25.45 C UT-Mn 303 22.15 D
January	**Station** **N** **Mean** **Grouping** SB-Mn2 24 38.56 A SB-Mo 24 37.72 A SB-Mn1 24 28.32 B SB-Ra 24 22.45 C	**Station** **N** **Mean** **Grouping** UB-Mo1 24 39.87 A UB-Ra2 24 38.48 A UB-Mn1 24 36.61 A B UB-Mn2 24 32.93 A B UB-Ra1 24 31.57 B UB-Mo2 23 31.52 B	**Station** **N** **Mean** **Grouping** UT-Mo1 24 52.13 A UT-Mo2 20 43.64 A B UT-Mn 24 39.54 B C UT-Ra 24 37.12 C
February	**Station** **N** **Mean** **Grouping**	**Station** **N** **Mean** **Grouping**	**Station** **N** **Mean** **Grouping** UT-Mo1 24 52..13 A UT-Mo2 20 43.64 A B

	SB-Mn2 24 38.56 A SB-Mo 24 37.72 A SB-Mn1 24 28.32 B SB-Ra 24 22.45 C	UB-Mo1 24 39.87 A UB-Ra2 24 38.48 A UB-Mn1 24 36.61 A B UB-Mn2 24 32.93 A B UB-Ra1 24 31.57 B UB-Mo2 23 31.52 B	UT-Mn 23 38.43 B C UT-Ra 24 37.12 C
March	**Station N Mean Grouping** SB-Mo 26 35.12 A SB-Mn2 27 29.00 A SB-Mn1 27 19.42 B SB-Ra 27 13.30 C	**Station N Mean Grouping** UB-Mo1 27 31.99 A UB-Mn2 27 30.60 A UB-Mn1 27 28.99 A UB-Mo2 27 28.43 A UB-Ra1 27 24.98 A B UB-Ra2 25 20.80 B	**Station N Mean Grouping** UT-Mo1 27 48.33 A UT-Mo2 27 48.03 A UT-Ra 27 36.43 B UT-Mn 27 29.60 C
April	**Station N Mean Grouping** SB-Mo 24 20.41 A SB-Mn2 22 18.58 A SB-Mn1 24 10.31 B SB-Ra 24 8.81 B	**Station N Mean Grouping** UB-Mo2 24 21.90 A UB-Mo1 24 16.96 B UB-Mn1 24 15.40 B C UB-Mn2 24 14.89 B C UB-Ra1 24 12.11 C UB-Ra2 24 12.00 C	**Station N Mean Grouping** UT-Mo2 24 44.03 A UT-Mo1 24 30.31 B UT-Ra 24 19.70 C UT-Mn 23 18.93 C
May	**Station N Mean Grouping** SB-Mn2 26 16.70 A	**Station N Mean Grouping**	**Station N Mean Grouping** UT-Mo2 26 49.57 A UT-Mo1 26 28.24 B

	SB-Mo 26 16.05 A SB-Mn1 26 7.74 B SB-Ra 26 6.93 B	UB-Mo1 26 15.15 A UB-Mo2 26 14.27 A UB-Mn1 26 10.73 B UB-Mn2 26 10.04 B UB-Ra1 26 9.42 B C UB-Ra2 25 7.74 C	UT-Ra 26 17.45 C UT-Mn 26 13.90 D
June	**Station N Mean Grouping** SB-Mo 25 15.57 A SB-Mn2 25 11.20 B SB-Mn1 25 8.60 C SB-Ra 24 5.47 D	**Station N Mean Grouping** UB-Mo1 25 13.51 A UB-Mn1 25 12.60 A UB-Mn2 25 12.29 A B UB-Mo2 25 11.84 A B UB-Ra2 25 10.94 A B UB-Ra1 24 9.86 B	**Station N Mean Grouping** UT-Mo2 25 42.88 A UT-Mo1 25 24.93 B UT-Ra 24 17.13 C UT-Mn 25 13.73 D
July	**Station N Mean Grouping** SB-Mo 26 14.40 A SB-Mn2 26 11.55 B SB-Mn1 26 8.79 C SB-Ra 26 4.81 D	**Station N Mean Grouping** UB-Mn2 26 13.14 A UB-Mn1 26 12.83 A UB-Mo2 24 11.39 A B UB-Mo1 26 10.67 A B C UB-Ra2 26 9.92 B C UB-Ra1 26 8.48 C	**Station N Mean Grouping** UT-Mo2 26 48.88 A UT-Mo1 26 23.66 B UT-Ra 26 16.81 C UT-Mn 26 13.18 D
August	**Station N Mean Grouping** SB-Mo 26 14.12 A SB-Mn2 26 11.20 B SB-Mn1 26 7.58 C SB-Ra 22 5.78 D	**Station N Mean Grouping** UB-Mn2 26 12.52 A UB-Mo1 26 11.78 A B UB-Mn1 26 11.20 A B UB-Ra1 25 10.28 A B UB-Ra2 26 10.08 B UB-Mo2 26 8.05 C	**Station N Mean Grouping** UT-Mo2 24 36.42 A UT-Mo1 26 22.40 B UT-Ra 25 19.34 B UT-Mn 26 12.41 C

September	**Station N Mean Grouping** SB-Mo 25 20.19 A SB-Mn2 26 16.02 B SB-Mn 26 9.20 C SB-Ra 26 6.91 D	**Station N Mean Grouping** UB-Mo1 26 17.38 A UB-Mn2 26 17.04 A UB-Mn1 26 14.72 A UB-Mo2 26 14.41 A UB-Ra1 26 10.59 B UB-Ra2 26 10.40 B	**Station N Mean Grouping** UT-Mo2 26 42.24 A UT-Mo1 26 30.69 B UT-Mn 26 17.29 C UT-Ra 24 14.88 C
October	**Station N Mean Grouping** SB-Mo 26 29.71 A SB-Mn2 26 23.98 B SB-Mn1 26 14.86 C SB-Ra 26 11.06 D	**Station N Mean Grouping** UB-Mo1 26 27.30 A UB-Mn2 25 24.84 A UB-Mn1 26 24.12 A UB-Mo2 25 19.33 B UB-Ra1 26 17.40 B C UB-Ra2 26 15.10 C	**Station N Mean Grouping** UT-Mo1 26 43.25 A UT-Mo2 23 41.19 A UT-Mn 25 26.97 B UT-Ra 22 23.02 B
November	**Station N Mean Grouping** SB-Mo 25 30.45 A SB-Mn2 22 26.76 A B SB-Mn1 25 22.35 B C SB-Ra 25 19.89 C	**Station N Mean Grouping** UB-Mo1 25 30.27 A UB-Mn1 25 28.27 A B UB-Ra1 25 26.45 A B UB-Mn2 25 24.91 B UB-Ra2 25 24.86 A B UB-Mo2 25 19.53 C	**Station N Mean Grouping** UT-Mo2 25 41.33 A UT-Mo1 25 41.30 A UT-Ra 25 31.08 B UT-Mn 25 25.23 C
December	**Station N Mean Grouping** SB-Mo 25 33.49 A SB-Mn2 24 28.05 B SB-Ra 24 25.83 B C SB-Mn1 25 24.05 C	**Station N Mean Grouping** UB-Mo1 25 29.09 A UB-Ra1 25 28.97 A UB-Mn1 24 27.61 A UB-Ra2 25 26.39 A UB-Mn2 25 26.32 A UB-Mo2 25 15.64 B	**Station N Mean Grouping** UT-Mo2 25 40.59 A UT-Mo1 25 38.88 A Ut-Ra 25 32.80 B UT-Mn 25 24.28 C

Table S36. Comparison of daily NO_2 mean concentrations ($\mu g/m^3$) in the stations of the province of Modena, Mantova and Ravenna: post-ANOVA grouping using Games-Howell method at 95% confidence level is reported. Stations which do not share a letter are significantly different.

Period	Games-Howell grouping Stations of the province of Modena	Games-Howell grouping Stations of the province of Mantova	Games-Howell grouping Stations of the province of Ravenna
Annual	**Station N Mean Grouping** UT-Mo2 296 44.24 A UT-Mo1 304 36.13 B SB-Mo 302 24.56 C UB-Mo1 304 23.23 C UB-Mo2 301 18.74 D RB-Mo 299 13.20 E	**Station N Mean Grouping** UT-Mn 303 22.15 A UB-Mn2 303 21.24 A UB-Mn1 304 21.22 A SB-Mn2 299 20.57 A SB-Mn1 304 17.10 B RB-Mn 304 14.15 C	**Station N Mean Grouping** UT-Ra 296 25.45 A UB-Ra1 304 18.75 B UB-Ra2 302 17.30 B SB-Ra 299 12.41 C RB-Ra 300 12.23 C
January	**Station N Mean Grouping** UT-Mo1 24 52.13 A UT-Mo2 20 43.64 A B UB-Mo1 24 39.87 B SB-Mo 24 37.72 B UB-Mo2 23 31.52 C RB-Mo 22 27.29 C	**Station N Mean Grouping** UTMn 24 39.54 A SBMn2 24 38.56 A UBMn1 24 36.61 A UBMn2 24 32.93 A B SBMn1 24 28.32 B C RBMNn 24 23.97 C	**Factor N Mean Grouping** UB-Ra2 24 38.48 A UT-Ra 24 37.12 A UB-Ra1 24 31.57 B SB-Ra 24 22.45 C RB-Ra 24 21.94 C

February

Station	N	Mean	Grouping
UT-Mo1	24	52.13	A
UT-Mo2	20	43.64	A B
UB-Mo1	24	39.87	B
SB-Mo	24	37.72	B
UB-Mo2	23	31.52	C
RB-Mo	22	27.29	C

Station	N	Mean	Grouping
SB-Mn2	24	38.56	A
UT-Mn	23	38.43	A
UB-Mn1	24	36.61	A
UB-Mn2	24	32.93	A B
SB-Mn1	24	28.32	B C
RB-Mn	24	23.97	C

Factor	N	Mean	Grouping
UB-Ra2	24	38.48	A
UT-Ra	24	37.12	A
UB-Ra1	24	31.57	B
SB-Ra	24	22.45	C
RB-Ra	24	21.94	C

March

Station	N	Mean	Grouping
UT-Mo1	27	48.33	A
UTMo2	27	48.03	A
SB-Mo	26	35.12	B
UB-Mo1	27	31.99	B
UB-Mo2	27	28.43	B
RB-Mo	27	12.34	C

Station	N	Mean	Grouping
UB-Mn2	27	30.60	A
UT-Mn	27	29.60	A
SB-Mn2	27	29.00	A
UB-Mn1	27	28.99	A
SB-Mn1	27	19.42	B
RB-Mn	27	12.791	C

Station	N	Mean	Grouping
UT-Ra	27	36.43	A
UB-Ra1	27	24.98	B
UB-Ra2	25	20.80	B
SB-Ra	27	13.30	C
UB-Ra	27	11.49	C

April

Station	N	Mean	Grouping
UT-Mo2	24	44.03	A
UT-Mo1	24	30.31	B
UB-Mo2	24	21.90	C
SB-Mo	24	20.41	C D
UB-Mo1	24	16.96	D
RB-Mo	24	8.49	E

Station	N	Mean	Grouping
UT-Mn	23	18.93	A
SB-Mn2	22	18.58	A B
UB-Mn1	24	15.40	B
UB-Mn2	24	14.89	B
SB-Mn1	24	10.31	C
RB-Mn	24	9.51	C

Factor	N	Mean	Grouping
UT-Ra	24	19.70	A
UB-Ra1	24	12.11	B
UB-Ra2	24	12.00	B
SB-Ra	24	8.81	B C
RB-Ra	24	7.44	C

May	**Factor N Mean Grouping** UT-Mo2 26 49.57 A UT-Mo1 26 28.24 B SB-Mo 26 16.05 C UB-Mo1 26 15.15 C UB-Mo2 26 14.27 C Rb-Mo 26 6.55 D	**Station N Mean Grouping** SB-Mn2 26 16.70 A UT-Mn 26 13.90 A UB-Mn1 26 10.73 B UB-Mn2 26 10.04 B SB-Mn1 26 7.74 C RB-Mn 26 6.52 C	**Station N Mean Grouping** UT-Ra 26 17.44 A UB-Mn1 26 9.42 B UB-Mn2 25 7.74 B C SB-Ra 26 6.93 C D RB-Ra 26 5.27 D
June	**Station N Mean Grouping** UT-Mo2 25 42.88 A UT-Mo1 25 24.93 B SB-Mo 25 15.57 C UB-Mo1 25 13.51 C D UB-Mo2 25 11.84 D RB-Mo 24 7.41 E	**Station N Mean Grouping** UT-Mn 25 13.73 A UB-Mn1 25 12.60 A UB-Mn2 25 12.29 A RB-Mn 25 11.76 A SB-Mn2 25 11.20 A B SB-Mn1 25 8.60 B	**Station N Mean Grouping** UT-Ra 24 17.13 A UB-Ra2 25 10.94 B UB-Ra2 24 9.86 B C RB-Ra 25 8.15 C SB-Ra 24 5.47 D
July	**Station N Mean Grouping** UT-Mo2 26 48.88 A UT-Mo1 26 23.66 B SB-Mo 26 14.40 C UB-Mo2 24 11.39 D UB-Mo1 26 10.67 D E RB-Mo 26 9.70 E	**Station N Mean Grouping** UT-Mn 26 13.18 A UB-Mn2 26 13.14 A UB-Mn1 26 12.83 A SB-Mn2 26 11.55 A RB-Mn 26 11.17 A SB-Mn1 26 8.79 B	**Station N Mean Grouping** UT-Ra 26 16.81 A RB-Ra 25 10.94 B UB-Ra2 26 9.92 B UB-Ra1 26 8.48 B SB-Ra 26 4.81 C
August	**Station N Mean Grouping** UT-Mo2 24 36.42 A UT-Mo1 26 22.40 B SB-Mo 26 14.12 C UB-Mo1 26 11.78 C UB-Mo2 26 8.05 D RB-Mo 25 8.01 D	**Station N Mean Grouping** UB-Mn2 26 12.52 A UT-Mn 26 12.41 A UB-Mn1 26 11.20 A SB-Mn2 26 11.20 A RB-Mn 25 7.92 B SB-Mn1 26 7.58 B	**Station N Mean Grouping** UT-Ra 25 19.34 A UB-Ra1 25 10.28 B UB-Ra2 26 10.08 B RB-Ra 26 9.61 B SB-Ra 22 5.78 C
September	**Station N Mean Grouping** UT-Mo2 26 42.24 A	**Station N Mean Grouping** UT-Mn 26 17.29 A UB-Mn2 26 17.04 A SB-Mn2 26 16.02 A UB-Mn1 26 14.72 A	**Station N Mean Grouping** UT-Ra 24 14.88 A UB-Ra1 26 10.59 B UB-Ra2 26 10.40 B C RB-Ra 26 8.28 C D

	UT-Mo1 26 30.69 B SB-Mo 25 20.19 C UB-Mo1 26 17.38 C D UB-Mo2 26 14.41 D RB-Mo 26 8.71 E	RB-Mn 26 9.58 B SB-Mn1 26 9.20 B	SB-Ra 26 6.91 D
October	**Station N Mean Grouping** UT-Mo1 26 43.25 A UT-Mo2 23 41.19 A SB-Mo 26 29.71 B UB-Mo1 26 27.30 B UB-Mo2 25 19.33 C RB-Mo 25 11.36 D	**Station N Mean Grouping** UT-Mn 25 26.97 A UB-Mn2 25 24.84 A UB-Mn1 26 24.12 A SB-Mn2 26 23.98 A SB-Mn1 26 14.86 B RB-MN 26 14.22 B	**Station N Mean Grouping** UT-Ra 22 23.02 A UB-Ra1 26 17.40 B UB-Ra2 26 15.10 B SB-Ra 26 11.06 C RB-Ra 24 9.35 C
November	**Station N Mean Grouping** UT-Mo2 25 41.33 A UT-Mo1 25 41.30 A SB-Mo 25 30.45 B UB-Mo1 25 30.27 B RB-Mo 25 20.49 C UB-Mo2 25 19.53 C	**Station N Mean Grouping** UB-Mn1 25 28.27 A SB-Mn2 22 26.76 A B UT-Mn 25 25.23 A B C UB-Mn2 25 24.91 A B C SB-Mn1 25 22.35 B C RB-Mn 25 21.53 C	**Station N Mean Grouping** UT-Ra 25 31.08 A UB-Ra1 25 26.45 A B UB-Ra2 25 24.86 B C SB-Ra 25 19.89 C D RB-Ra 25 18.08 D

December

Station	N	Mean	Grouping			
UT-Mo2	25	40.59	A			
UT-Mo1	25	38.88	A			
SB-Mo	25	33.49		B		
UB-Mo1	25	29.09		B		
RB-Mo	25	22.62			C	
UB-Mo2	25	15.64				D

Station	N	Mean	Grouping		
SB-Mn2	24	28.05	A		
UB-Mn1	24	27.61	A	B	
UB-Mn2	25	26.32	A	B	C
UT-Mn	25	24.28		B	C
SB-Mn1	25	24.05	A	B	C
RB-Mn	25	23.15			C

Station	N	Mean	Grouping		
UT-Ra	25	32.80	A		
UB-Ra1	25	28.97	A	B	
UB-Ra2	25	26.39		B	
SB-Ra	24	25.83		B	
RB-Ra	25	20.75			C