ETC-HE Report 2026/2

Status report of air quality in Europe for year 2025, using validated and up-to-date data

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1 Summary

The *2025 Status report of air quality in Europe* presents summarized information on the air quality data for the protection of health reported in the previous years. The reported 2025 monitoring data used in this analysis was reported as up-to-date (UTD) data, prior to final quality control and validated data reporting by the countries ([1]). It provides information on the following pollutants, regulated by the Ambient Air Quality Directives (AAQD) (EU, 2008, 2024)

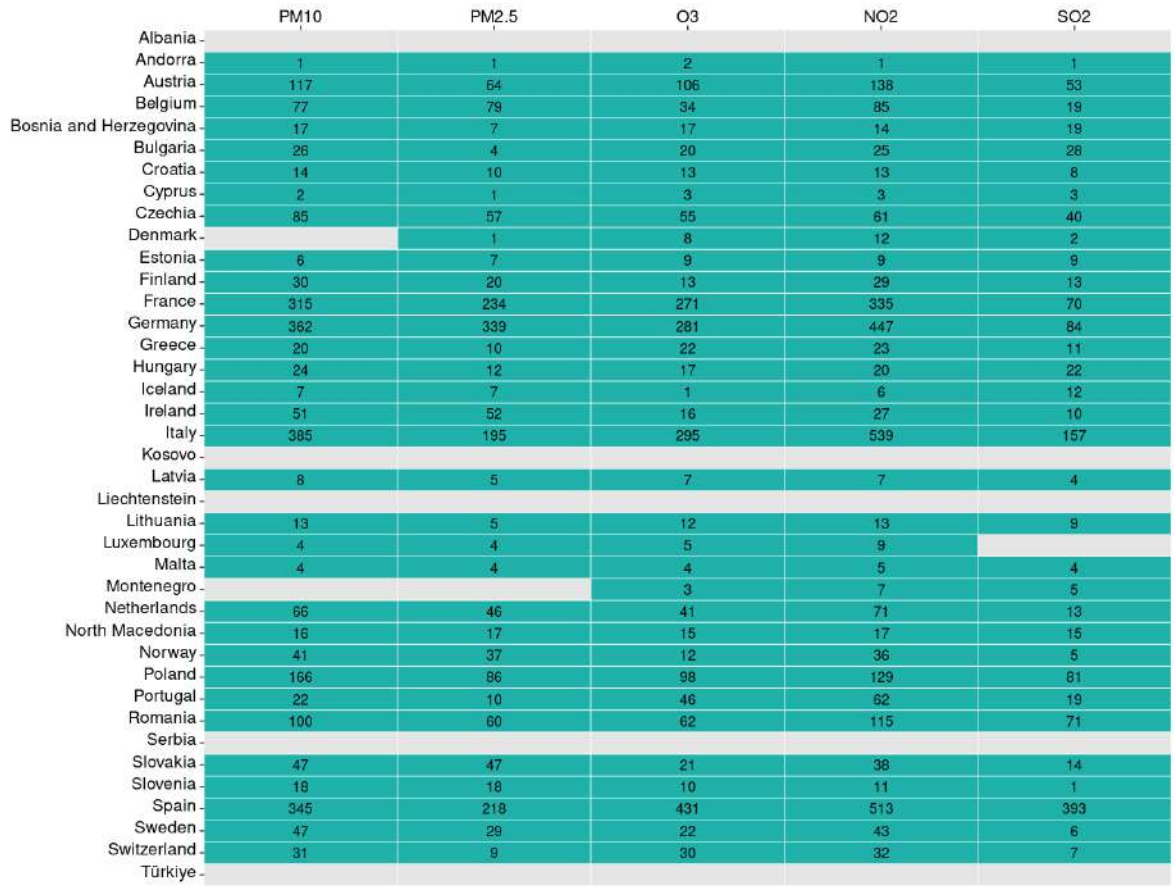
- PM_{10}: Particulate matter with a diameter of 10 µm or less
- $PM_{2.5}$: Particulate matter with a diameter of 2.5 µm or less
- O_3: Tropospheric ozone
- NO_2: Nitrogen dioxide
- SO_2: Sulphur dioxide

It also offers a comparison with the situation in previous years. For those years, validated data are considered.

Data included in this report was received by 09 February 2026 from the reporting countries. By that date the reporting status of 2025 up-to-date data is summarized in Figure 1, where a green box indicates that the referred pollutant was reported by the referred country and a grey box indicates the contrary (that the referred pollutant was not reported by the referred country). Please see editorial notes at the end of this Chapter on additional information on the data used. The number of stations by country reporting each pollutant, with the minimum data coverage for at least one of the aggregations used in the report, is also included in Figure 1, while Table 3 in the Annex summarizes the number of stations, with the minimum data coverage for at least one of the aggregations used in the report, at different country aggregations. Data from stations that do not fulfil the criteria from Box 1.1 are excluded from this report. Please be aware that the number of stations presented in Figure 1 and Table 3, that corresponds to all reported stations fulfilling the minimum data coverage criteria for at least one of the aggregations used in the report, may be different to the one presented in the corresponding boxplots, as there could be some stations not fulfilling the minimum data coverage criteria for the corresponding aggregation.

[1] https://eeadmz1-cws-wp-air02-dev.azurewebsites.net/aq-ereporting/

Figure 1: Number of stations, for each country and each pollutant, that in 2025 reported data with the minimum data coverage for at least one of the aggregations used in the report, by 09 February 2026



	PM10	PM2.5	O3	NO2	SO2
Albania					
Andorra	1	1	2	1	1
Austria	117	64	106	138	53
Belgium	77	79	34	85	19
Bosnia and Herzegovina	17	7	17	14	19
Bulgaria	26	4	20	25	28
Croatia	14	10	13	13	8
Cyprus	2	1	3	3	3
Czechia	85	57	55	61	40
Denmark		1	8	12	2
Estonia	6	7	9	9	9
Finland	30	20	13	29	13
France	315	234	271	335	70
Germany	362	339	281	447	84
Greece	20	10	22	23	11
Hungary	24	12	17	20	22
Iceland	7	7	1	6	12
Ireland	51	52	16	27	10
Italy	385	195	295	539	157
Kosovo					
Latvia	8	5	7	7	4
Liechtenstein					
Lithuania	13	5	12	13	9
Luxembourg	4	4	5	9	
Malta	4	4	4	5	4
Montenegro			3	7	5
Netherlands	66	46	41	71	13
North Macedonia	16	17	15	17	15
Norway	41	37	12	36	5
Poland	166	86	98	129	81
Portugal	22	10	46	62	19
Romania	100	60	62	115	71
Serbia					
Slovakia	47	47	21	38	14
Slovenia	18	18	10	11	1
Spain	345	218	431	513	393
Sweden	47	29	22	43	6
Switzerland	31	9	30	32	7
Türkiye					

The countries included in this report and that, therefore, appear in Figure 1, are those with the obligation to report data under the AAQD or that have voluntarily reported data. These countries are the EU-27 (Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden); the five other member countries of the EEA (Iceland, Liechtenstein, Norway, Switzerland and Türkiye) that, together with the EU-27 form the EEA-32; the six EEA's cooperating countries from the Western Balkans (Albania, Bosnia and Herzegovina, Kosovo under UN Security Council Resolution 1244/99, Montenegro, North Macedonia and Serbia) that, together with the EEA-32 form the EEA-38; and the voluntary reporting country of Andorra.

The air quality data are stored at the EEA's e-reporting database ([2]). Therefore, this is the source for all maps and figures in the report. UTD data is stored temporarily until it is replaced by CDR data.

1.1 Particulate matter

For PM_{10}, concentrations above the EU daily limit value (50 µg/m^3) were registered at 5 % of the reporting stations. These stations were in 12 countries in EU-27 and in 3 other reporting countries. For $PM_{2.5}$, concentrations above the EU annual limit value (25 µg/m^3) were registered at 1 % of the reporting stations. These stations were in 4 countries in EU-27 and in 2 other reporting countries.

The long-term World Health Organization air quality guideline (WHO AQG) level for PM_{10} (15 µg/m^3) was exceeded at 59 % of the stations in 24 countries of the EU-27 and 4 other reporting countries. The long-term WHO AQG level for $PM_{2.5}$ (5 µg/m^3) was exceeded at 94 % of the stations located in 26 countries of the EU-27 and 6 other reporting countries.

1.2 Ozone

16 % of stations registered concentrations above the EU target value for O_3 (120 µg/m^3), averaged over three years, for the protection of human health. These stations were located in 16 countries of the EU-27 and 2 other reporting countries. The long-term EU objective (120 µg/m^3) was met in only 15 % of the stations. The short-term WHO AQG level for O_3 (100 µg/m^3) was exceeded in 93 % of all the reporting stations, and concentrations above the long-term WHO AQG level for O_3 (60 µg/m^3) were registered in 98 % of all reporting stations.

1.3 Nitrogen dioxide

Around 1 % of all the reporting stations recorded concentrations above the EU annual limit value for NO_2 (40 µg/m^3). These stations were located in 4 countries of the EU-27 and 1 other reporting country. 87 % of concentrations above this limit value were observed at traffic stations.

On the contrary, 67 % of stations, located in 27 countries of the EU-27 and 7 other reporting countries reported concentrations above the WHO AQG level of 10 µg/m^3.

1.4 Sulphur dioxide

For SO_2, regarding the EU daily limit value (125 µg/m^3), concentrations above were registered at 0.7 % of the reporting stations. These stations were in 2 other reporting countries . On the other hand, concerning the daily WHO AQG level (40 µg/m^3), 4 % of all reporting SO_2 stations

[2] https://discomap.eea.europa.eu/App/AQViewer/index.html?fqn=Airquality_Dissem.b2g.AirQualityStatistics

measured SO_2 concentrations above. These stations were located in 10 countries of the EU-27 and 4 other reporting countries .

1.5 Editorial note

Values in Table 4 in Annex 1 are considered outliers and were not taken into account for the analysis presented in this report.

On 20 November 2024, the revised Directive (EU) 2024/2881 (EU, 2024) on ambient air quality and cleaner air for Europe was published and it entered into force on 10 December 2024. It sets new or revised air quality standards to be reached by 1 January 2030. The main analysis in this report is done against the AQ standards defined in the 2004 and 2008 AAQD (EU, 2008, 2024), which are the ones currently applicable. Annex 2 benchmarks the situation in year 2025 with respect to some of the new and/or revised AQ standards, as an analysis of the 'distance to target' from the 2025 status.

2 Introduction

The *2025 Status report of air quality in Europe* presents summarized information on the air quality data reported up to 2025. The 2025 data was reported as up-to-date (UTD) data in a continuous basis prior to final quality control and official reporting of validated data by the countries, which will be done under the 2026 September reporting cycle (validated assessment data for 2025, deadline of submission 30 September 2026). This report aims at informing on the current status of ambient air quality in Europe, based on the most updated data available for the analysis of a complete calendar year. Furthermore, it informs on progress towards meeting the air quality standards established for the protection of health in the Ambient Air Quality Directives (EU, 2004, 2008) (Table 1) and the World Health Organization air quality guideline levels (WHO, 2000, 2006, 2021) (Table 2)([3]).

This report builds on the former EEA "Air quality in Europe report" (EEA, 2020) content, figures and maps regarding the status of monitored air quality in Europe. The report focuses on the analysis of the main pollutants, to allow a meaningful preliminary analysis of their concentration status in Europe. It provides:

- a European overview of the monitoring stations that reported UTD 2025 data, and of their concentrations in relation to the EU legal standards set in the 2008 EU Ambient Air Quality Directive (EU, 2008) and WHO AQG levels for each pollutant;
- a map with the 2025 UTD concentrations at station level for each pollutant;
- a boxplot graph summarizing for each country the range of concentrations (highlighting the lowest, highest, average and the 25 and 75 percentiles) for PM_{10}, $PM_{2.5}$, NO_2 and O_3.

Furthermore, it provides:

- maps with the situation at station level for the previous three years (using validated data). In this way, any significant change in the spatial distribution of the values above the set thresholds in the legends can be observed (assuming the UTD stations dataset is complete);

[3] Nevertheless, in this report the following standards and guideline levels are not analysed: exposure concentration obligation and national exposure reduction target for $PM_{2.5}$, information and alert thresholds for O_3, alert threshold for NO_2, annual target value for BaP, alert threshold for SO_2, limit value for CO maximum daily 8-hour mean, annual limit value for C_6H_6, annual limit value for Pb, target value for As, target value for Cd, and target value for Ni in Table 1; and hourly air quality guideline level for NO_2, reference level for annual mean of BaP, 10 minutes air quality guideline level for SO_2, air quality guideline level for CO, reference level for annual mean of C_6H_6, air quality guideline level for Pb, reference level for annual mean of As, air quality guideline level for Cd, and reference level for annual mean of Ni in Table 2.

- heatmaps with the evolution of the mean and the maximum measured concentrations at country level since 2000 (or since when available, using validated data for all years up to 2024).

Please be aware that the number of stations can vary once the validated dataset for 2025 is received by 30 September 2026. In some figures like the boxplots, the final order of the countries may vary once the validated data are submitted.

Table 1: Air quality standards for the protection of health, as given in the EU 2004 and 2008 Ambient Air Quality Directives

Pollutant	Averaging period	Legal nature and concentration	Comments
PM_{10}	1 day	Limit value: 50 µg/m^3	Not to be exceeded on more than 35 days per year
	Calendar year	Limit value: 40 µg/m^3	
$PM_{2.5}$	Calendar year	Limit value: 25 µg/m^3	Stage 1
		Indicative limit value: 20 µg/m^3	Stage 2: indicative limit value to be reviewed by the Commission in 2013. It remained unchanged after that revision
		Exposure concentration obligation: 20 µg/m^3	Average Exposure Indicator (AEI) ([a]) in 2015 (2013-2015 average)
		National Exposure reduction target: 0-20 percentage reduction in exposure	AEI ([a]) in 2020, the percentage reduction depends on the initial AEI
O_3	Maximum daily 8-hour mean	Target value: 120 µg/m^3	Not to be exceeded on more than 25 days/year, averaged over 3 years ([b])
		Long term objective: 120 µg/m^3	
	1 hour	Information threshold: 180 µg/m^3 Alert threshold: 240 µg/m^3	
NO_2	1 hour	Limit value: 200 µg/m^3	Not to be exceeded on more than 18 hours per year
		Alert threshold: 400 µg/m^3	To be measured over 3 consecutive hours over 100 km^2 or an entire zone
	Calendar year	Limit value: 40 µg/m^3	
BaP	Calendar year	Target value: 1 ng/m^3	Measured as content in PM_{10}
SO_2	1 hour	Limit value: 350 µg/m^3	Not to be exceeded on more than 24 hours per year
		Alert threshold: 500 µg/m^3	To be measured over 3 consecutive hours over 100 km^2 or an entire zone
	1 day	Limit value: 125 µg/m^3	Not to be exceeded on more than 3 days per year
CO	Maximum daily 8-hour mean	Limit value: 10 mg/m^3	
C_6H_6	Calendar year	Limit value: 5 µg/m^3	
Pb	Calendar year	Limit value: 0.5 µg/m^3	Measured as content in PM_{10}
As	Calendar year	Target value: 6 ng/m^3	Measured as content in PM_{10}
Cd	Calendar year	Target value: 5 ng/m^3	Measured as content in PM_{10}
Ni	Calendar year	Target value: 20 ng/m^3	Measured as content in PM_{10}

Notes:

[a] AEI: based upon measurements in urban background locations established for this purpose by the Member States, assessed as a 3-year running annual mean.

[b] In the context of this report, both the maximum daily 8-hour means in 2025 and the average over the period 2023 - 2025 are considered.

Sources:

EU (2004, 2008).

Table 2: WHO air quality guideline (AQG) levels and estimated reference levels (RL) ([a])

Pollutant	Averaging period	AQG	RL	Comments
PM_{10}	1 day	45 µg/m^3		99th percentile (3-4 exceedance days per year). Updated 2021 guideline
	Calendar year	15 µg/m^3		Updated 2021 guideline
$PM_{2.5}$	1 day	15 µg/m^3		99th percentile (3-4 exceedance days per year). Updated 2021 guideline
	Calendar year	5 µg/m^3		Updated 2021 guideline
O_3	Maximum daily 8-hour mean	100 µg/m^3		99th percentile (3-4 exceedance days per year). Updated 2021 guideline
	Peak season ([b])	60 µg/m^3		New 2021 guideline
NO_2	1 hour	200 µg/m^3		
	1 day	25 µg/m^3		99th percentile (3-4 exceedance days per year). New 2021 guideline
	Calendar year	10 µg/m^3		Updated 2021 guideline
BaP	Calendar year		0.12 ng/m^3	
SO_2	10 minutes	500 µg/m^3		
	1 day	40 µg/m^3		99th percentile (3-4 exceedance days per year). Updated 2021 guideline
CO	1 hour	30 mg/m^3		
	Maximum daily 8-hour mean	10 mg/m^3		
	1 day	4 mg/m^3		99th percentile (3-4 exceedance days per year). New 2021 guideline
C_6H_6	Calendar year		1.7 µg/m^3	
Pb	Calendar year	0.5 µg/m^3		
As	Calendar year		6.6 ng/m^3	
Cd	Calendar year	5 ng/m^3 ([c])		
Ni	Calendar year		25 ng/m^3	

Notes:

[a] As WHO has not set an AQG level for BaP, C_6H_6, As and Ni, the RL was estimated assuming an acceptable risk of additional lifetime cancer risk of approximately 1 in 100 000.

[b] Average of daily maximum 8-hour mean concentration in the six consecutive months with the highest six-month running average O_3 concentration.

[c] AQG set to prevent any further increase of Cd in agricultural soil, likely to increase the dietary intake of future generations.

Sources:

WHO (2000, 2006, 2021).

Box 1.1 Classification of monitoring stations and criteria used for the assessment

Fixed sampling points in Europe are situated at different types of stations following rules for macro- and micro-scale siting. Briefly, depending on the predominant emission sources, stations are classified as follows:

- traffic stations: located in close proximity to a single major road;
- industrial stations: located in close proximity to an industrial area or an industrial source;
- background stations: where pollution levels are representative of the average exposure of the general population or vegetation.

Depending on the distribution/density of buildings, the area surrounding the station is classified as follows:

- urban: continuously built-up urban area;
- suburban: largely built-up urban area;
- rural: all other areas.

For the pollutants considered in this report, monitoring stations have to fulfil the criterion of reporting more than 75 % of valid data out of all the possible data in a year to be included in this assessment. Reporting stations not fulfilling the minimum data coverage could be found at the Annual AQ statistics table.

Measurement data are rounded following the general recommendations under (EU, 2011). The number of considered decimals are indicated in the legend of the corresponding maps.

The assessments do not account for the fact that the 2004 and 2008 EU Ambient Air Quality Directives (EU, 2004, 2008) provide Member States with the possibility of subtracting contributions to the measured concentrations from natural sources and winter road sanding/salting under specific circumstances.

3 Status of particulate matter ambient air concentrations

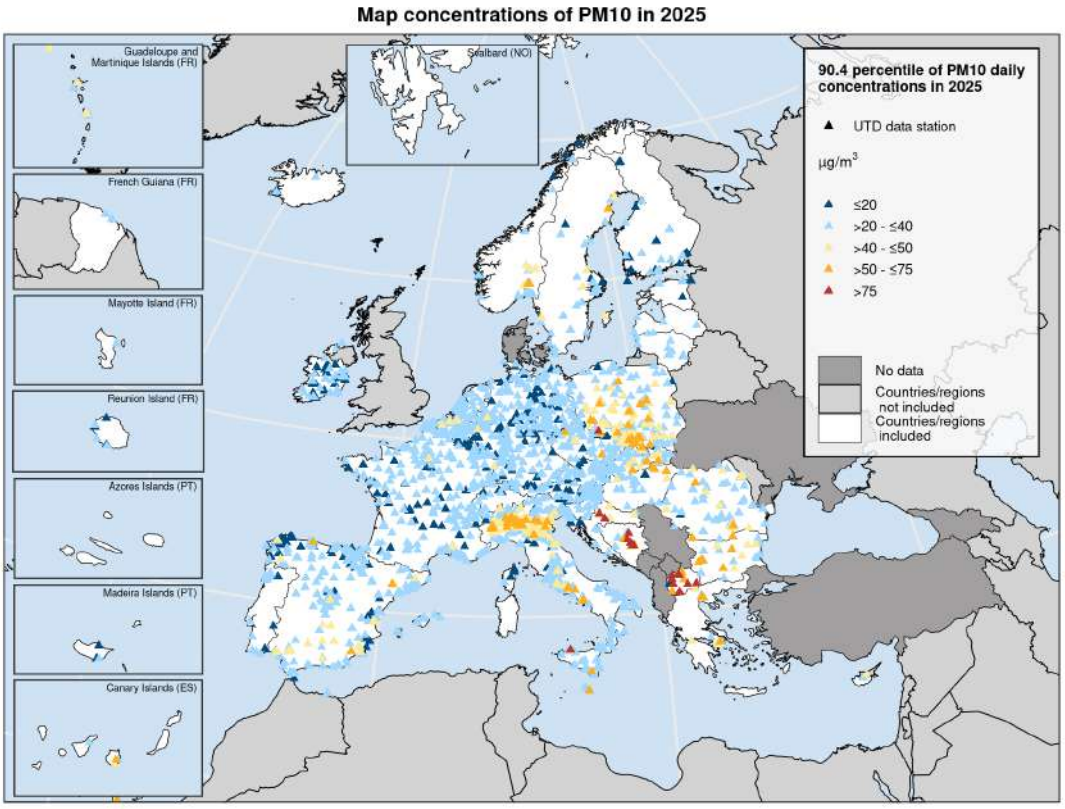
3.1 Status of PM_{10} concentrations

The EEA received PM_{10} data for 2025, with sufficient valid measurements from 2466 stations for the calculation of annual mean concentrations and from 2449 stations in relation to the daily limit value. The stations were located in all the reporting countries shown in Figure 1.

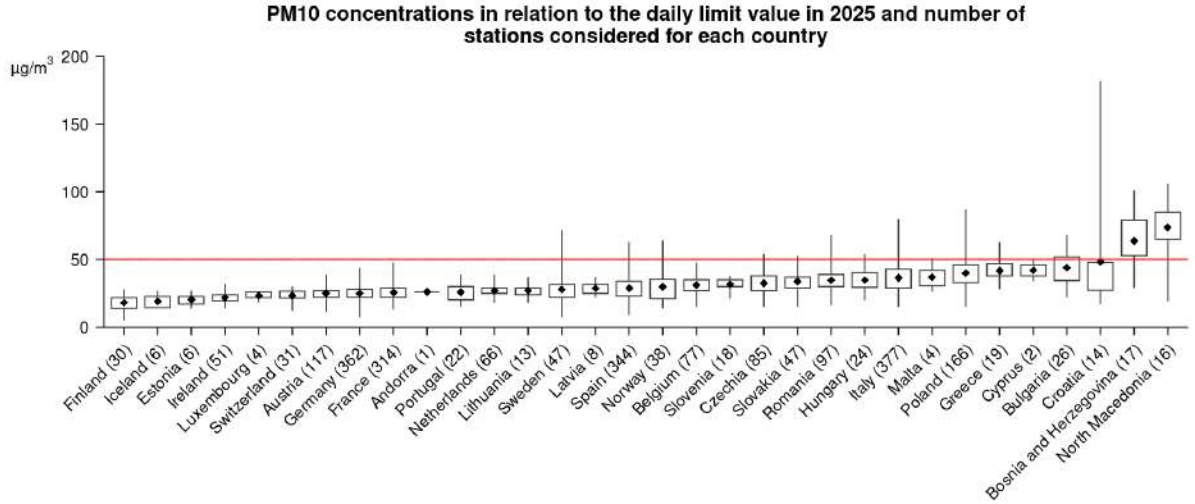
Twelve countries in EU-27, and three other reporting countries reported PM_{10} concentrations above the EU daily limit value of 50 µg/m^3 (Figure 2). This was the case for 5 % (118) of reporting stations. In total, 94 % of those stations were either urban (78 %) or suburban (16 %). The stricter value of the WHO AQG level for PM_{10} daily mean (45 µg/m^3) was exceeded at 58 % (1423) of the stations in all the reporting countries, except in Luxembourg(Figure 8).

Concentrations above the PM_{10} annual limit value (40 µg/m^3) were monitored in 0.9 % (22 stations) of all the reporting stations, located in 4 countries in EU-27, and 2 other reporting countries. The stricter value of the WHO AQG level for PM_{10} annual mean (15 µg/m^3) was exceeded at 59 % (1455) of the stations in all the reporting countries, except in Andorra, Estonia, Finland and Iceland(Figure 5).

Figure 2: UTD Map and boxplot of PM_{10} concentrations in 2025 - daily limit value



Note: Observed concentrations of PM10 in 2025. The possibility of subtracting contributions to the measured concentrations from natural sources and winter road sanding/salting has not been considered. The map shows the 90.4 percentile of the PM10 daily mean concentrations, representing the 36th highest value in a complete series. It is related to the PM10 daily limit value, allowing 35 exceedances of the 50 µg/m³ threshold over 1 year. The last two colour categories indicate stations with concentrations above this daily limit value. Only stations with more than 75 % of valid data have been included in the map.

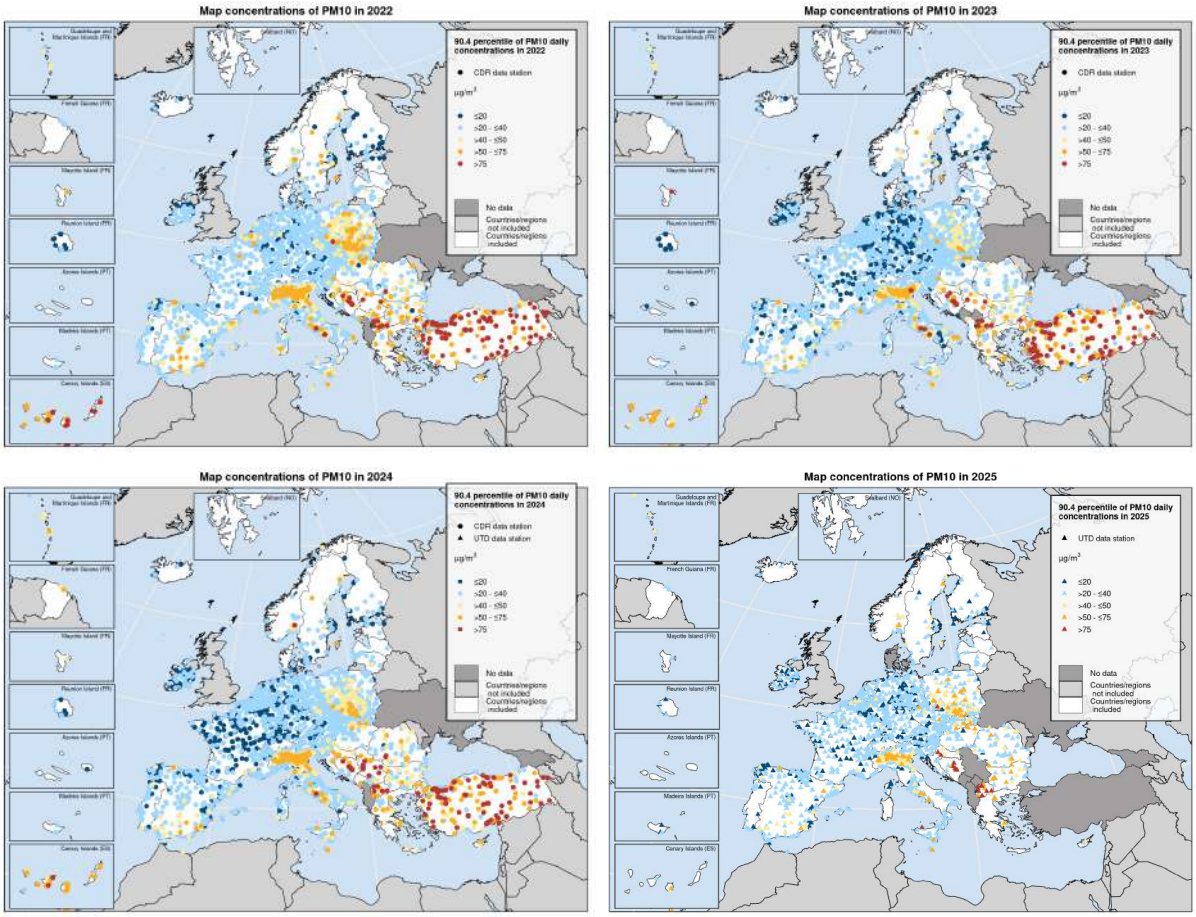


Note: The graph is based, for each country, on the 90.4 percentile of daily mean concentration values corresponding to the 36th highest daily mean in a complete time series. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) 90.4 percentile values (in µg/m³). The rectangles mark the 25th and 75th percentiles. At 25 % of the stations, levels are below the 25th percentile; at 25 % of the stations, concentrations are above the 75th percentile. The daily limit value set by EU legislation is marked by the horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

Figure 3 shows the maps of the 90.4 percentile of PM_{10} daily mean concentrations (equivalent to the PM_{10} daily limit value) for four years. In this way, any significant change in the spatial

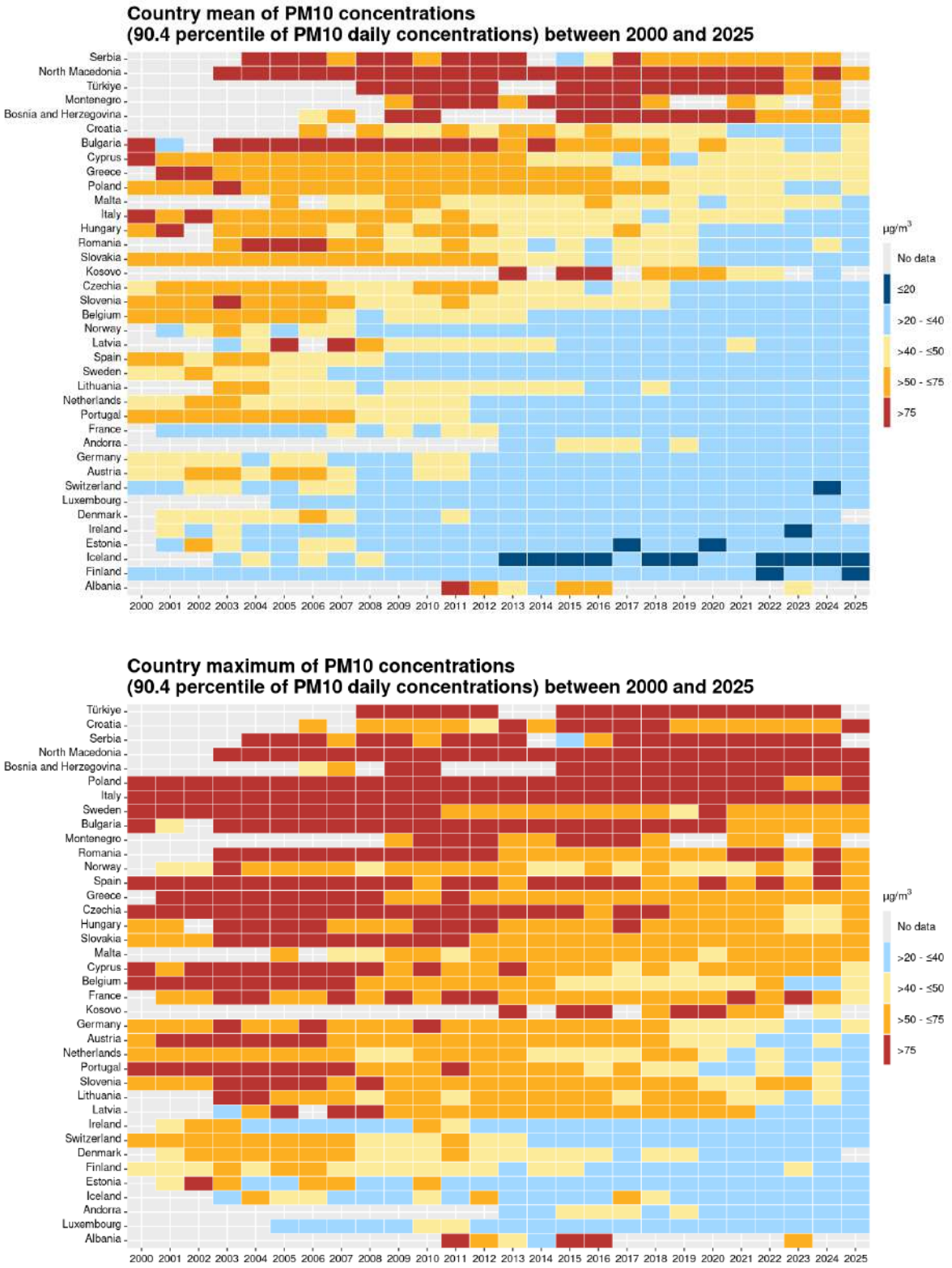
distribution of the values above the set thresholds in the legends can be observed. Note that only the last year's map (2025) is based on UTD data, while the previous three years are based on officially reported validated data (CDR).

Figure 3: Maps of PM_{10} concentrations (daily limit value) for the last 4 years



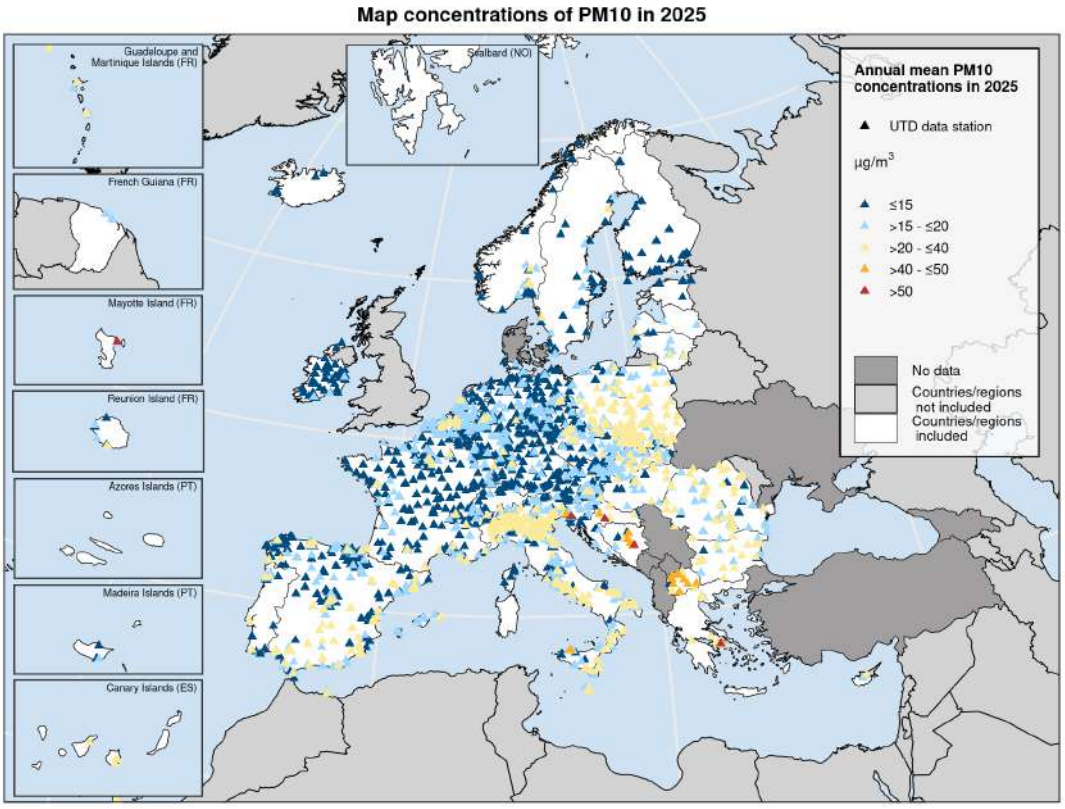
Heatmaps with the evolution from 2000 of the mean (top) and the maximum (bottom) 90.4 percentile of PM_{10} daily mean concentrations at country level are shown in figure 4. In this way, the evolution along years of the average and maximum measured concentration levels can be seen for each country. Note that meteorological variability has a considerable impact on year-to-year changes in ambient air concentrations of air pollutants (EEA, 2020), and the last year (2025) is based on UTD data, while the previous years are based on officially reported validated data.

Figure 4: Evolution of mean (top) and maximum (bottom) 90.4 percentile of PM_{10} daily mean concentrations (daily limit value) per country from 2000

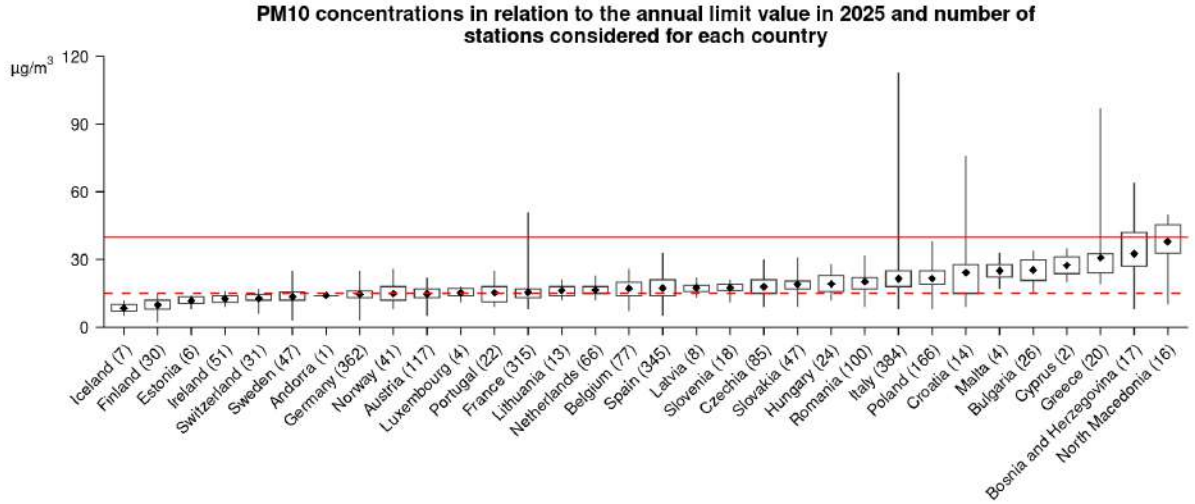


Note: It is important to note that the figure is not based on a consistent set of stations. The number, location and classification of the stations included may vary from year to year.

Figure 5: UTD Map and boxplot of PM_{10} concentrations in 2025 - annual limit value



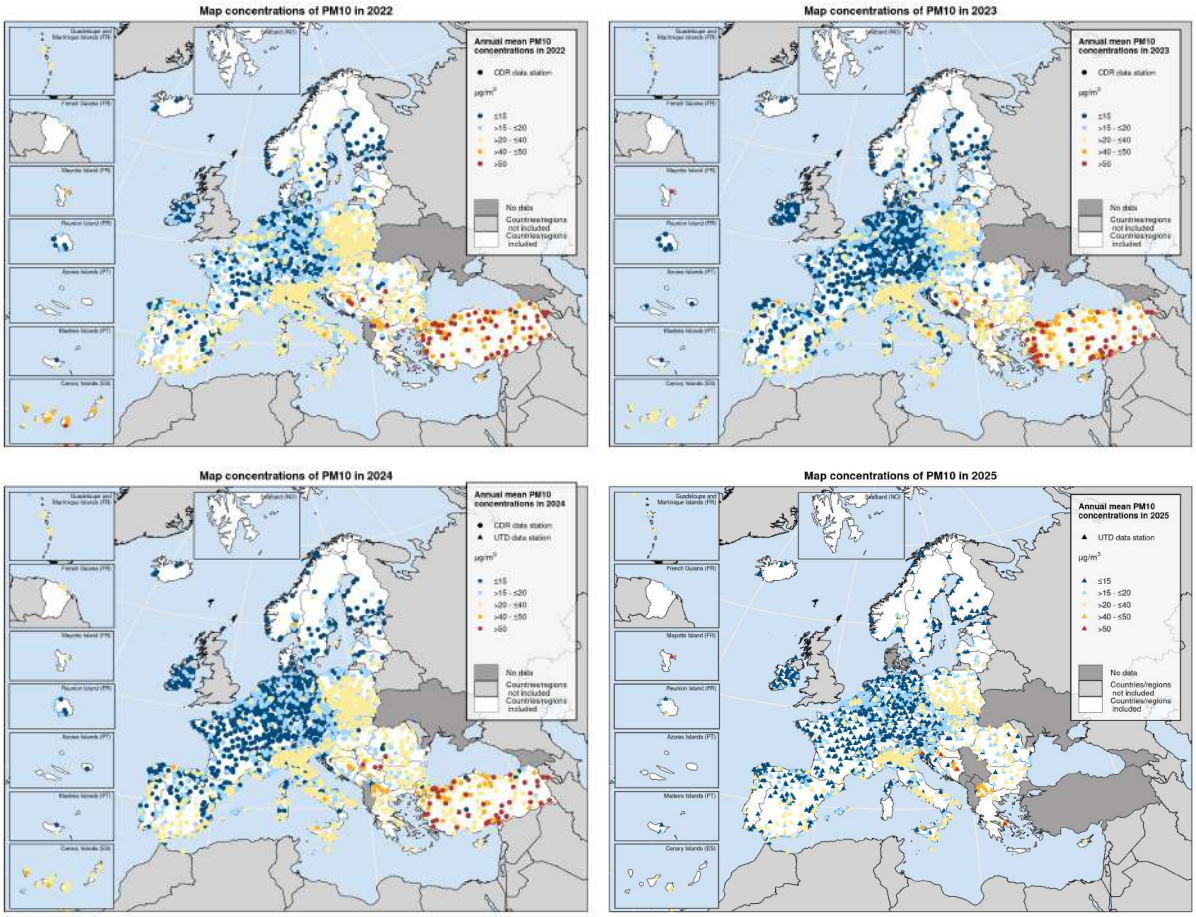
Note: Observed concentrations of PM10 in 2025. The possibility of subtracting contributions to the measured concentrations from natural sources and winter road sanding/salting has not been considered. The last two colour categories indicate stations reporting concentrations above the EU annual limit value (40 µg/m³). The first colour category indicate stations reporting values below the WHO AQG level for PM10 (15 µg/m³). Only stations with more than 75 % of valid data have been included in the map.



Note: The graph is based on annual mean concentration values. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) annual mean values (in µg/m³). The rectangles mark the 25th and 75th percentiles. At 25 % of the stations, levels are below the 25th percentile; at 25 % of the stations, concentrations are above the 75th percentile. The annual limit value set by EU legislation is marked by the upper continuous horizontal line. The WHO AQG level is marked by the lower dashed horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

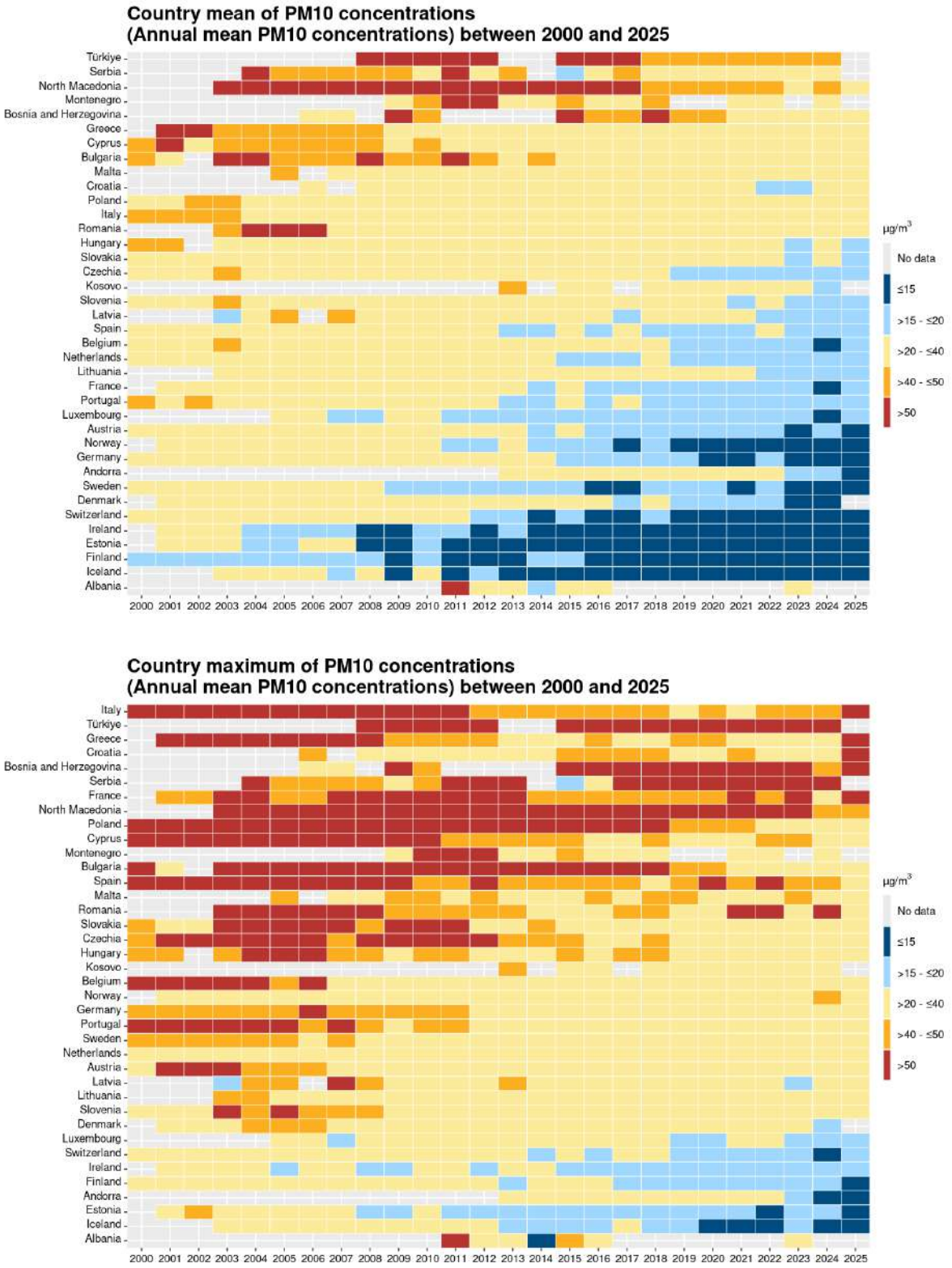
Figure 6 shows the maps of PM_{10} annual mean concentrations at station level for the last four years. In this way, any significant change in the spatial distribution of the values above the set thresholds in the legends can be observed. Note that only the last year's map (2025) is based on UTD data, while the previous three years are based on officially reported validated data (CDR).

Figure 6: Maps of PM_{10} concentrations (annual limit value) for the last 4 years



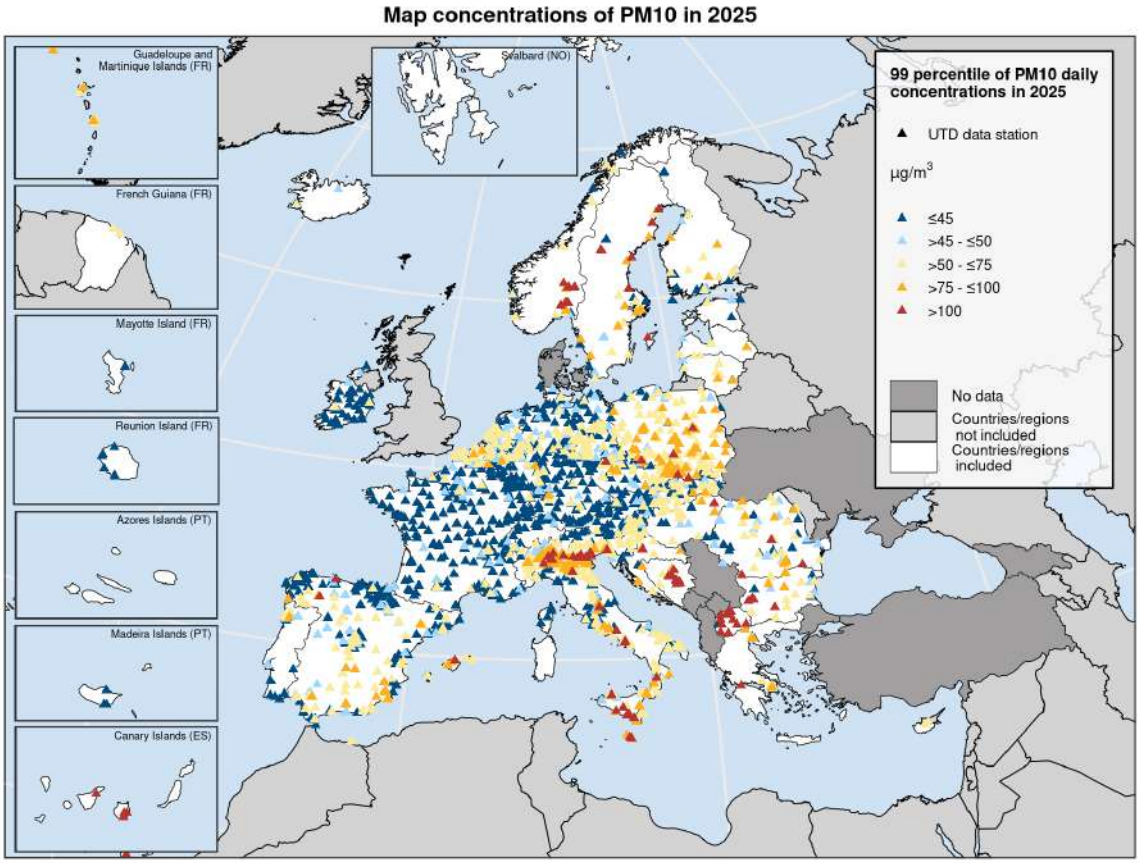
Heatmaps with the evolution from 2000 of the mean (top) and the maximum (bottom) annual mean PM_{10} concentrations at country level are shown in figure 7. In this way, the evolution along years of the average and maximum measured concentration levels can be seen for each country. Note that meteorological variability has a considerable impact on year-to-year changes in ambient air concentrations of air pollutants (EEA, 2020), and the last year (2025) is based on UTD data, while the previous years are based on officially reported validated data.

Figure 7: Evolution of mean (top) and maximum (bottom) PM_{10} annual mean concentrations (annual limit value) per country from 2000



Note: It is important to note that the figure is not based on a consistent set of stations. The number, location and classification of the stations included may vary from year to year.

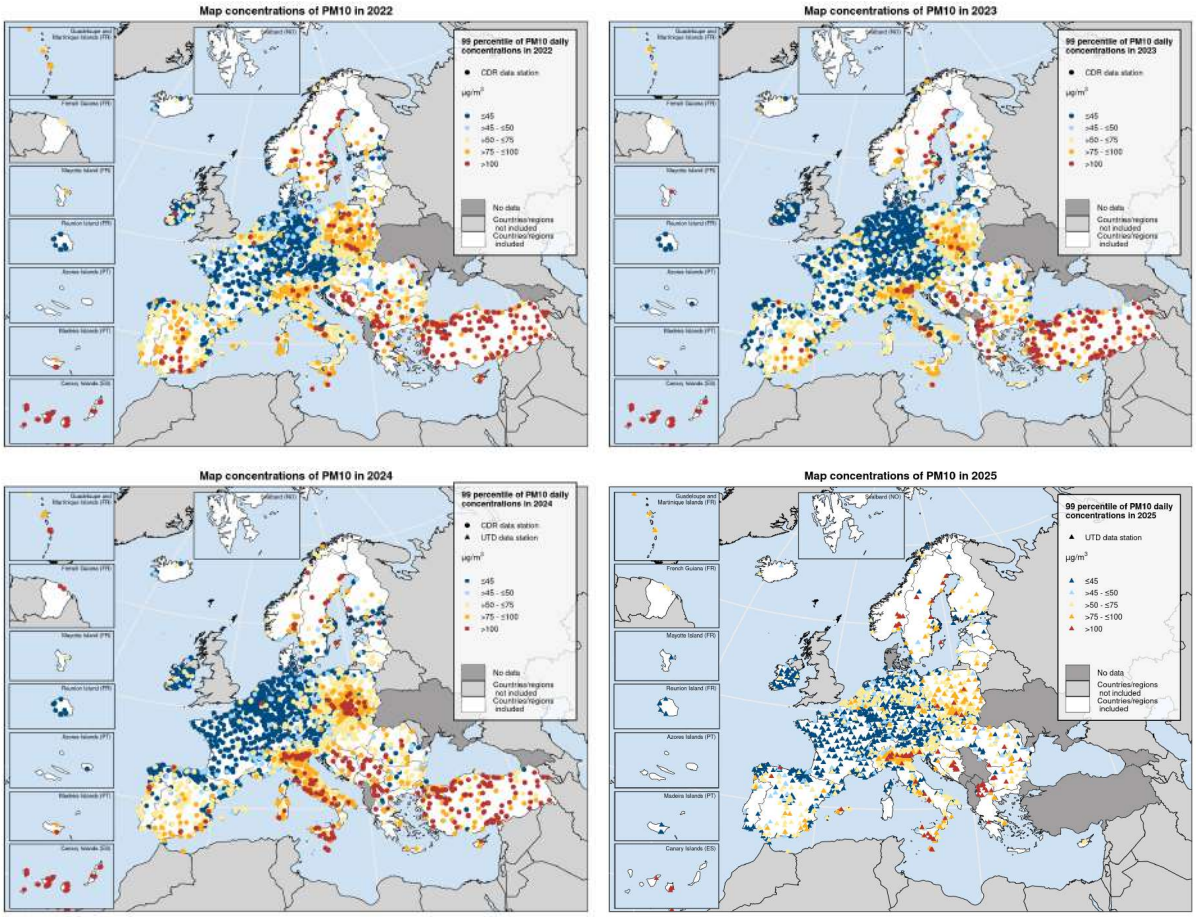
Figure 8: UTD Map of PM_{10} concentrations in 2025 - daily WHO AQG level



Note: Observed concentrations of PM10 in 2025. The map shows the 99 percentile of the PM10 daily mean concentrations, equivalent to 3–4 exceedance days per year, according to the definition of the daily WHO AQG level (45 µg/m³). The first colour category indicates stations with concentrations below this AQG level. Only stations with more than 75 % of valid data have been included in the map.

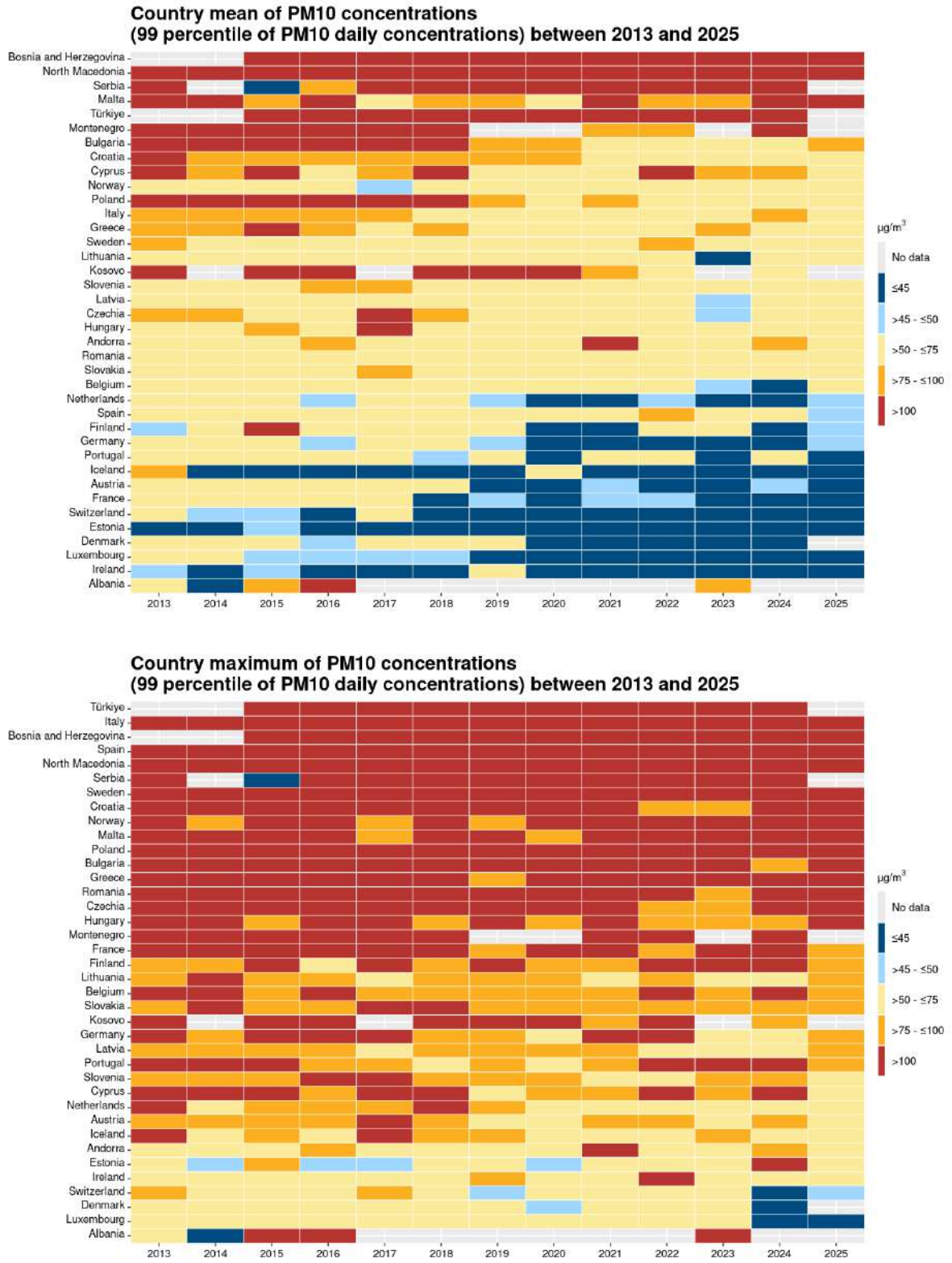
Figure 9 shows the maps of the 99 percentile of PM_{10} daily mean concentrations (equivalent to the WHO AQG level for PM_{10} daily mean level) for the last four years. In this way, any significant change in the spatial distribution of the values above the set thresholds in the legends can be observed. Note that only the last year's map (2025) is based on UTD data, while the previous three years are based on officially reported validated data (CDR).

Figure 9: Maps of PM_{10} concentrations (daily WHO AQG level) for the last 4 years



Heatmaps with the evolution from 2013 of the mean (top) and the maximum (bottom) 99 percentile of PM_{10} daily mean concentrations at country level are shown in figure 10. In this way, the evolution along years of the average and maximum measured concentration levels can be seen for each country. Note that meteorological variability has a considerable impact on year-to-year changes in ambient air concentrations of air pollutants (EEA, 2020), and the last year (2025) is based on UTD data, while the previous years are based on officially reported validated data.

Figure 10: Evolution of mean (top) and maximum (bottom) 99 percentile of PM_{10} daily mean concentrations (daily WHO AQG level) per country from 2013



Note: It is important to note that the figure is not based on a consistent set of stations. The number, location and classification of the stations included may vary from year to year.

3.2 Status of $PM_{2.5}$ concentrations

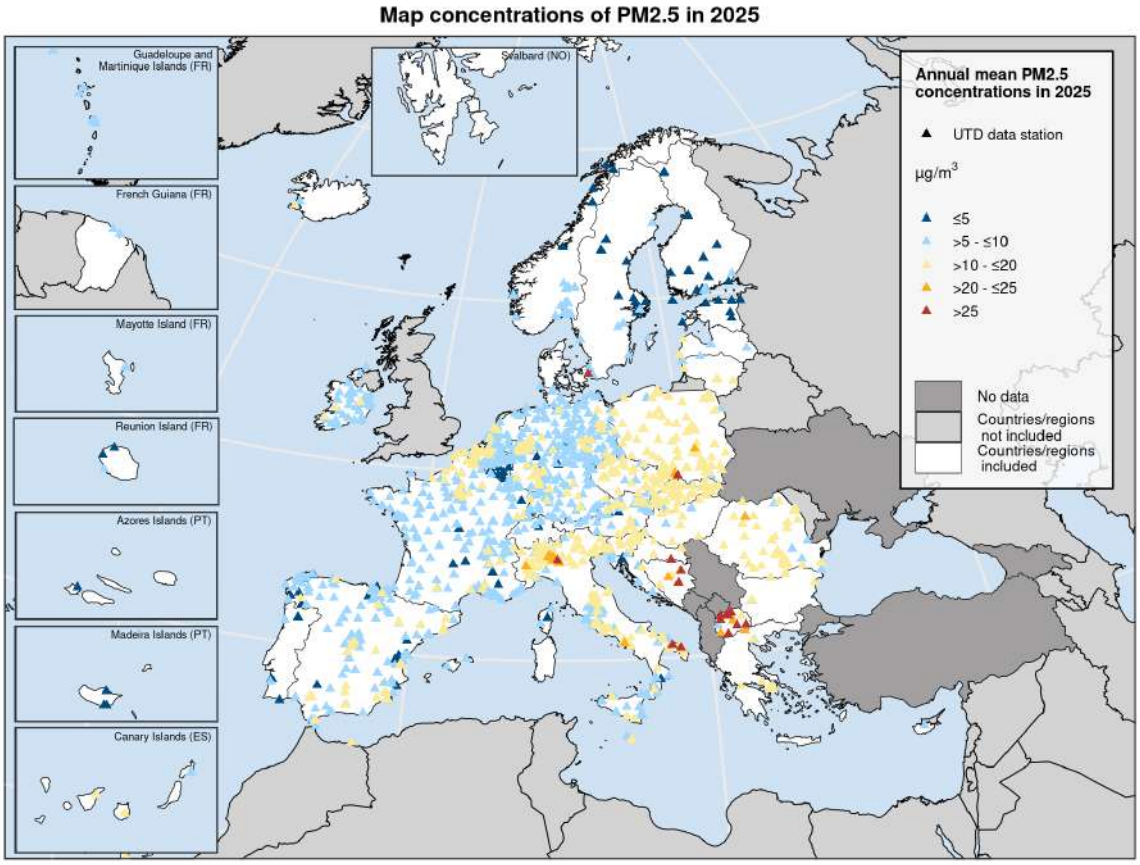
Regarding $PM_{2.5}$, data with sufficient valid measurements were received from 1694 stations for the calculation of annual mean concentrations and from 1685 stations in relation to the short-term WHO AQG level. These stations were located in all the reporting countries shown in Figure 1.

The $PM_{2.5}$ concentrations were higher than the EU annual limit value (25 µg/m^3) in four countries in EU-27 and two other reporting countries (Figure 11). These concentrations above the limit value were registered in 1 % of all the reporting stations and occurred primarily (100 % of cases) in urban (71 %) or suburban (29 %) areas.

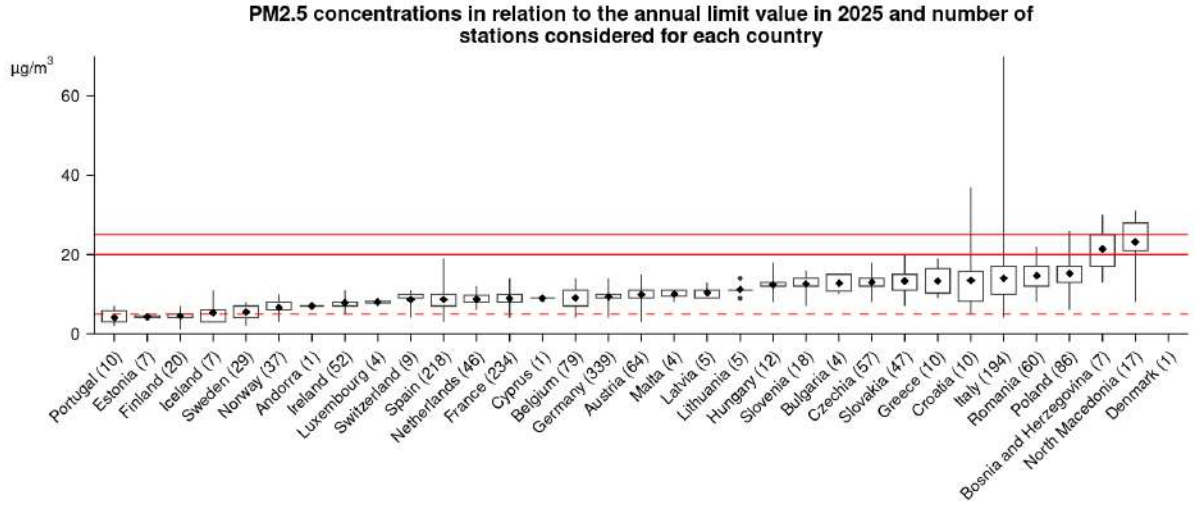
The WHO AQG level for $PM_{2.5}$ annual mean (5 µg/m^3) was exceeded at 94 % of the stations, located in 32 of the 33 countries reporting $PM_{2.5}$ data (Figure 11). Estonia did not report any concentrations above the WHO AQG level for $PM_{2.5}$.

The WHO AQG level for $PM_{2.5}$ daily mean (15 µg/m^3), expresed as percentile 99, it was exceeded at 97 % (1627 stations) of the stations in all the reporting countries (Figure 14).

Figure 11: UTD Map and boxplot of $PM_{2.5}$ concentrations in 2025 - annual limit value



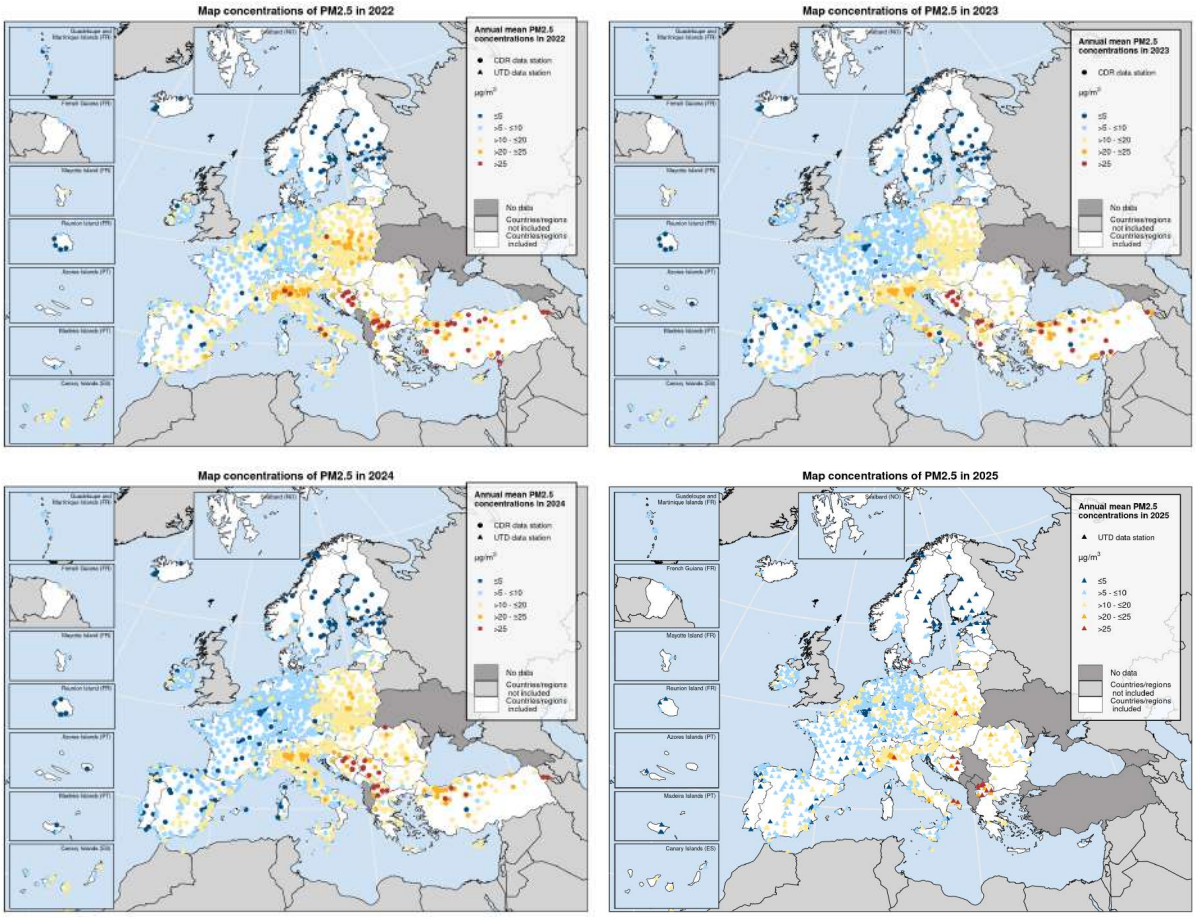
Note: Observed concentrations of PM2.5 in 2025. The possibility of subtracting contributions to the measured concentrations from natural sources has not been considered. The last two colour categories indicate stations reporting concentrations above the EU indicative annual limit value (20 µg/m³) or the EU annual limit value (25 µg/m³). The first colour category indicates stations reporting values below the WHO AQG level for PM2.5 (5 µg/m³). Only stations with more than 75 % of valid data have been included in the map.



Note: The graph is based on annual mean concentration values. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) annual mean values (in µg/m³). The rectangles mark the 25th and 75th percentiles. At 25 % of the stations, levels are below the 25th percentile; at 25 % of the stations, concentrations are above the 75th percentile. The annual limit value and the indicative annual limit value set by EU legislation are marked by the upper continuous horizontal lines at 25 and 20, respectively. The WHO AQG level is marked by the lower dashed horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

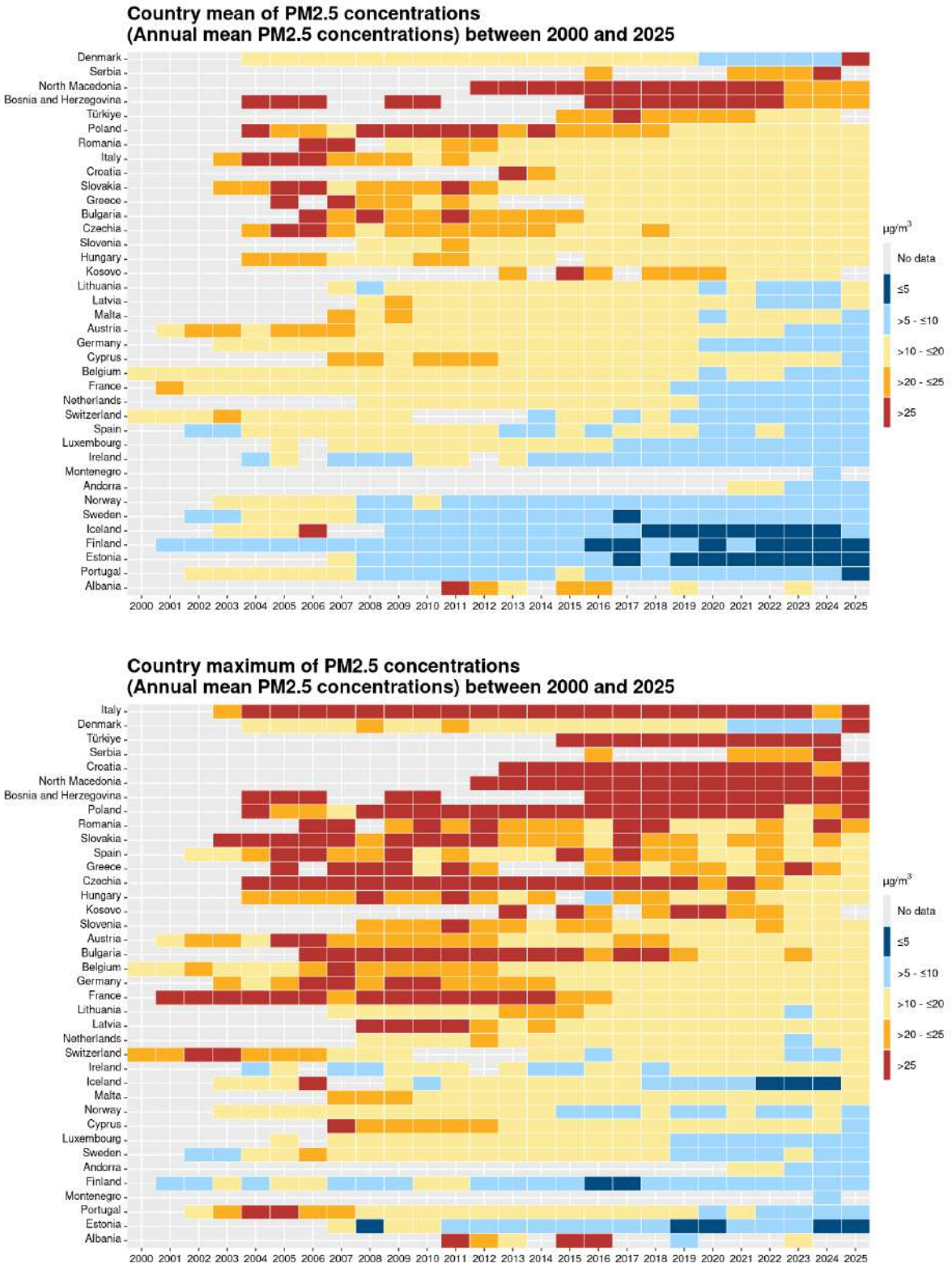
Figure 12 shows the maps of measured $PM_{2.5}$ annual mean concentrations for the last four years. In this way, any significant change in the spatial distribution of the values above the set thresholds in the legends can be observed. Note that only the last year's map (2025) is based on UTD data, while the previous three years are based on officially reported validated data (CDR).

Figure 12: Maps of $PM_{2.5}$ concentrations (annual limit value) for the last 4 years



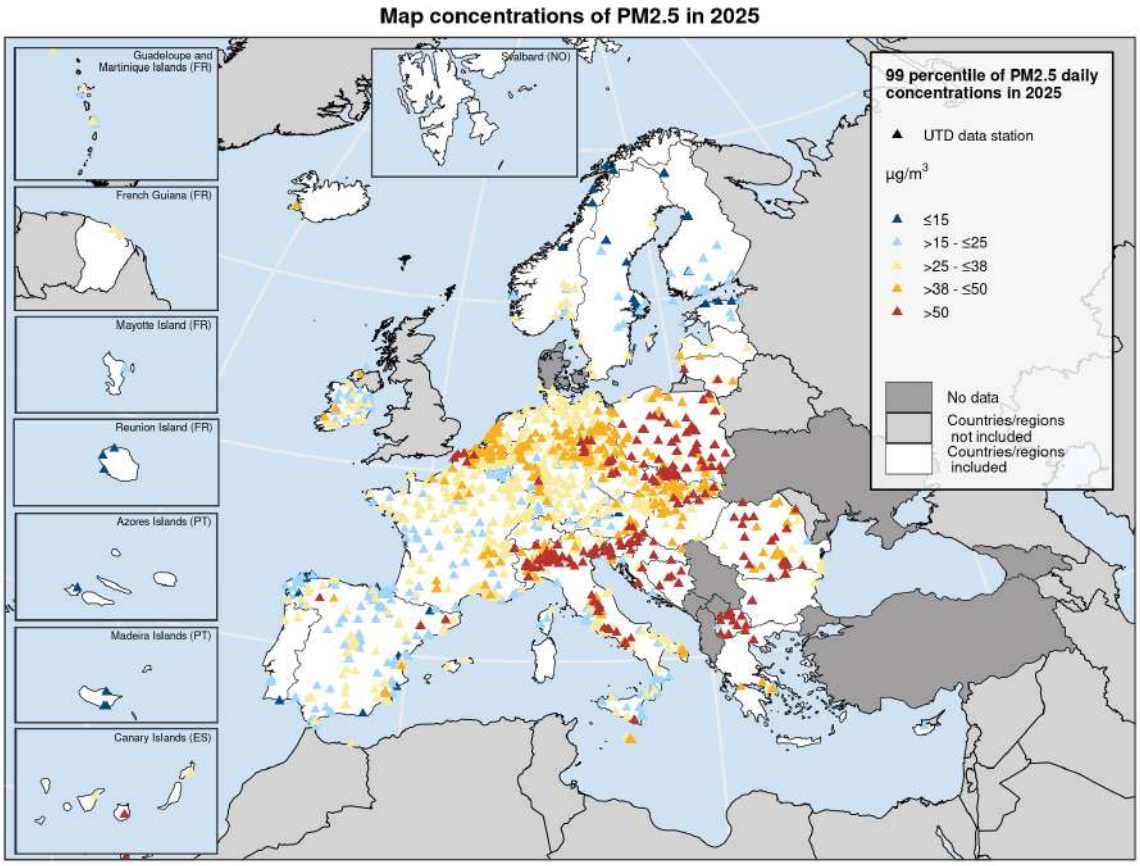
Heatmaps with the evolution from 2000 of the mean (top) and the maximum (bottom) $PM_{2.5}$ annual mean concentrations at country level are shown in figure 13. In this way, the evolution along years of the average and maximum measured concentration levels can be seen for each country. Note that meteorological variability has a considerable impact on year-to-year changes in ambient air concentrations of air pollutants (EEA, 2020), and the last year (2025) is based on UTD data, while the previous years are based on officially reported validated data.

Figure 13: Evolution of mean (top) and maximum (bottom) $PM_{2.5}$ annual mean concentrations (annual limit value) per country from 2000



Note: It is important to note that the figure is not based on a consistent set of stations. The number, location and classification of the stations included may vary from year to year.

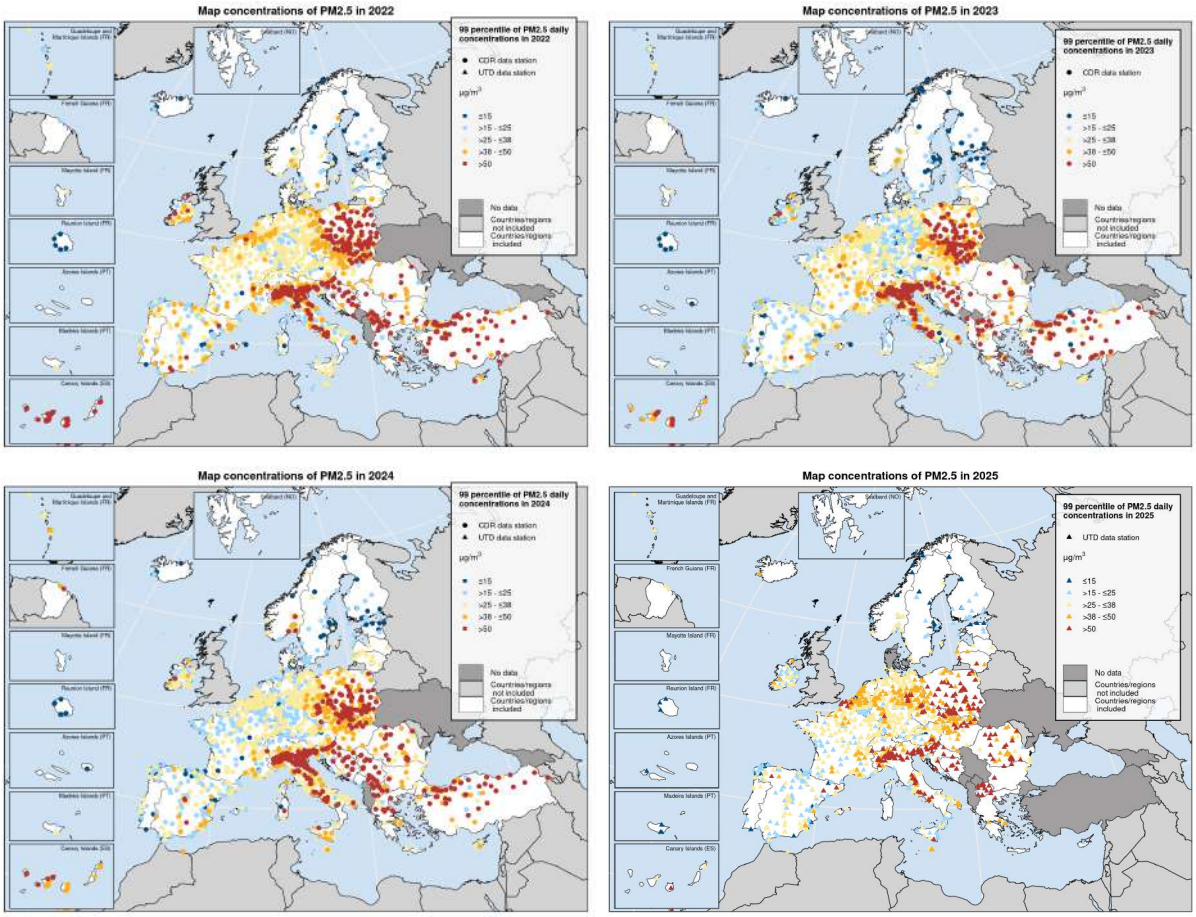
Figure 14: UTD Map of $PM_{2.5}$ concentrations in 2025 - daily WHO AQG level



Note: Observed concentrations of PM2.5 in 2025. The map shows the 99 percentile of the PM2.5 daily mean concentrations, equivalent to 3−4 exceedance days per year, according to the definition of the daily WHO AQG level (15 µg/m³). The first colour category indicates stations with concentrations below this AQG level. Only stations with more than 75 % of valid data have been included in the map.

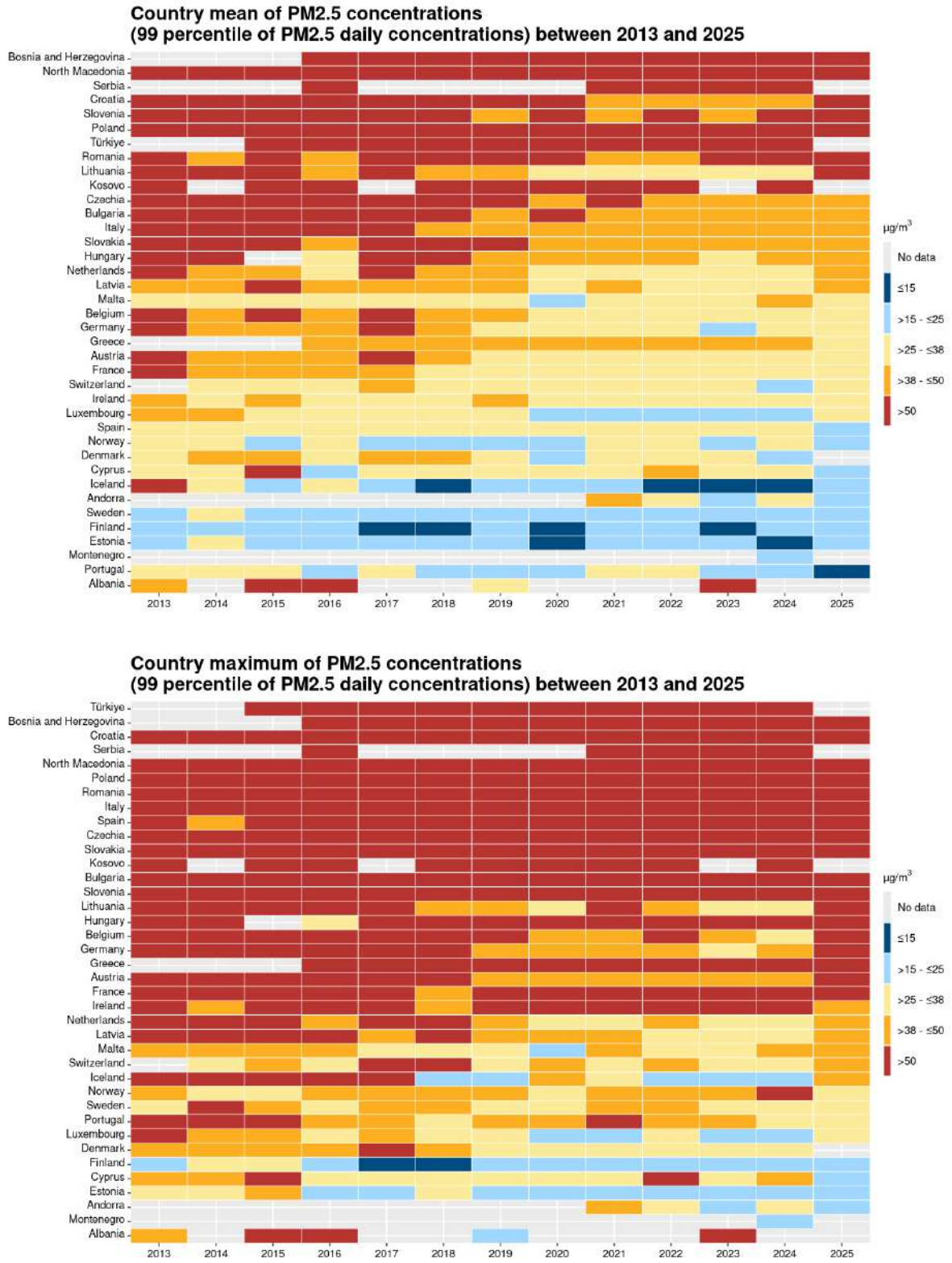
Figure 15 shows the maps of the 99 percentile of $PM_{2.5}$ daily mean concentrations (equivalent to the WHO AQG level for $PM_{2.5}$ daily mean level) for the last four years. In this way, any significant change in the spatial distribution of the values above the set thresholds in the legends can be observed. Note that only the last year's map (2025) is based on UTD data, while the previous three years are based on officially reported validated data (CDR).

Figure 15: Maps of $PM_{2.5}$ concentrations (daily WHO AQG level) for the last 4 years



Heatmaps with the evolution from 2013 of the mean (top) and the maximum (bottom) 99 percentile of $PM_{2.5}$ daily mean concentrations at country level are shown in figure 16. In this way, the evolution along years of the average and maximum measured concentration levels can be seen for each country. Note that meteorological variability has a considerable impact on year-to-year changes in ambient air concentrations of air pollutants (EEA, 2020), and the last year (2025) is based on UTD data, while the previous years are based on officially reported validated data.

Figure 16: Evolution of mean (top) and maximum (bottom) 99 percentile of $PM_{2.5}$ daily mean concentrations (daily WHO AQG level) per country from 2013



Note: It is important to note that the figure is not based on a consistent set of stations. The number, location and classification of the stations included may vary from year to year.

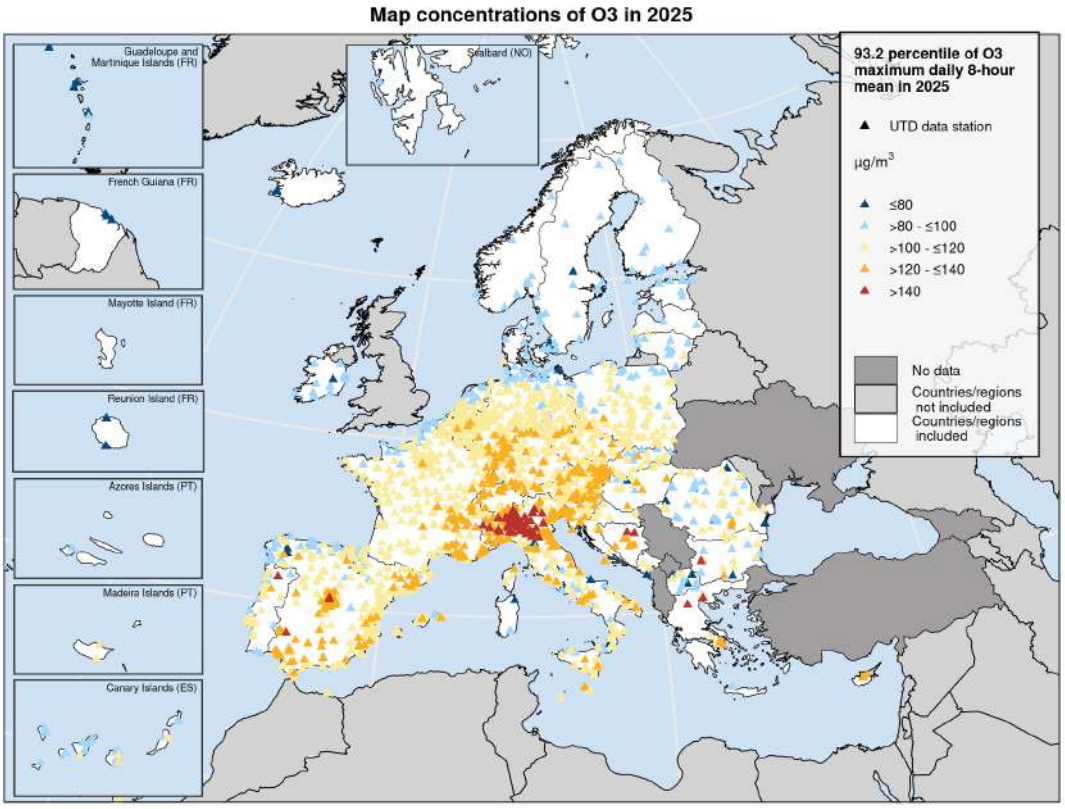
4 Status of ozone ambient air concentrations

Data for O_3 were reported from 1976 stations for the calculation of EU standards, from 1975 stations in relation to the short-term WHO AQG level, and from 1836 stations for the long-term WHO AQG level. These stations were located in all the reporting countries shown in Figure 1. 18 countries in EU-27 and 2 other reporting countries registered concentrations above the O_3 target value threshold (120 µg/m^3) more than 25 times this year (Figure 17). In total, 22 % of all stations reporting O_3 showed concentrations above the target value threshold for the protection of human health. Furthermore, the 2023-2025 average of the annual number of days with maximum daily 8-hour means above 120 µg/m^3 was higher than 25 (that is, above the target value) in 284 stations (16% of the total) in 16 countries of the EU-27 and 2 other reporting countries (Figure 20). In addition, only 15 % (289) of all stations fulfilled the long-term objective (120 µg/m^3). 86 % of the stations with values above the long-term objective were background stations.

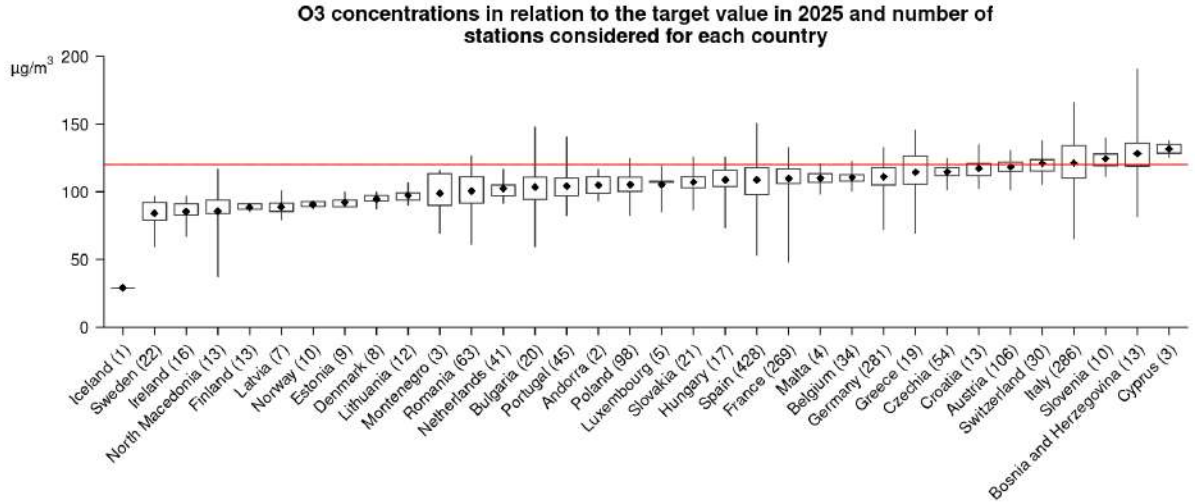
7 % (144) of all stations and only 25 of the 510 reported rural background stations had values below the short-term WHO AQG value for O_3 (100 µg/m^3) (Figure 23), set for the protection of human health. The long-term, peak season([4]), WHO AQG level (60 µg/m^3) was exceeded in 98 % (1806) of all stations located in 27 countries in EU-27 and 6 other reporting countries. Only 2 of the 484 reported rural background stations had values below this AQG level (Figure 26).

[4]The peak season is calculated for each station as the average of daily maximum 8-hour mean O3 concentration in the six consecutive months with the highest six-month running-average O_3 concentration. That means that, for each station, twelve 6-months running averages of the daily 8-h max are calculated (1 August YY-1 to 31 January YY, ..., 1 January YY to 30 June YY, ..., 1 July YY to 31 December YY) and the maximum of those 12 values is selected as the peak season concentration. Please check also Data Dictionary - Vocabulary (https://dd.eionet.europa.eu/vocabularyconcept/aq/aggregationprocess/P1Y-maxP6M-P8H-dmax/view?vocabularyFolder.workingCopy=false&facet=HTML+Representation).

Figure 17: UTD Map and boxplot of O_3 concentrations in 2025



Note: Observed concentrations of O3 in 2025. The map shows the 93.2 percentile of the O3 maximum daily 8−hour mean, representing the 26th highest value in a complete series. It is related to the O3 target value. At sites marked with the last two colour categories, the 26th highest daily O3 concentrations were above the 120 µg/m³ threshold, implying values above the target value threshold. Please note that the legal definition of the target value considers not only 1 year but the average over 3 years. Only stations with more than 75 % of valid data have been included in the map.

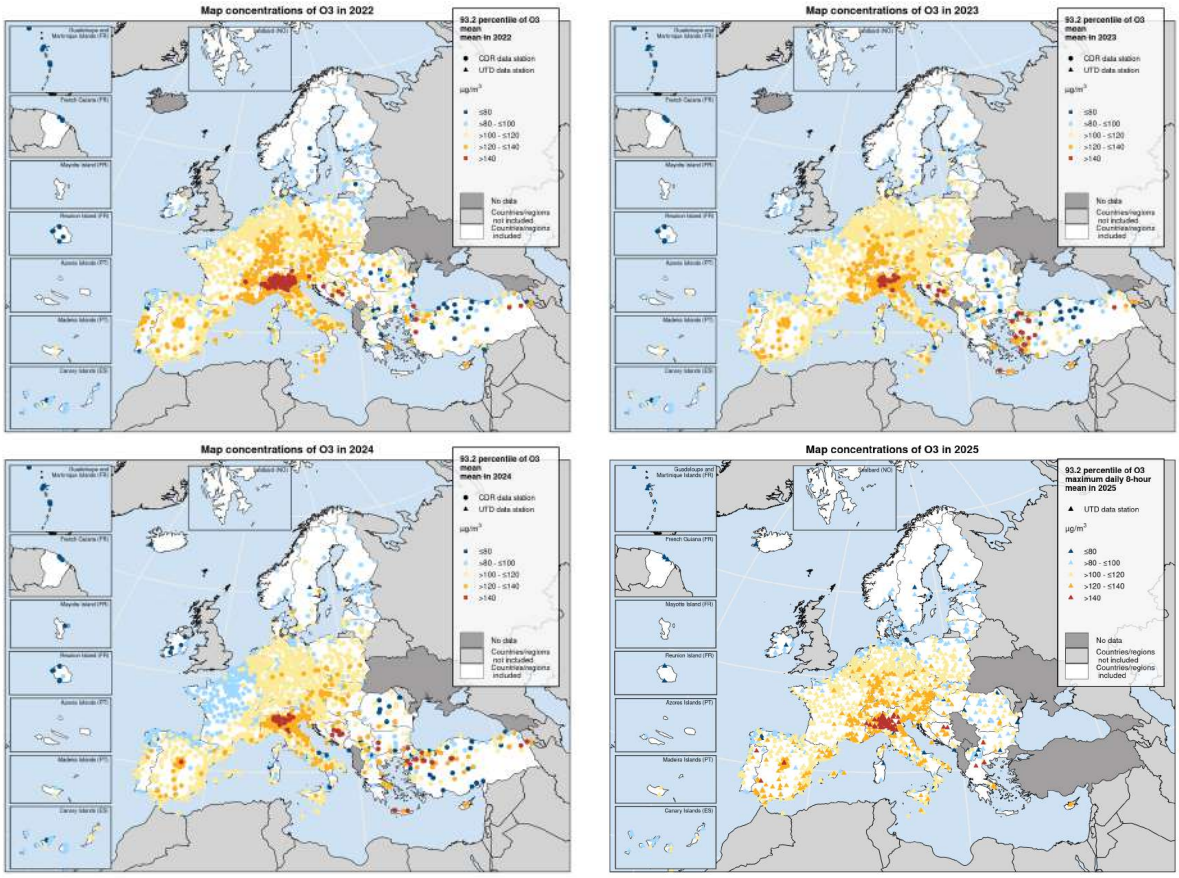


Note: The graph is based, for each country, on the 93.2 percentile of the maximum daily 8−hour mean concentration values, corresponding to the 26th highest daily maximum of the running 8−hour mean in a complete time series. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) values (in µg/m³). The rectangles mark the 25th and 75th percentiles. At 25 % of the stations, levels are below the 25th percentile; at 25 % of the stations, concentrations are above the 75th percentile. The target value threshold set by the EU legislation is marked by the horizontal line. Please note that the legal definition of the target value considers not only 1 year but the average over 3 years. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

The highest value in the boxplot, Bosnia and Herzegovina (191 µg/m³), has not been included in the graph for representation purposes.

Figure 18 shows the maps of the observed 93.2 percentile of the O_3 maximum daily 8-hour mean concentrations (O_3 target value) for the last four years. In this way, any significant change in the spatial distribution of the values above the set thresholds in the legends can be observed. Note that only the last year's map (2025) is based on UTD data, while the previous three years are based on officially reported validated data (CDR).

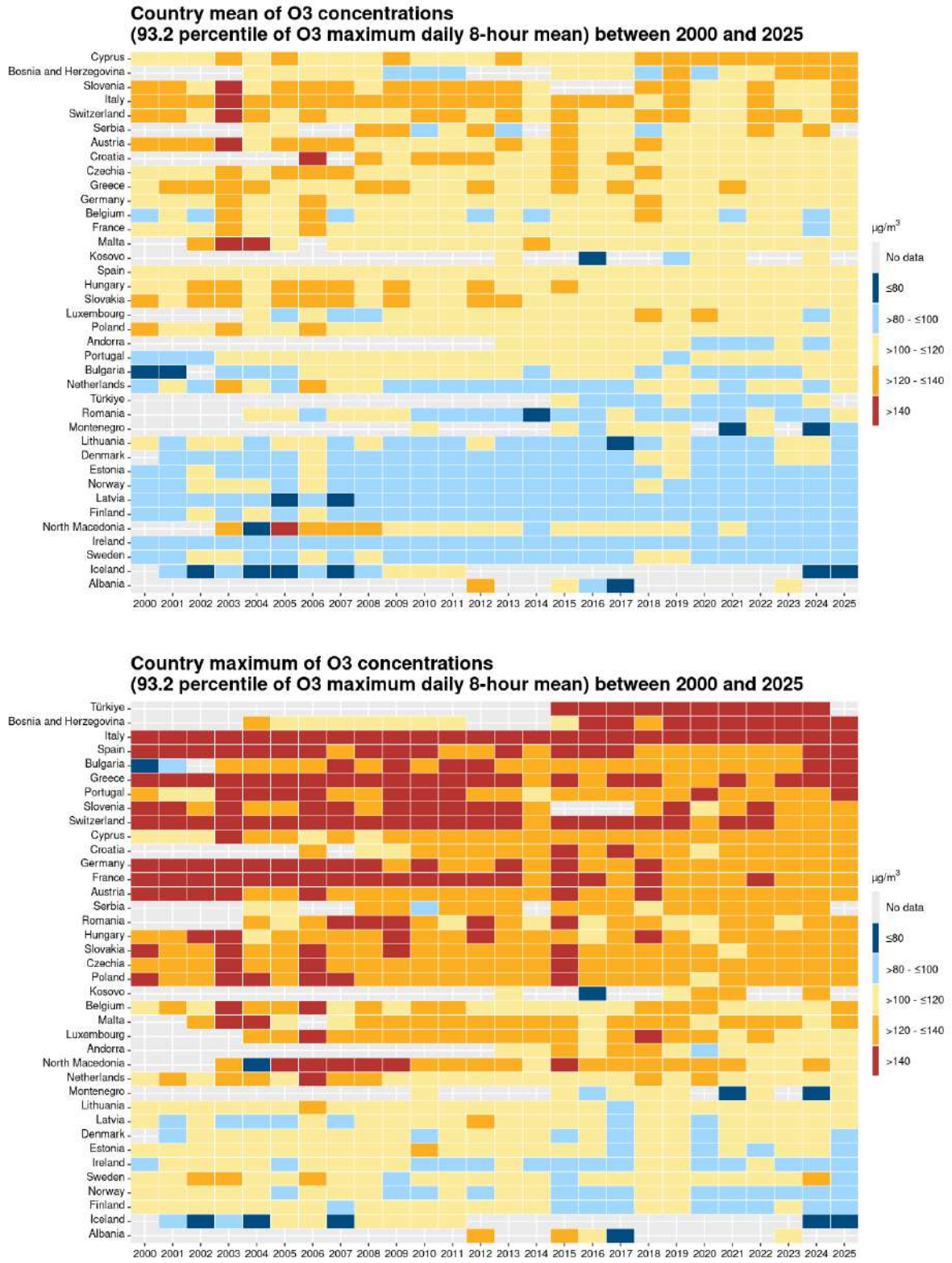
Figure 18: Maps of O_3 concentrations (related to the target value) for the last 4 years



Note: Please be aware that the TV considers the average over 3 years and the maps only show the situation for one specific year.
To check the situation with the TV please see Figure 22

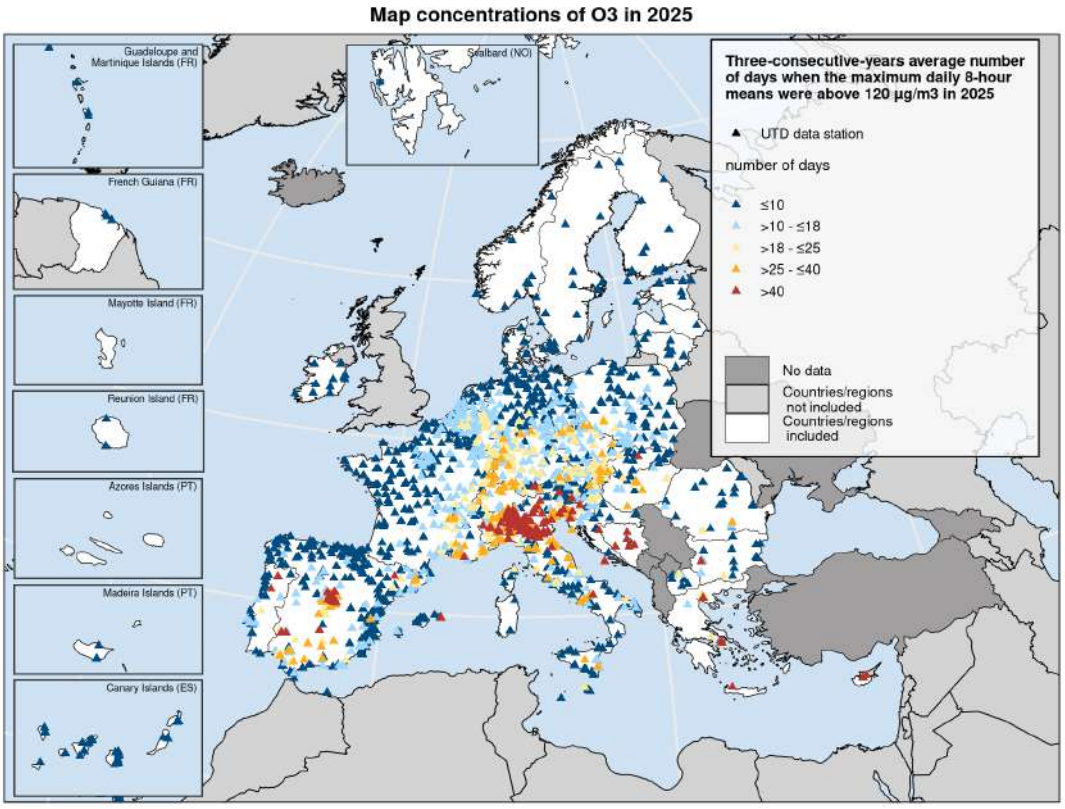
Heatmaps with the evolution from 2000 of the mean (top) and the maximum (bottom) O_3 concentrations (93.2 percentile of the maximum daily 8-hour mean concentration, target value) at country level are shown in figure 19. In this way, the evolution along years of the average and maximum measured concentration levels can be seen for each country. Note that meteorological variability has a considerable impact on year-to-year changes in ambient air concentrations of air pollutants (EEA, 2020), especially for O_3 as higher ambient air temperature leads to enhanced photochemical reactions and O_3 formation. The last year (2025) is based on UTD data, while the previous years are based on officially reported validated data.

Figure 19: Evolution of mean (top) and maximum (bottom) O_3 concentrations (93.2 percentile of the maximum daily 8-hour mean concentration, related to the target value) per country from 2000

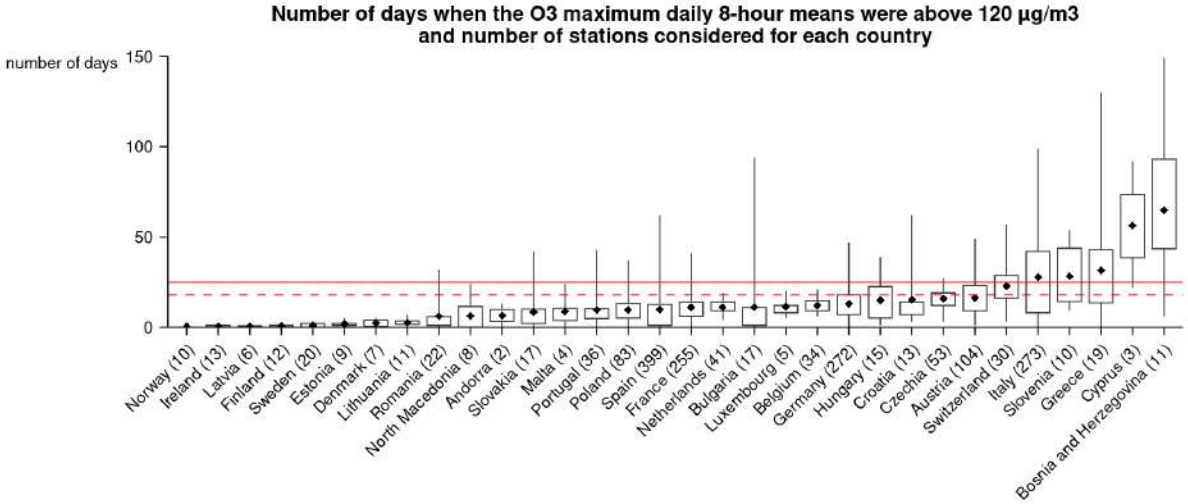


Note: It is important to note that the figure is not based on a consistent set of stations. The number, location and classification of the stations included may vary from year to year.

Figure 20: UTD Map and boxplot of O_3 concentrations in 2025 - target value human health



Note: The map shows the 2023−2025 average of the annual number of days with maximum daily 8−hour means above 120 µg/m3. The last two categories of the legend indicate stations with this average about 25, meaning above the O3 target value for the protection of human health.

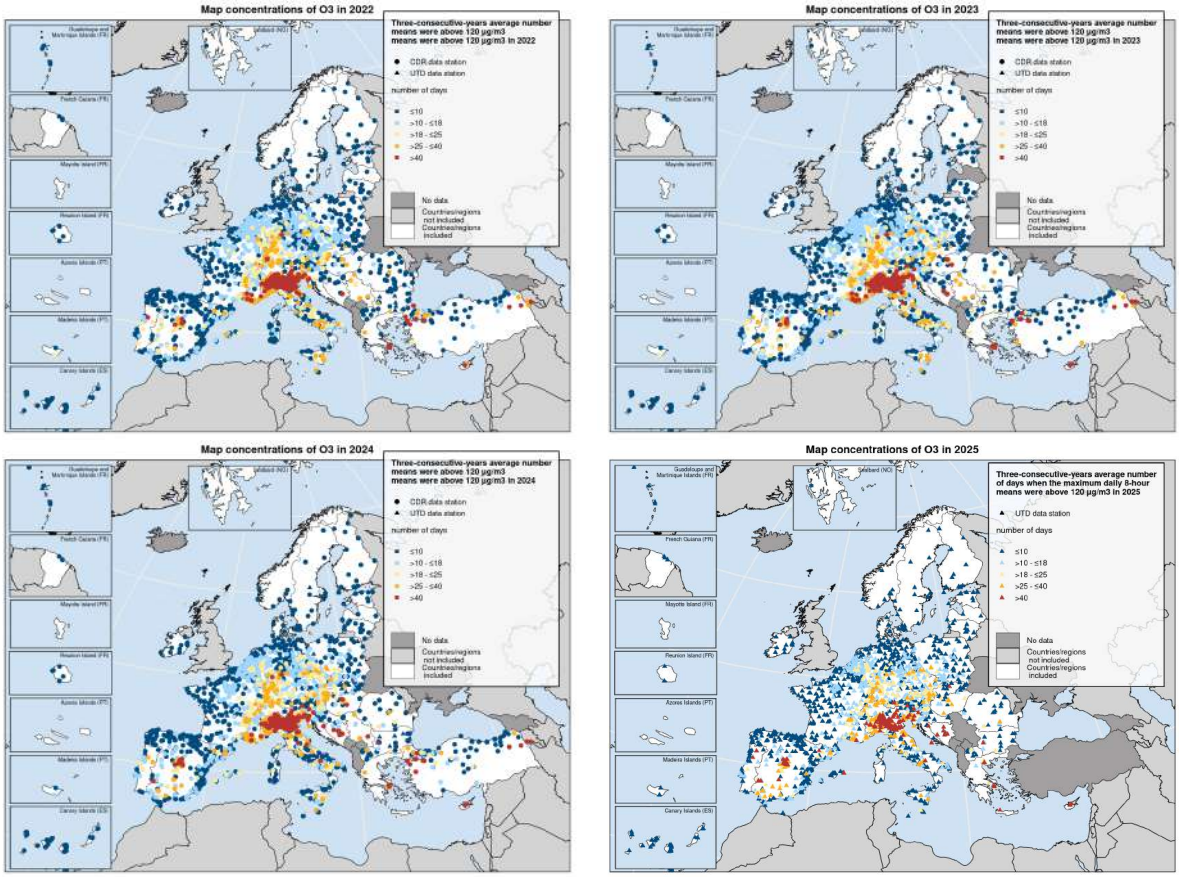


Note: The graph is based, for each country, on the 2023−2025 average of the annual number of days with maximum daily 8−hour means above 120 µg/m3. For each country, the number of stations considered for the three years (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) values (in number of days). The rectangles mark the 25th and 75th percentiles. At 25 % of the stations, the three−years average number of days are below the 25th percentile; at 25 % of the stations, the three−years average number of days are above the 75th percentile. The target value set by the EU legislation is marked by the horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

Figure 21 shows shows the maps of three-years average of the annual number of days with maximum daily 8-hour means above 120 µg/m^3 for the last four years. In this way, the evolution

of the situation against the O3 target value to protect human health can be observed. These maps are based on officially reported validated data (CDR).

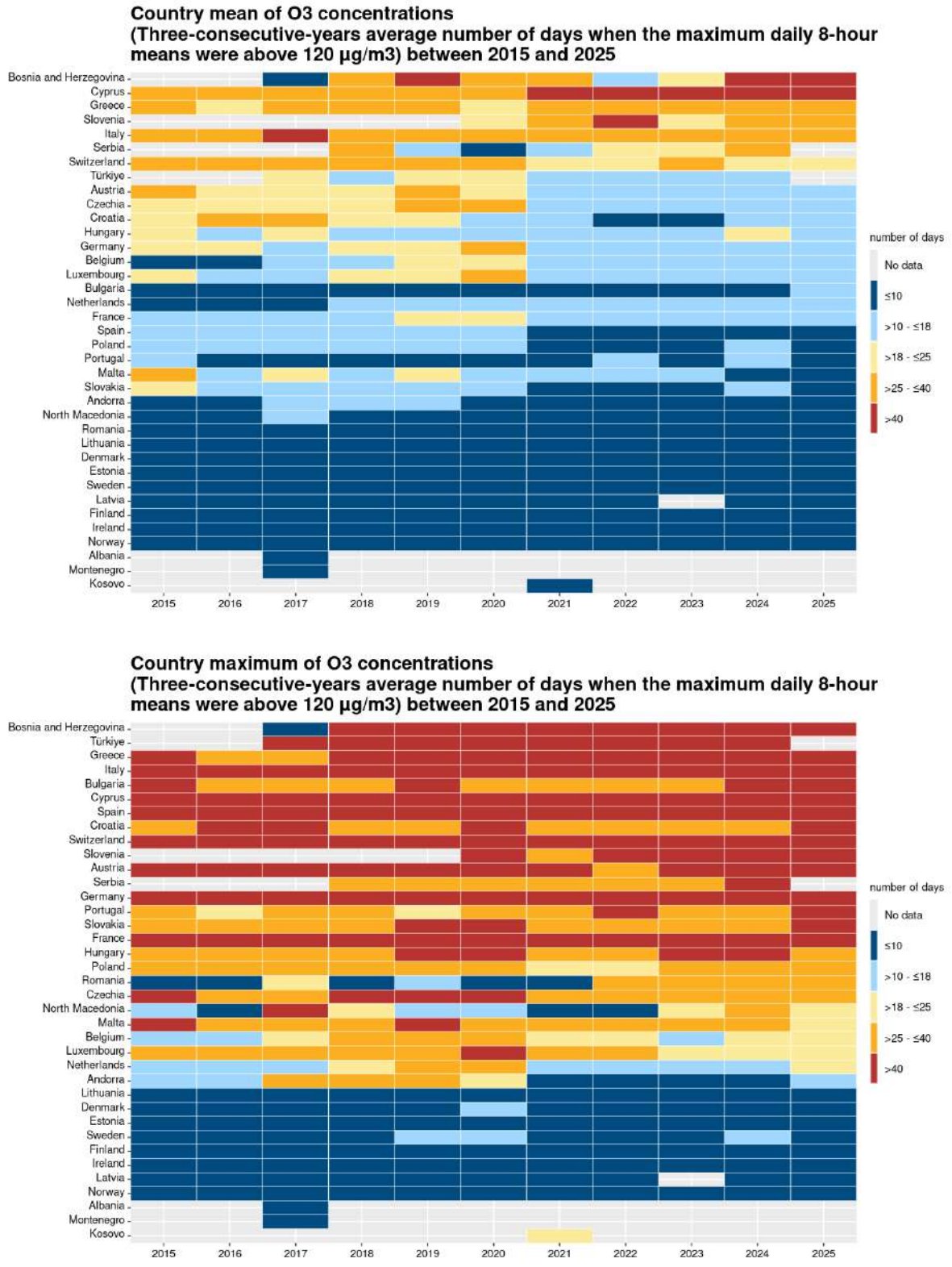
Figure 21: Maps of the O_3 situation in relation to the target value for protection of human health for the last 4 years



Note: The map shows the 2023–2025 average of the annual number of days with maximum daily 8–hour means above 120 µg/m3. The last two categories of the legend indicate stations with this average about 25, meaning above the O3 target value for the protection of human health.

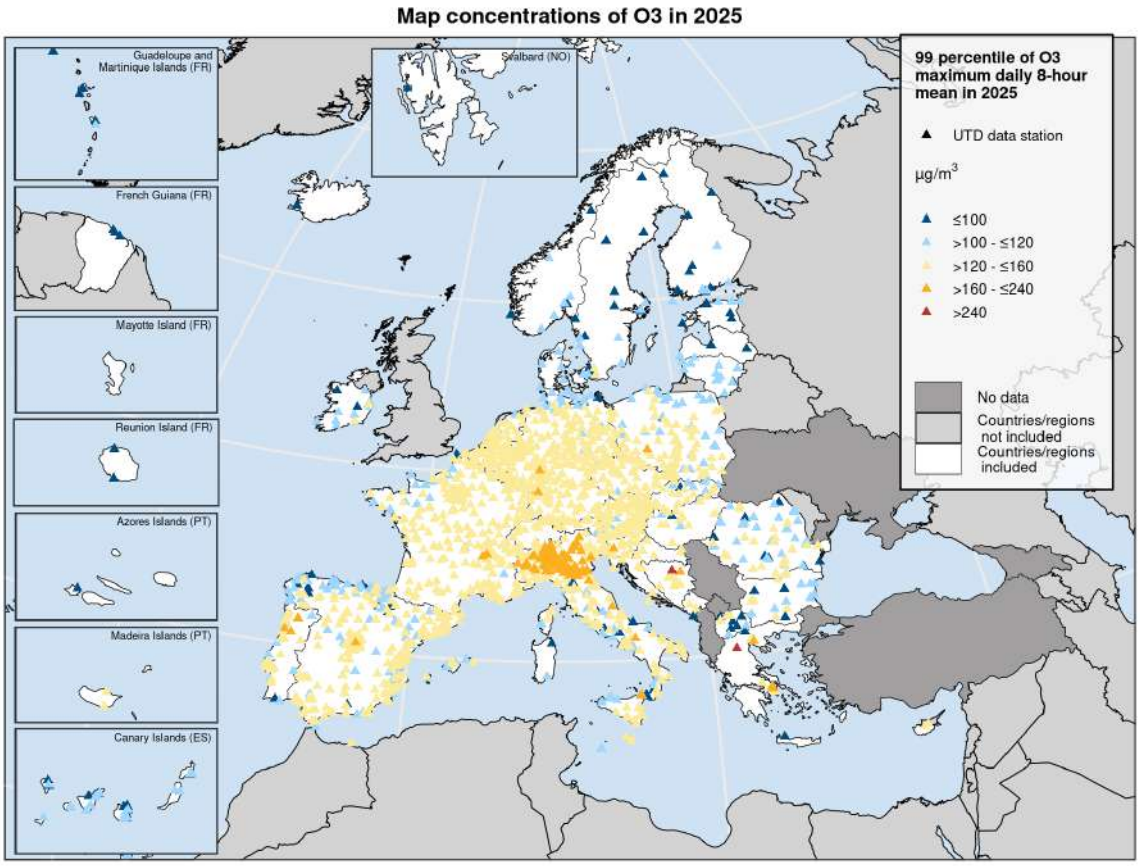
Heatmaps with the evolution from 2015 of the mean (top) and the maximum (bottom) three-years average of the number of days when the O_3 maximum daily 8-hour mean concentrations were above 120 µg/m^3 at country level are shown in figure 22. Note that meteorological variability has a considerable impact on year-to-year changes in ambient air concentrations of air pollutants (EEA, 2020), especially for O_3 as higher ambient air temperature leads to enhanced photochemical reactions and O_3 formation.

Figure 22: Evolution of mean (top) and maximum (bottom) of the three-years average of the number of days when the O_3 maximum daily 8-hour mean concentrations were above 120 µg/m^3 per country from 2015



Note: It is important to note that the figure is not based on a consistent set of stations. The number, location and classification of the stations included may vary from year to year.

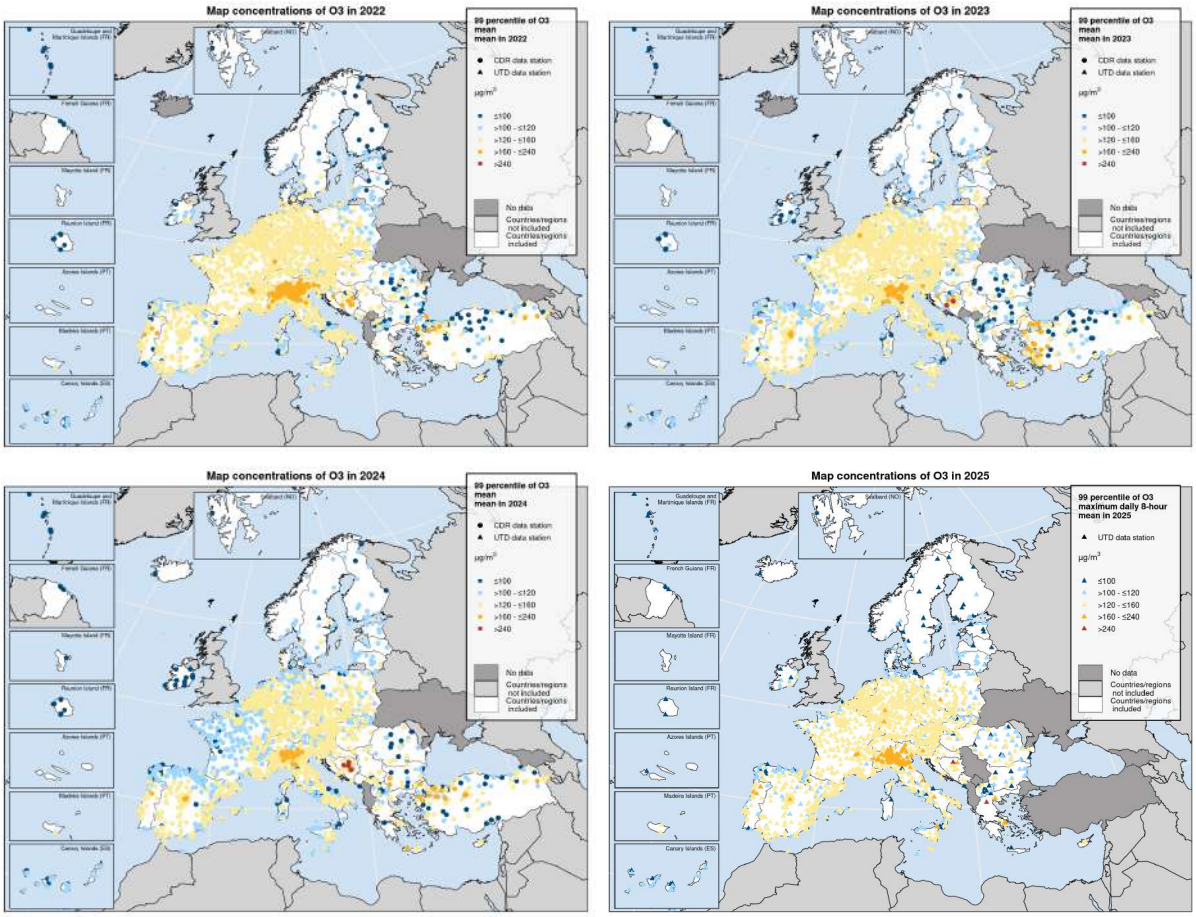
Figure 23: UTD Map of O_3 concentrations in 2025 - short-term WHO AQG level



Note: Observed concentrations of O3 in 2025. The map shows the 99 percentile of the O3 maximum daily 8−hour mean concentrations, equivalent to 3−4 exceedance days per year, according to the definition of the short−term WHO AQG level (100 µg/m³).
The first colour category indicates stations with concentrations below this AQG level.
Only stations with more than 75 % of valid data have been included in the map.

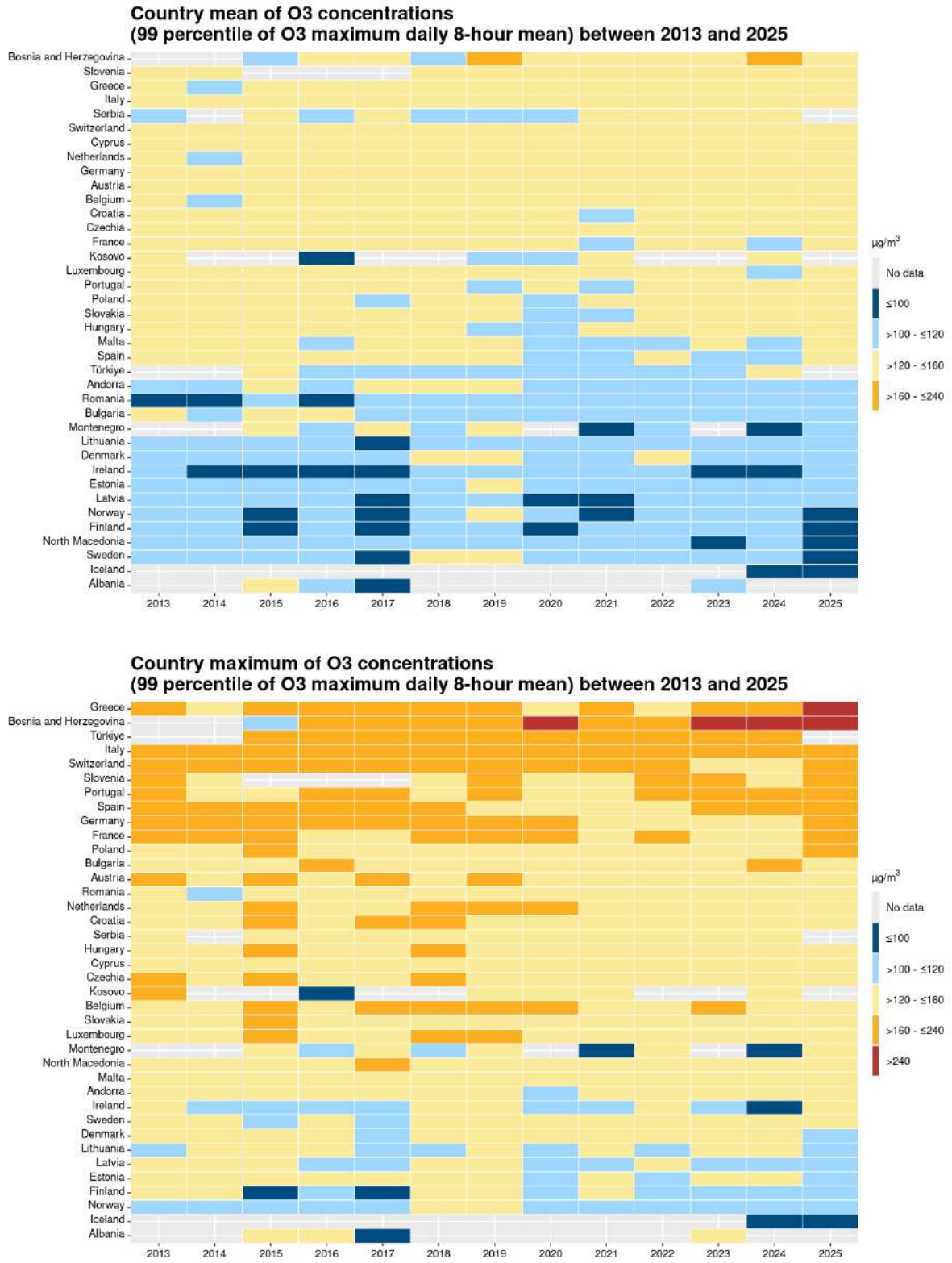
Figure 24 shows the maps of the 99 percentile of the O_3 maximum daily 8-hour mean concentrations (equivalent to the short-term WHO AQG level) for the last four years. In this way, any significant change in the spatial distribution of the values above the set thresholds in the legends can be observed. Note that only the last year's map (2025) is based on UTD data, while the previous three years are based on officially reported validated data (CDR).

Figure 24: Maps of O_3 concentrations (short-term WHO AQG level) for the last 4 years



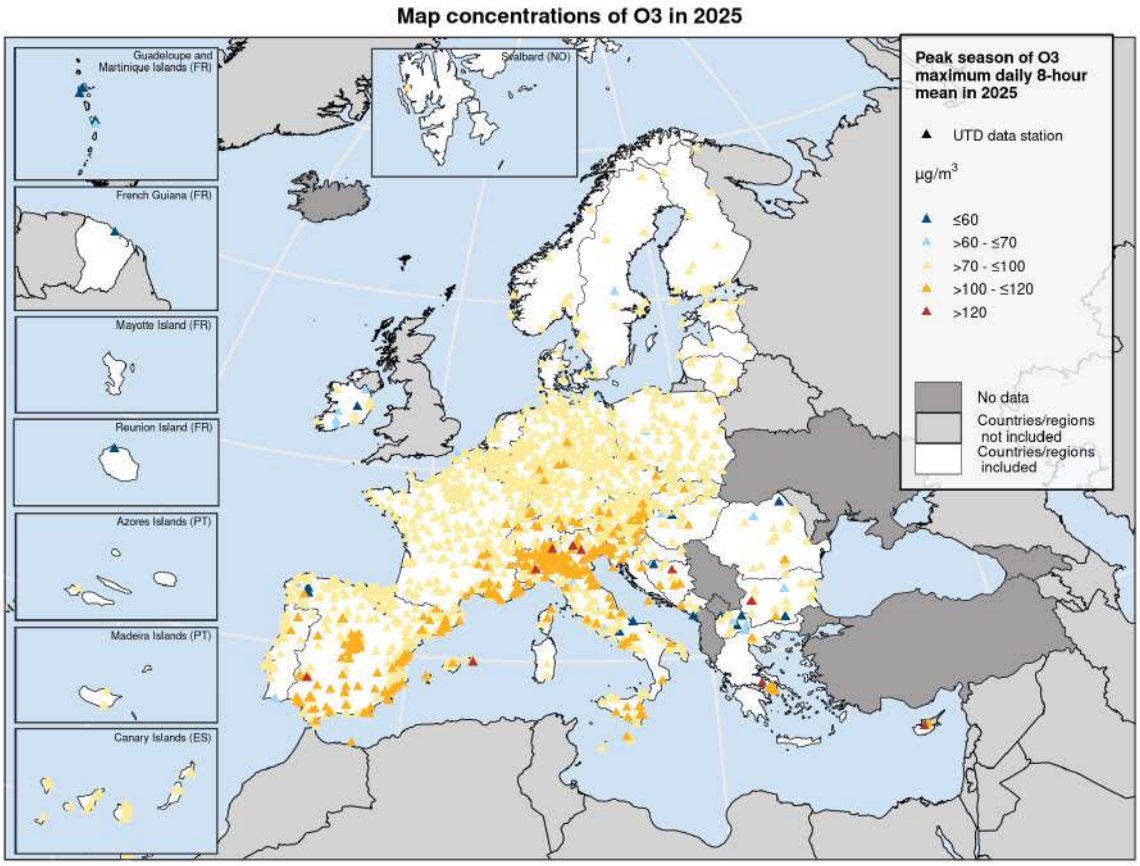
Heatmaps with the evolution from 2013 of the mean (top) and the maximum (bottom) 99 percentile of the O_3 maximum daily 8-hour mean concentrations at country level are shown in figure 25. In this way, the evolution along years of the average and maximum measured concentration levels can be seen for each country. Note that meteorological variability has a considerable impact on year-to-year changes in ambient air concentrations of air pollutants (EEA, 2020), and the last year (2025) is based on UTD data, while the previous years are based on officially reported validated data.

Figure 25: Evolution of mean (top) and maximum (bottom) 99 percentile of the O_3 maximum daily 8-hour mean concentrations per country from 2013



Note: It is important to note that the figure is not based on a consistent set of stations. The number, location and classification of the stations included may vary from year to year.

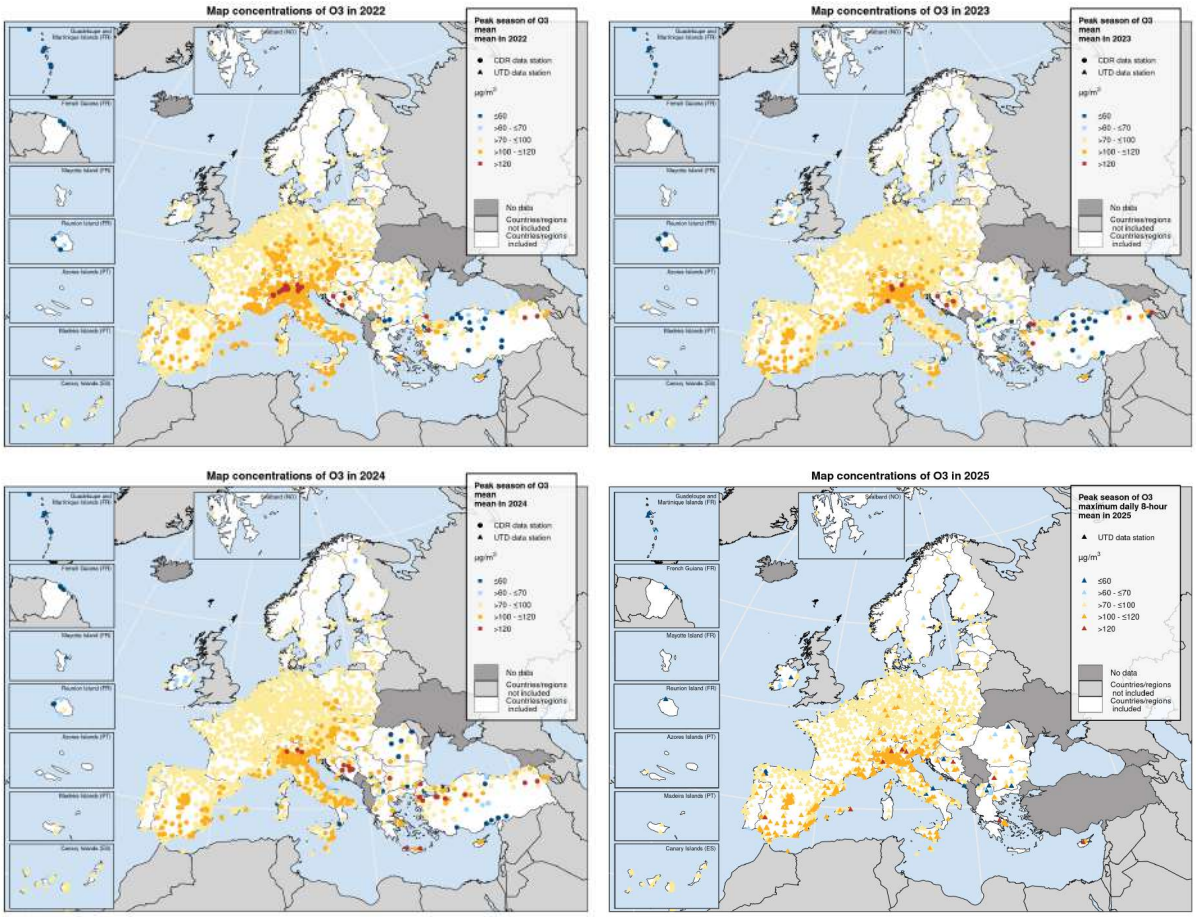
Figure 26: UTD Map of peak season O_3 concentrations in 2025



Note: Observed concentrations of O3 in 2025. The map shows the average of the daily maximum 8−hour mean O3 concentration in the six consecutive months with the highest six−month running−average O3 concentration. The first colour category represents stations fulfilling the peak season O3 AQG level. Only stations with more than 75 % of valid data have been included in the map.

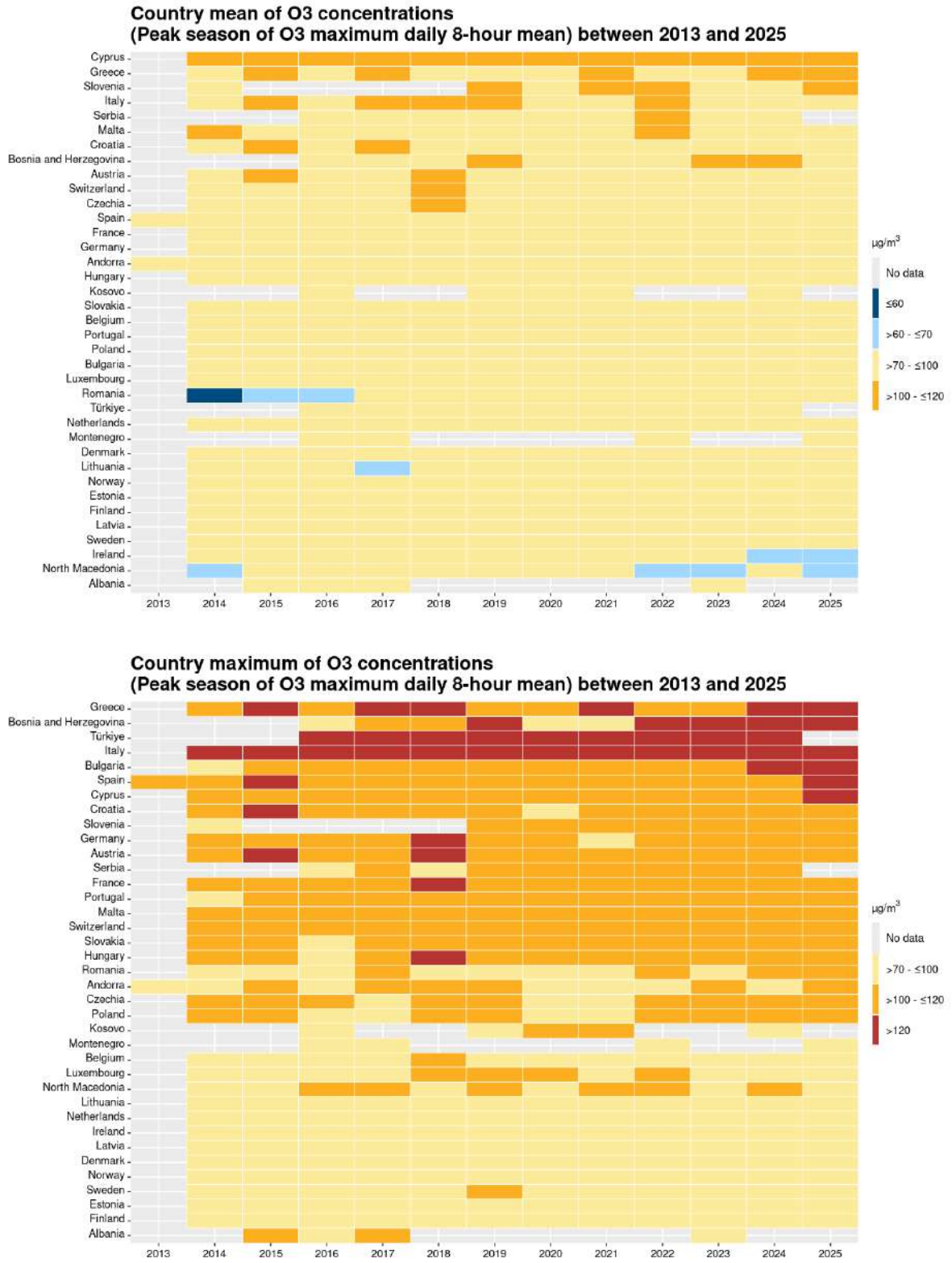
Figure 27 shows the maps of the peak season O_3 concentrations (equivalent to the long-term WHO AQG level) for the last four years. In this way, any significant change in the spatial distribution of the values above the set thresholds in the legends can be observed. Note that only the last year's map (2025) is based on UTD data, while the previous three years are based on officially reported validated data (CDR).

Figure 27: Maps of peak season O_3 concentrations for the last 4 years



Heatmaps with the evolution from 2013 of the mean (top) and the maximum (bottom) peak season O_3 concentrations at country level are shown in figure 28. In this way, the evolution along years of the average and maximum measured concentration levels can be seen for each country. Note that meteorological variability has a considerable impact on year-to-year changes in ambient air concentrations of air pollutants (EEA, 2020), and the last year (2025) is based on UTD data, while the previous years are based on officially reported validated data.

Figure 28: Evolution of mean (top) and maximum (bottom) peak season O_3 concentrations per country from 2013



Note: It is important to note that the figure is not based on a consistent set of stations. The number, location and classification of the stations included may vary from year to year.

5 Status of nitrogen dioxide ambient air concentrations

The reporting countries shown in Figure 1 submitted NO_2 data from 2890 stations for the annual limit value, 2843 stations for the hourly limit value, and 2833 stations for the daily WHO AQG level.

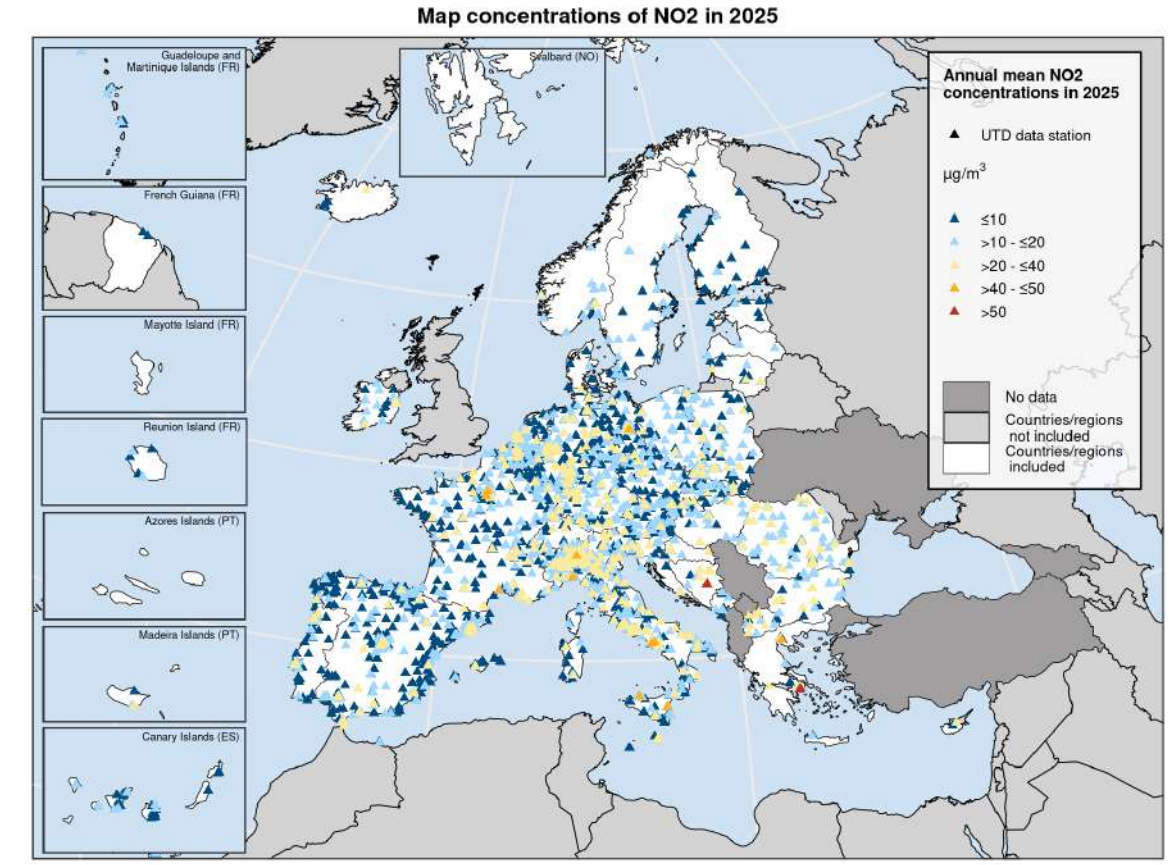
4 of the countries in EU-27 and 1 other reporting countries (Figure 29) recorded concentrations above the annual limit value (40 µg/m^3). This happened in 1 % of all the stations measuring NO_2. On the contrary, 67 % of stations, located in 27 of the countries in EU-27 and 7 other reporting countries reported concentrations above the WHO AQG level of 10 µg/m^3. Figure 29 shows the measured annual mean NO_2 concentrations.

87 % of all values above the annual limit value were observed at traffic stations. Furthermore, 100 % of the stations with concentrations above the annual limit value were located in urban or suburban areas.

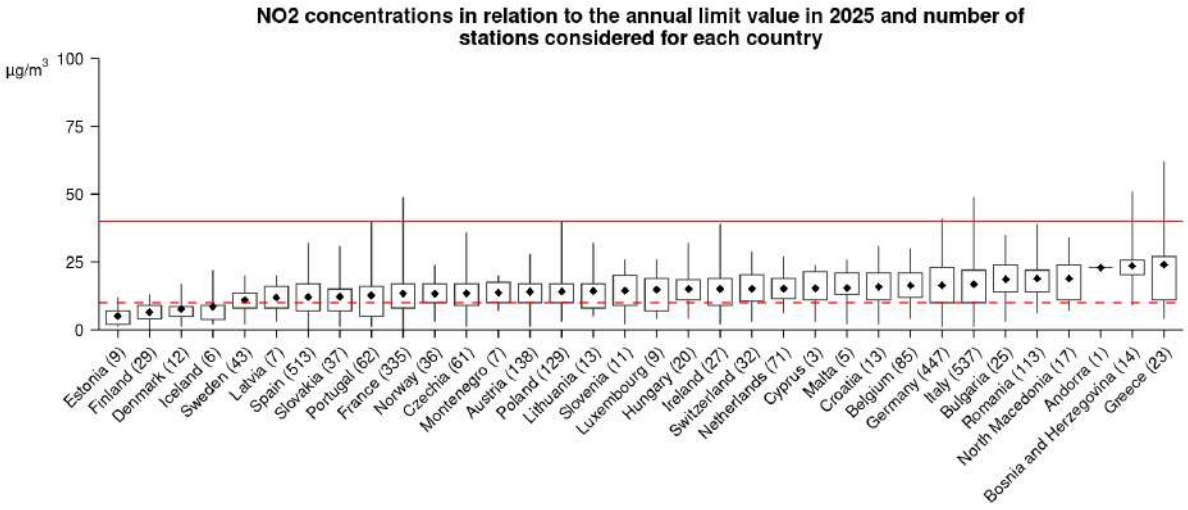
Concentrations above the hourly limit value (200 µg/m^3) were observed in 0.11 % (3 stations) of all reporting stations, mostly at urban traffic stations. They were observed in three countries. (Ireland (one), Italy (one) and Romania (one)).

Finally, concentrations above the daily NO_2 WHO AQG level (25 µg/m^3) were registered in 72 % (2032 stations) of all the reporting stations in 27 of the countries in EU-27 and 7 other reporting countries (Figure 32).

Figure 29: UTD Map and boxplot of NO_2 concentrations in 2025



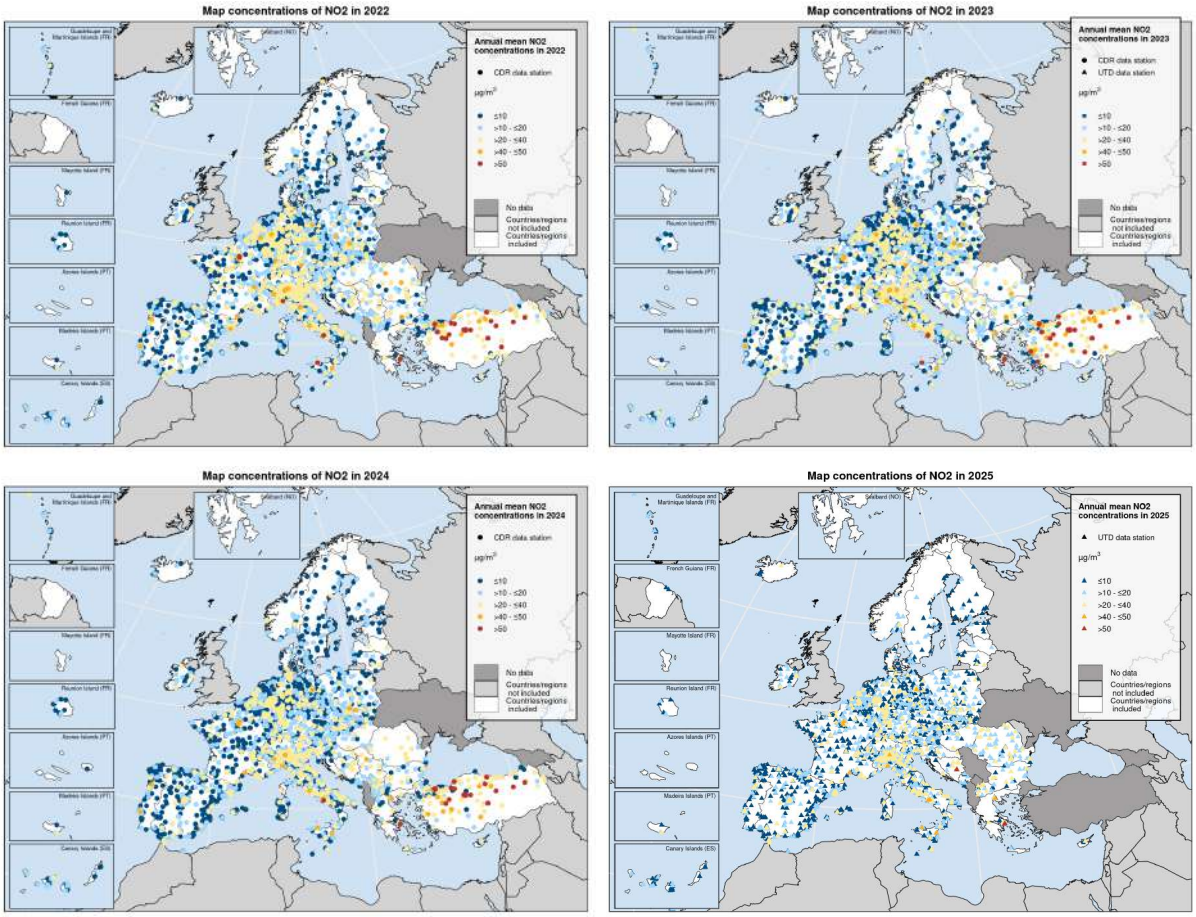
Note: Observed concentrations of NO2 in 2025. The last two colour categories correspond to values above the EU annual limit value (40 µg/m³), while the first colour category indicates stations reporting values below the WHO AQG level for NO2 (10 µg/m³). Only stations with more than 75 % of valid data have been included in the map.



Note: The graph is based on the annual mean concentration values. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) annual mean values (in µg/m³). The rectangles mark the 25th and 75th percentiles. At 25 % of the stations, levels are below the 25th percentile; at 25 % of the stations, concentrations are above the 75th percentile. The limit value set by EU legislation is marked by the horizontal line. The WHO AQG level is marked by the lower dashed horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

Figure 30 shows the maps of the observed NO_2 annual mean concentrations for the last four years. In this way, any significant change in the spatial distribution of the values above the set thresholds in the legends can be observed. Note that only the last year's map (2025) is based on UTD data, while the previous three years are based on officially reported validated data (CDR).

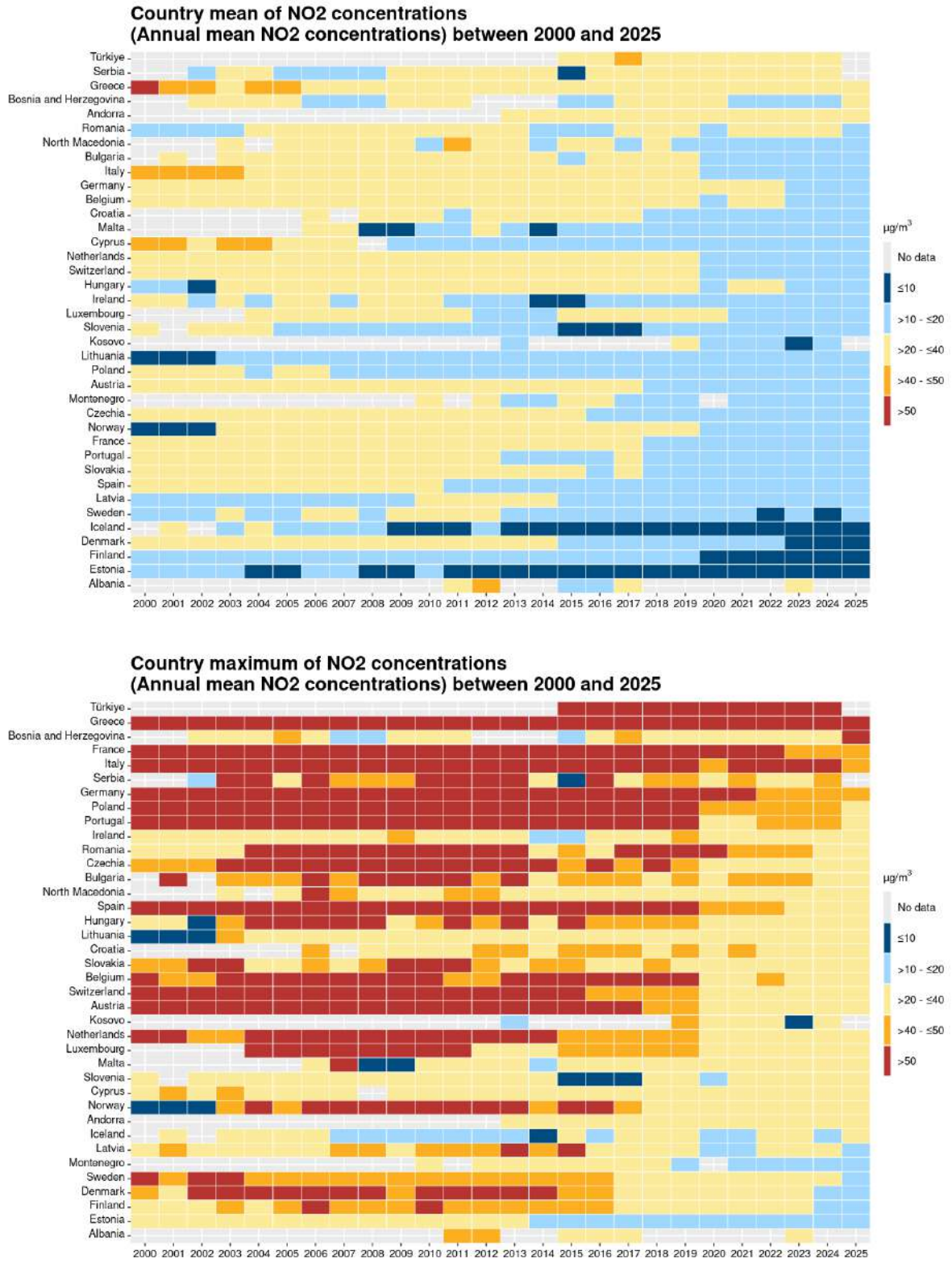
Figure 30: Map of NO_2 concentrations (annual mean) for the last 4 years



Maps for years before 2023 are different to the ones published in previous reports because the bands in the legend have been modified to accommodate the 2030 EU annual limit value (EU, 2024).

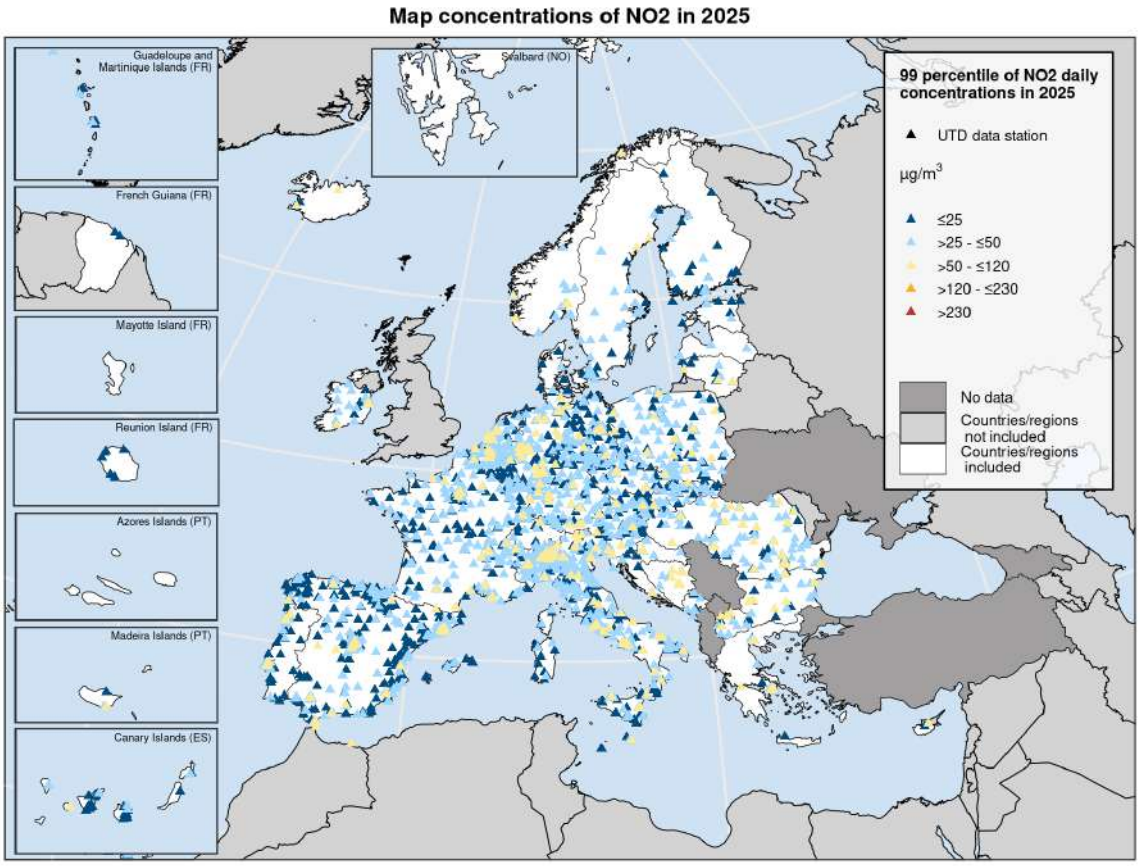
Heatmaps with the evolution from 2000 of the mean (top) and the maximum (bottom) NO_2 annual mean concentrations at country level are shown in figure 31. In this way, the evolution along years of the average and maximum measured concentration levels can be seen for each country. Note that meteorological variability has a considerable impact on year-to-year changes in ambient air concentrations of air pollutants (EEA, 2020), and the last year (2025) is based on UTD data, while the previous years are based on officially reported validated data.

Figure 31: Evolution of mean (top) and maximum (bottom) NO_2 annual mean concentrations (annual limit value) per country from 2000



Note: It is important to note that the figure is not based on a consistent set of stations. The number, location and classification of the stations included may vary from year to year.

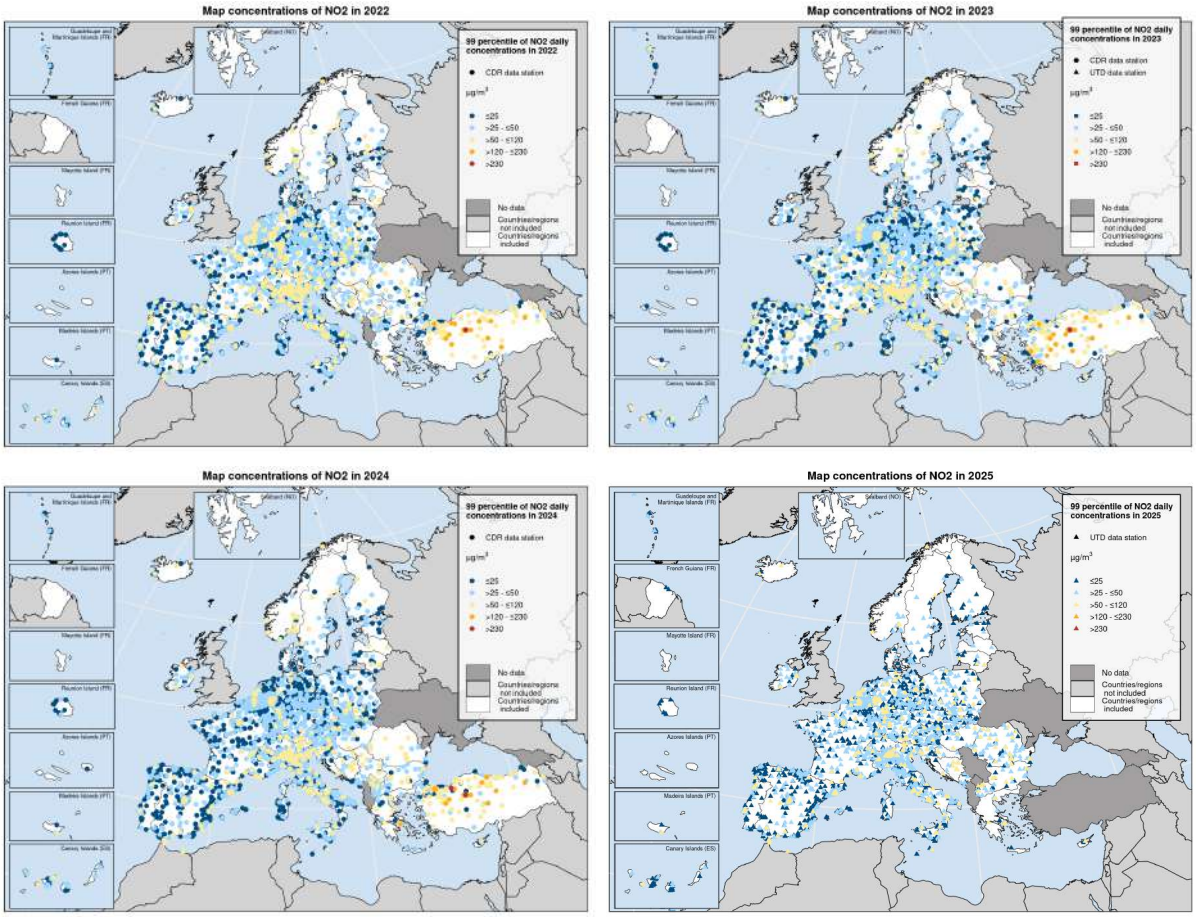
Figure 32: UTD Map of NO_2 concentrations in 2025 - daily WHO AQG level



Note: Observed concentrations of NO2 in 2025. The map shows the 99 percentile of the NO2 daily mean concentrations, equivalent to 3−4 exceedance days per year, according to the definition of the daily WHO AQG level (25 µg/m³). The first colour category indicates stations with concentrations below this AQG level. Only stations with more than 75 % of valid data have been included in the map.

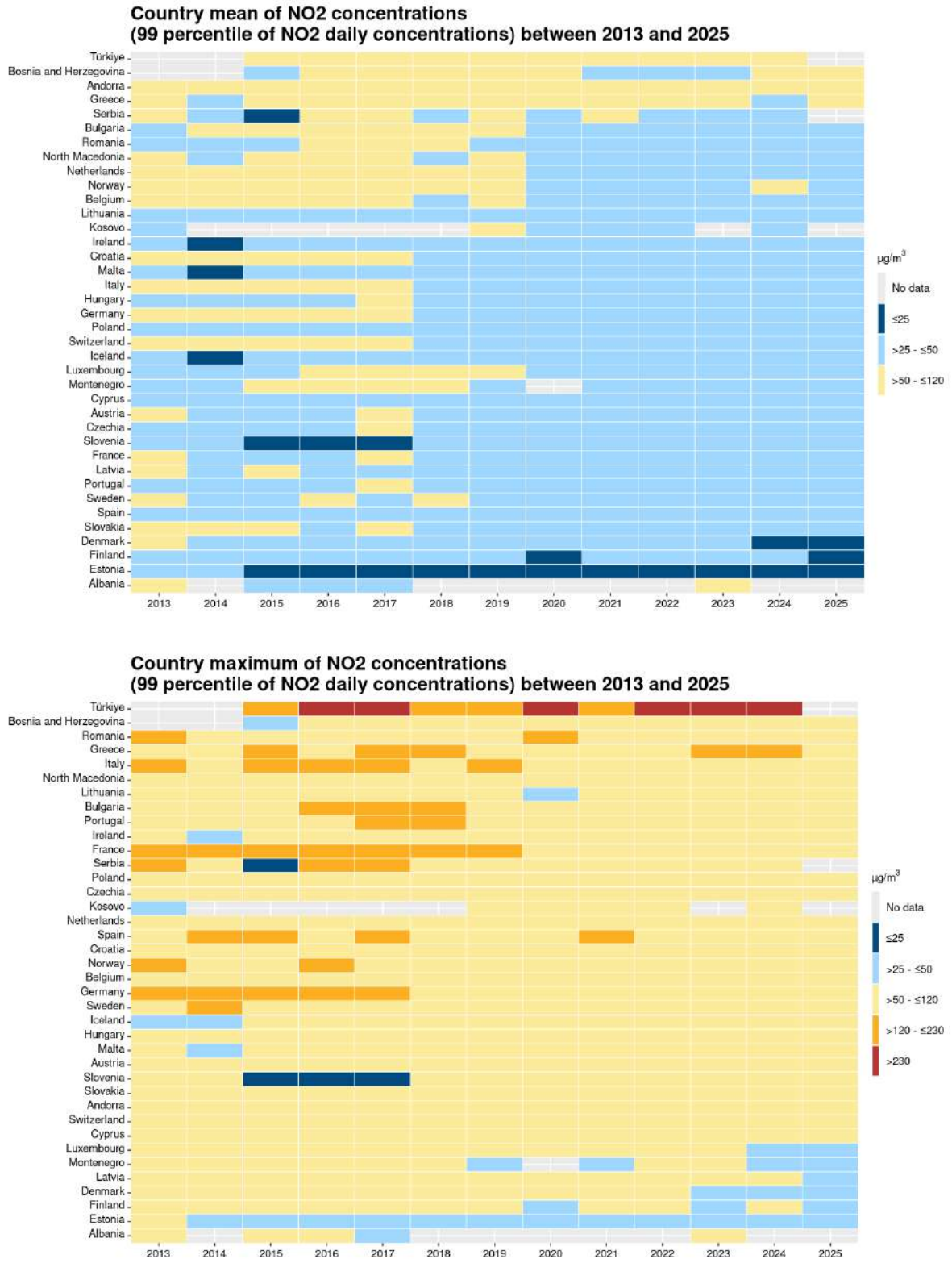
Figure 33 shows the maps of the 99 percentile of NO_2 daily mean concentrations (equivalent to the WHO AQG level for NO_2 daily mean level) for the last four years. In this way, any significant change in the spatial distribution of the values above the set thresholds in the legends can be observed. Note that only the last year's map (2025) is based on UTD data, while the previous three years are based on officially reported validated data (CDR).

Figure 33: Maps of NO_2 concentrations (daily WHO AQG level) for the last 4 years



Heatmaps with the evolution from 2013 of the mean (top) and the maximum (bottom) 99 percentile of NO_2 daily mean concentrations at country level are shown in figure 34. In this way, the evolution along years of the average and maximum measured concentration levels can be seen for each country. Note that meteorological variability has a considerable impact on year-to-year changes in ambient air concentrations of air pollutants (EEA, 2020), and the last year (2025) is based on UTD data, while the previous years are based on officially reported validated data.

Figure 34: Evolution of mean (top) and maximum (bottom) 99 percentile of NO_2 daily mean concentrations (daily WHO AQG level) per country from 2013



Note: It is important to note that the figure is not based on a consistent set of stations. The number, location and classification of the stations included may vary from year to year.

6 Status of sulphur dioxide ambient air concentrations

The reporting countries shown in Figure 1 reported measurements of SO_2 from 1206 stations for the hourly limit value and 1199 stations for the daily limit value.

7 stations ([5]) registered concentrations above the hourly limit value (350 µg/m^3); and 8 stations ([6]) registered concentrations above the daily limit of 125 µg/m^3 for SO_2 (Figure 35).

On the contrary, 42 (4 %) of all the stations reporting SO_2 levels, located in 14 reporting countries ([7]), measured SO_2 concentrations above the WHO AQG level of 40 µg/m^3 for daily mean concentrations ([8]).

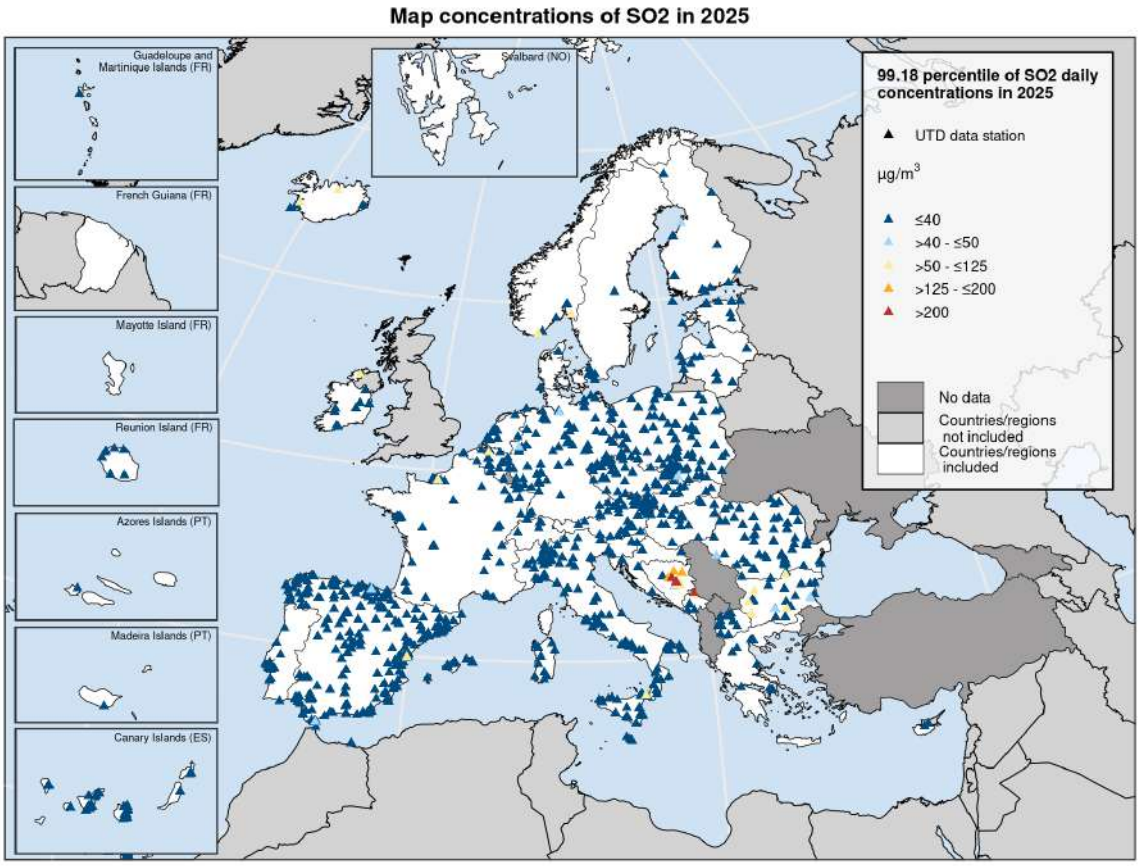
[5] Bosnia and Herzegovina (six) and Montenegro (one)

[6] Bosnia and Herzegovina (seven) and Montenegro (one).

[7] All reporting countries except Andorra, Austria, Croatia, Cyprus, Czechia, Denmark, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Netherlands, North Macedonia, Portugal, Slovakia, Slovenia, Sweden and Switzerland.

[8] Although the WHO AQG level for daily means refers to the percentile 99 (3-4 exceedance days), here we have used the percentile 99.18 (3 exceedance days), so the daily WHO AQG level can be directly compared with the EU daily LV.

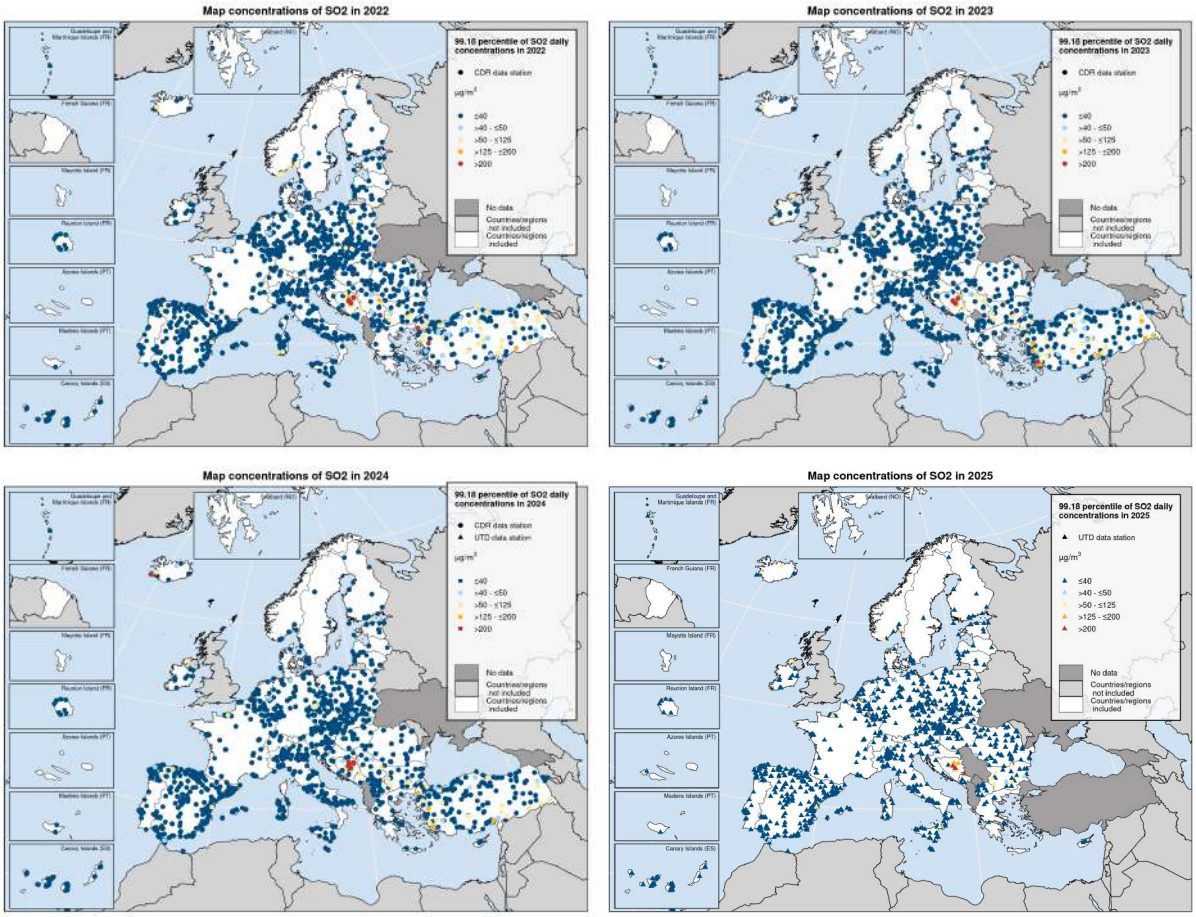
Figure 35: Map of SO_2 daily concentrations in 2025



Note: Observed concentrations of SO2 in 2025. The map shows the percentile 99.18 of SO2 daily means, indicating 3 exceedance days. It relates to the EU daily limit value (125 µg/m³) and to the WHO daily AQG level (40 µg/m³). Only stations with more than 75 % of valid data have been included in the map.

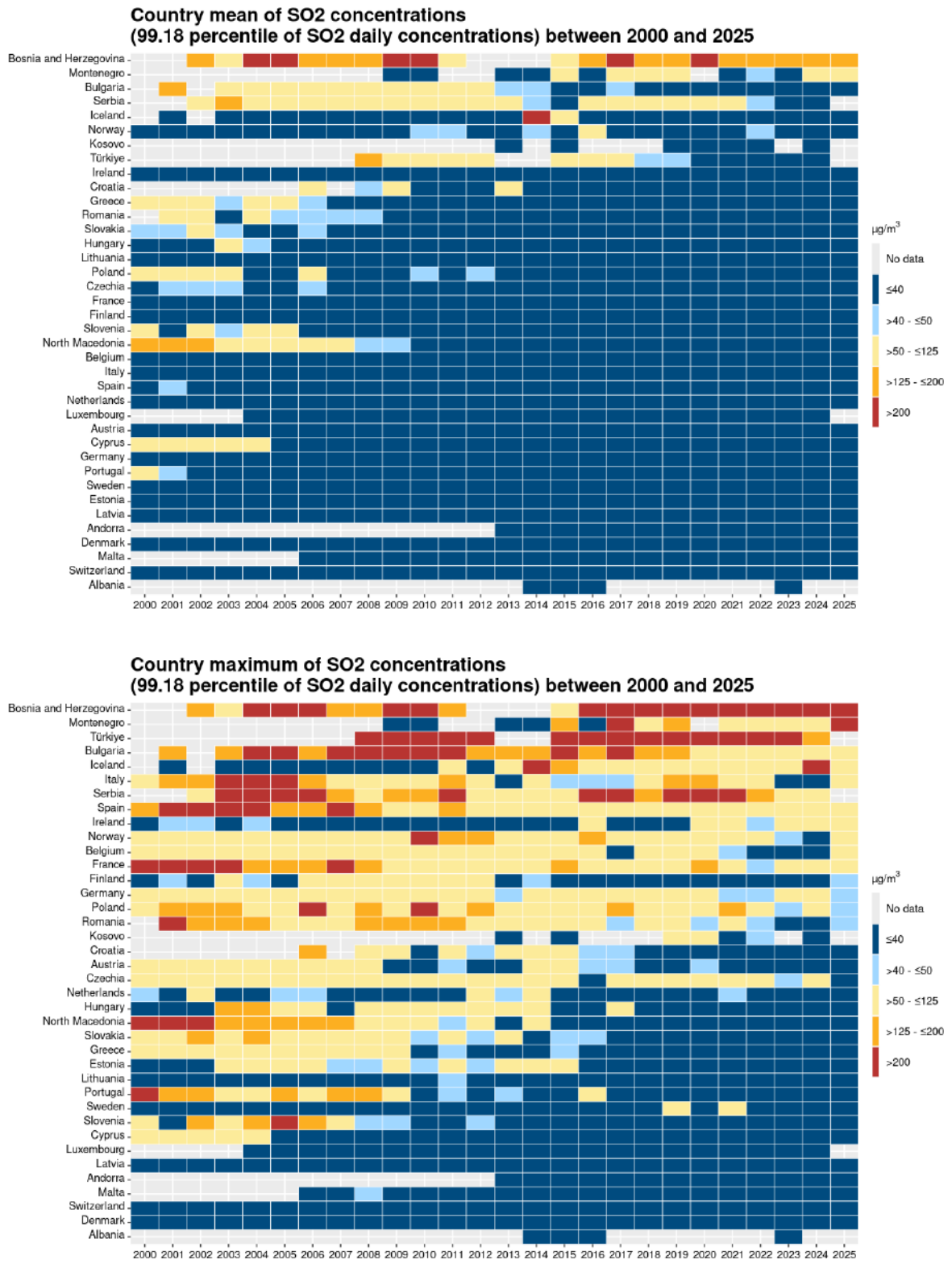
Figure 36 shows the maps of the observed SO_2 daily mean concentrations for the last four years. In this way, any significant change in the spatial distribution of the values above the set thresholds in the legends can be observed. Note that only the last year's map (2025) is based on UTD data, while the previous three years are based on officially reported validated data (CDR).

Figure 36: Maps of SO_2 concentrations (daily mean) for the last 4 years



Heatmaps with the evolution from 2000 of the mean (top) and the maximum (bottom) SO_2 daily mean concentrations at country level are shown in figure 37. In this way, the evolution along years of the average and maximum measured concentration levels can be seen for each country. Note that meteorological variability has a considerable impact on year-to-year changes in ambient air concentrations of air pollutants (EEA, 2020), and the last year (2025) is based on UTD data, while the previous years are based on officially reported validated data.

Figure 37: Evolution of mean (top) and maximum (bottom) SO_2 99.18 percentile of daily mean concentrations (EU LV (125 µg/m^3) and WHO AQG level (40 µg/m^3)) per country from 2000



Note: It is important to note that the figure is not based on a consistent set of stations. The number, location and classification of the stations included may vary from year to year.

7 Abbreviations, units and symbols

µg/m^3: microgram(s) per cubic metre

AAQD: Ambient Air Quality Directives

AQG: Air quality guideline

CDR: Central data repository

EEA: European Environment Agency

ETC HE: European Topic Centre on Human health and the Environment

EU: European Union

LV: limit value

NO_2: Nitrogen dioxide

O_3: Ozone

PM: Particulate matter

$PM_{2.5}$: Particulate matter with a diameter of 2.5 µm or less

PM_{10}: Particulate matter with a diameter of 10 µm or less

RL: Reference level

SO_2: Sulphur dioxide

TV: target value

UTD: up-to-date

WHO: World Health Organization

8 Annex 1

Data included in this report was received by 09 February 2026 from the reporting countries. By that date the number of stations by country aggregation reporting each pollutant is summarized in Table 3. Data from stations that do not fulfil the criteria from Box 1.1 are excluded from this report.

Table 3: Reporting status of 2025 air quality data by 09 February 2026

Countries	PM10	PM2.5	O3	NO2	SO2
EU27	2354	1617	1922	2782	1144
EEA32	2433	1670	1965	2856	1168
Total	2467	1695	2002	2895	1208

Data not included in this report is summarized in Table 4:

Table 4: Reporting outliers of 2025 air quality data by 09 February 2026

Country	Station EoI Code	Pollutant	Aggregation(*)	Year	Value	Units	Data Coverage
Bosnia and Herzegov-ina	BA0049A	PM10	P1Y-P1D-per99	2025	985	ug/m3	95
Croatia	HR0006A	PM10	P1Y-P1D-per99	2025	695	ug/m3	86
Denmark	DK0034A	PM2.5	P1Y-P1D-per99	2025	1256	ug/m3	88
Italy	IT2133A	NO2	P1Y	2025	5452087	ug/m3	98
Italy	IT1294A	PM2.5	P1Y-P1D-per99	2025	321	ug/m3	96
Italy	IT2226A	PM10	P1Y	2025	865	ug/m3	87
Italy	IT2151A	PM2.5	P1Y-P1D-per99	2025	985	ug/m3	81
Italy	IT2148A	PM2.5	P1Y-P1D-per99	2025	985	ug/m3	84

Table 4: Reporting outliers of 2025 air quality data by 09 February 2026 (continued)

Country	Station EoI Code	Pollutant	Aggregation(*)	Year	Value	Units	Data Coverage
Italy	IT2261A	PM10	P1Y-P1D-per99	2025	3762	ug/m3	95
Italy	IT2148A	PM2.5	P1Y-P1D-per95.07	2025	985	ug/m3	84
Italy	IT2151A	PM2.5	P1Y-P1D-per95.07	2025	871	ug/m3	81
Italy	IT2226A	PM2.5	P1Y	2025	1124	ug/m3	87
Italy	IT2215A	O3	P1Y-dmax-per99	2025	799	ug/m3	85

(*) https://dd.eionet.europa.eu/vocabulary/aq/aggregationprocess/view

Table 5 summarizes the number of sampling points per country with air quality levels above specific air quality objectives summarized through out this report. Sampling points that do not fulfil the criteria from Box 1.1 are excluded.

Table 5: Number of sampling points above air quality levels/objectives per reporting country

Levels/Objectives	Albania	Andorra	Austria	Belgium	Bosnia and Herzegovina	Bulgaria	Croatia	Cyprus	Czechia	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Latvia	Lithuania	Luxembourg	Malta	Montenegro	Netherlands	North Macedonia	Norway	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	Switzerland
PM_{10} daily LV (50 µg/m^3)	0	0	0	0	13	9	3	0	2	0	0	0	0	0	3	3	0	0	35	0	0	0	1	0	0	13	3	21	0	4	3	0	4	1	0
PM_{10} daily 2030 LV (45 µg/m^3)	0	0	0	9	15	16	6	1	29	0	0	0	11	10	10	8	0	0	152	2	1	0	2	0	1	15	11	112	1	26	11	4	38	12	0
PM_{10} daily WHO AQG level (45 µg/m^3)	0	1	34	54	16	23	10	2	63	0	2	16	81	160	16	20	2	4	312	8	11	0	4	0	52	15	27	155	10	72	33	17	168	34	1
PM_{10} annual LV (40 µg/m^3)	0	0	0	0	5	0	2	0	0	0	0	0	1	0	1	0	0	0	4	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0
PM_{10} annual WHO AQG level (15 µg/m^3)	0	0	48	51	15	24	9	2	63	0	0	0	132	116	20	18	0	3	328	6	8	2	4	0	47	15	13	154	10	89	41	15	207	12	3
PM_{10} annual 2030 LV (20 µg/m^3)	0	0	3	16	13	19	6	1	23	0	0	0	29	10	16	9	0	0	208	1	2	0	3	0	1	15	4	105	4	43	12	1	87	2	0
$PM_{2.5}$ annual LV (25 µg/m^3)	0	0	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	9	0	1	0	0	0	0	0	0	0
$PM_{2.5}$ annual WHO AQG level (5 µg/m^3)	0	1	62	71	7	4	9	1	57	1	0	4	225	332	10	12	2	51	193	5	5	4	4	0	46	17	30	86	3	60	47	18	203	13	8
$PM_{2.5}$ daily WHO AQG level (15 µg/m^3)	0	1	62	79	6	4	10	1	57	0	4	15	231	339	9	12	3	52	192	5	5	4	4	0	46	17	28	86	4	60	47	18	200	17	9
O_3 max daily 8h mean TV (120 µg/m^3)	0	0	44	3	9	3	4	3	7	0	0	0	47	42	8	4	0	0	145	0	0	0	1	0	0	0	0	2	2	2	2	6	90	0	18
O_3 long-term objective (120 µg/m^3)	0	2	105	34	12	13	13	3	54	5	1	3	256	278	14	13	0	7	261	1	7	4	3	2	41	4	0	88	40	37	19	10	322	4	30
O_3 max daily 8h mean 2030 LTO (100 µg/m^3)	0	0	73	7	10	4	5	3	21	0	0	0	83	105	10	5	0	0	173	0	0	1	1	0	4	1	0	9	7	4	2	9	118	0	23
O_3 short-term WHO AQG level (100 µg/m^3)	0	2	106	34	12	17	13	3	54	7	3	5	257	279	15	16	0	12	274	3	11	5	4	2	41	6	5	97	43	56	20	10	381	8	30
O_3 peak season WHO AQG level (60 µg/m^3)	0	2	106	34	13	19	12	3	55	7	9	13	252	279	12	16	0	13	268	6	10	5	4	2	11	11	12	91	38	20	19	9	410	15	30
O_3 target value health (120 µg/m^3)	0	0	12	0	9	1	2	2	4	0	0	0	16	13	7	4	0	0	138	0	0	0	0	0	0	0	0	3	2	1	1	4	53	0	12
O_3 target value health 2030 (120 µg/m^3)	0	0	44	2	9	2	2	3	17	0	0	0	38	61	12	6	0	0	159	0	0	1	1	0	1	1	0	6	3	2	3	6	71	0	21
NO_2 annual LV (40 µg/m^3)	0	0	0	0	1	0	0	0	0	0	0	0	3	1	4	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO_2 annual WHO AQG level (10 µg/m^3)	0	1	96	70	13	21	11	2	38	3	1	5	197	328	18	17	1	19	396	4	8	6	4	4	59	13	26	96	34	105	19	7	265	22	24
NO_2 hourly LV (200 µg/m^3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
NO_2 hourly 2030 LV (200 µg/m^3)	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	1	0	0	0	0	1	0	0	0	1	0	0	1	1	0
NO_2 daily WHO AQG level (25 µg/m^3)	0	1	102	74	14	21	11	2	44	3	3	8	234	309	18	16	2	22	396	5	9	6	4	5	64	14	31	103	37	98	24	7	289	30	26
NO_2 daily 2030 LV (50 µg/m^3)	0	0	0	3	2	7	1	0	1	0	0	0	11	7	4	2	1	3	39	0	1	0	0	0	0	2	1	3	3	10	0	0	11	0	0
BaP annual LV (1 ng/m^3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
BaP annual WHO AQG level (0.12 ng/m^3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
SO_2 hourly LV (350 µg/m^3)	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Table 5: Number of sampling points above air quality levels/objectives per reporting country (continued)

Levels/Objectives	Albania	Andorra	Austria	Belgium	Bosnia and Herzegovina	Bulgaria	Croatia	Cyprus	Czechia	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Latvia	Lithuania	Luxembourg	Malta	Montenegro	Netherlands	North Macedonia	Norway	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	Switzerland
SO_2 hourly LV 2030 (350 µg/m^3)	0	0	0	1	13	3	0	0	0	0	0	0	0	0	1	0	8	0	11	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0
SO_2 daily LV (125 µg/m^3)	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
SO_2 daily WHO AQG level (40 µg/m^3)	0	0	0	1	15	8	0	0	0	0	0	1	2	2	0	0	2	1	1	0	0	0	0	2	0	0	2	1	0	1	0	0	3	0	0
CO daily LV (10 mg/m^3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0	0
CO daily WHO AQG level (4 mg/m^3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C_6H_6 annual LV (5 µg/m^3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
C_6H_6 annual WHO RL (1.7 µg/m^3)	1	0	0	0	0	0	1	0	0	0	0	0	1	0	4	1	0	0	7	0	0	0	0	0	0	0	0	2	0	60	0	0	5	0	0
C_6H_6 annual 2030 LV (3.4 µg/m^3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0

9 Annex 2 - Air quality status in relation to the new standards in the revised AAQD (EU) 2024/2081

On 20 November 2024, the revised Directive (EU) 2024/2881 (EU, 2024) on ambient air quality and cleaner air for Europe was published and it entered into force on 10 December 2024. This Directive amends and recasts Directives 2004/107/EC (EU, 2004) and 2008/50/EC (EU, 2008). Among other changes, it has introduced new air quality (AQ) standards (or revised the ones in the 2004 and 2008 Directives) setting the attainment date at 1 January 2030. The revised and new standards for the protection of human health are summarised in table 6).

Table 6: Air quality standards for the protection of health, as given in the revised EU Ambient Air Quality Directive (EU) 2024/2881

Pollutant	Averaging period	Legal nature and concentration	Comments
PM_{10}	1 day	Limit value: 45 µg/m^3	Not to be exceeded more than 18 times per calendar year
		Alert threshold: 90 µg/m^3	To be measured as a daily average over 3 consecutive days or less at locations representative of air quality over at least 100 km^2 or an entire zone, whichever is the smaller
		Information threshold: 90 µg/m^3	To be measured over 1 day at locations representative of air quality over at least 100 km^2 or an entire zone, whichever is the smaller
	Calendar year	Limit value: 20 µg/m^3	
$PM_{2.5}$	1 day	Limit value: 25 µg/m^3	Not to be exceeded more than 18 times per calendar year
		Alert threshold: 50 µg/m^3	To be measured as a daily average over 3 consecutive days or less at locations representative of air quality over at least 100 km^2 or an entire zone, whichever is the smaller
		Information threshold: 50 µg/m^3	To be measured over 1 day at locations representative of air quality over at least 100 km^2 or an entire zone, whichever is the smaller
	Calendar year	Limit value: 10 µg/m^3	
		Average exposure reduction obligation, 10-25% reduction of the Average Exposure Indicator (AEI) in 2020	The percentage reduction depends on the initial AEI in 2020 ([a])
		Average exposure concentration objective, AIE: 5 µg/m^3	
O_3	1 hour	Alert threshold: 240 µg/m^3	
		Information threshold: 180 µg/m^3	
	Maximum daily 8-hour mean ([b])	Target value: 120 µg/m^3	Not to be exceeded on more than 18 days per calendar year averaged over 3 years ([c])

Table 6: Air quality standards for the protection of health, as given in the revised EU Ambient Air Quality Directive (EU) 2024/2881 (continued)

Pollutant	Averaging period	Legal nature and concentration	Comments
	Maximum daily 8-hour mean within a calendar year	Long term objective: 100 µg/m^3	Not to be exceeded more than 3 days per calendar year (99th percentile)
NO_2	1 hour	Limit value: 200 µg/m^3	Not to be exceeded more than 3 times per calendar year
		Alert threshold: 200 µg/m^3	To be measured as a daily average over 3 consecutive days or less at locations representative of air quality over at least 100 km^2 or an entire zone, whichever is the smaller
		Information threshold: 150 µg/m^3	To be measured over 1 day at locations representative of air quality over at least 100 km^2 or an entire zone, whichever is the smaller
	1 day	Limit value: 50 µg/m^3	Not to be exceeded more than 18 times per calendar year
	Calendar year	Limit value: 20 µg/m^3	
		Average exposure reduction obligation, 15-25% reduction of the Average Exposure Indicator (AEI) in 2020	The percentage reduction depends on the initial AEI in 2020 ([a])
		Average exposure concentration objective, AIE: 10 µg/m^3	
BaP	Calendar year	Limit value: 1,0 ng/m^3	
SO_2	1 hour	Limit value: 350 µg/m^3	Not to be exceeded more than 3 times per calendar year
		Alert threshold: 350 µg/m^3	To be measured as a daily average over 3 consecutive days or less at locations representative of air quality over at least 100 km^2 or an entire zone, whichever is the smaller
		Information threshold: 275 µg/m^3	To be measured over 1 day at locations representative of air quality over at least 100 km^2 or an entire zone, whichever is the smaller
	1 day	Limit value: 50 µg/m^3	Not to be exceeded more than 18 times per calendar year
CO	Maximum daily 8-hour mean ([b])	Limit value: 10 mg/m^3	
	1 day	Limit value: 4 mg/m^3	Not to be exceeded more than 18 times per calendar year
C_6H_6	Calendar year	Limit value: 3.4 µg/m^3	
Pb	Calendar year	Limit value: 0.5 µg/m^3	
As	Calendar year	Limit value: 6,0 ng/m^3	
Cd	Calendar year	Limit value: 5,0 ng/m^3	
Ni	Calendar year	Limit value: 20 ng/m^3	

Table 6: Air quality standards for the protection of health, as given in the revised EU Ambient Air Quality Directive (EU) 2024/2881 (continued)

Pollutant	Averaging period	Legal nature and concentration	Comments

Notes:

[a] AEI: based upon measurements at all sampling points in urban background locations in average exposure territorial units throughout the territory of a Member State, assessed as a 3-year running annual mean.

[b] The maximum daily 8-hour mean concentration shall be selected by examining 8-hour running averages, calculated from hourly data and updated each hour. Each 8-hour average so calculated shall be assigned to the day on which it ends, i.e. the first calculation period for any 1 day shall be the period from 17:00 on the previous day to 1:00 on that day; the last calculation period for any 1 day shall be the period from 16:00 to 24:00 on that day.

[c] If the 3-year average cannot be determined on the basis of a full and consecutive set of annual data, the minimum annual data required for checking compliance with the ozone target value shall be valid data for 1 year.

This annex analyses the situation in year 2025 with respect to some of the new and/or revised AQ standards ([9]) using the same air quality data as those in the main section. It provides:

- a European overview of the 2025 monitoring stations reported, and of their concentrations in relation to some EU legal standards defined in the Directive (EU) 2024/2881 (EU, 2024);
- a map with the 2025 concentrations at station level for each pollutant relevant to each AQ standard;
- a boxplot graph summarizing for each country the range of concentrations (highlighting the lowest, highest, average and the 25 and 75 percentiles) for PM_{10}, $PM_{2.5}$, O_3, NO_2 and SO_2.

It should be noted that this assessment is only intended to shed light on the current situation in relation to the 2030 AQ standards, and the 'distance to target', i.e. the scale of the challenge to meet those standards by 2030. This analysis may also help to identify air quality zones where air quality roadmaps may need to be established. Roadmaps are air quality plans that must be implemented where, from 2026 to 2029, levels of pollutants are foreseen to be above the 2030 limit and target values.

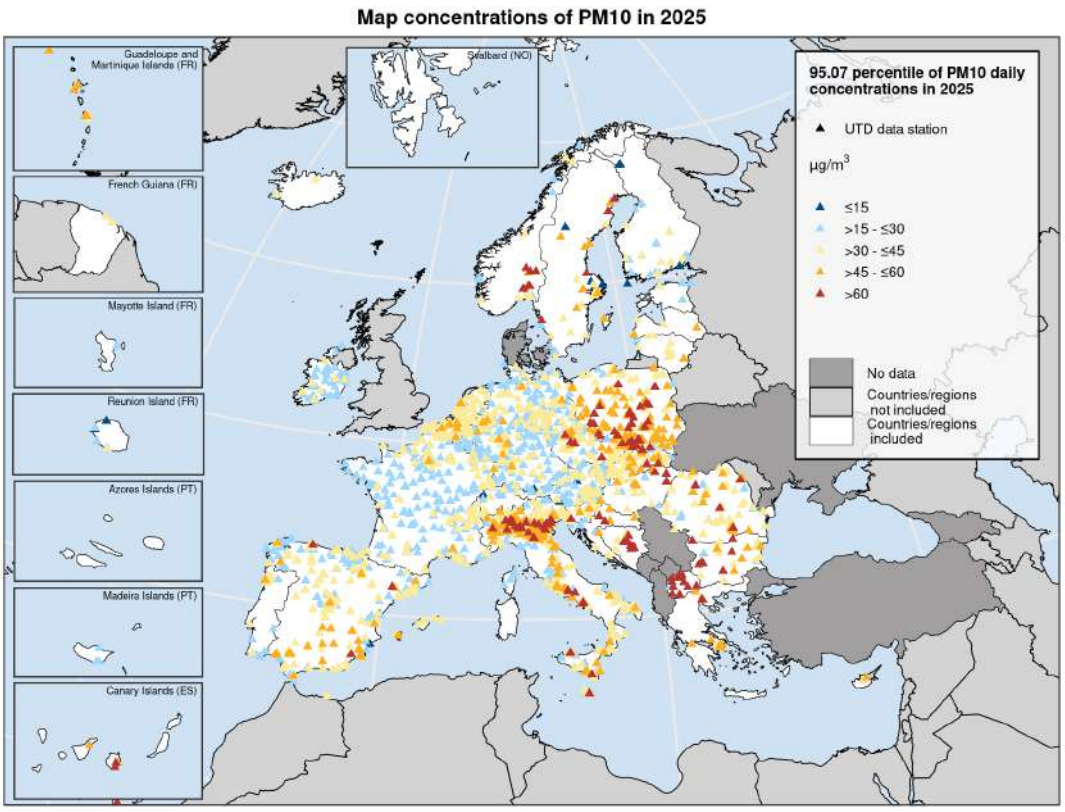
[9] Only for the limit values and O3 target value and long-term objective

9.1 Status of PM_{10} concentrations

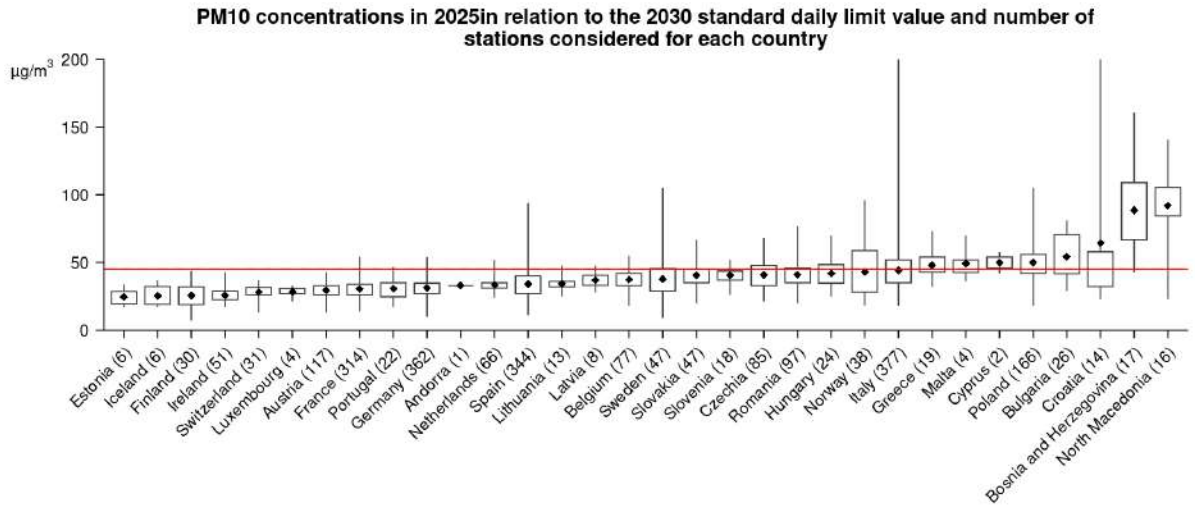
Twenty-one countries in EU-27, and three other reporting countries reported PM_{10} concentrations above the 2030 EU daily limit value of 45 µg/m^3, more than 18 days over the calendar year (Figure 38). This applied to 21 % (503) of reporting stations.

Concentrations above the 2030 PM_{10} annual limit value (20 µg/m^3) were monitored in 26 % (633 stations) of all the reporting stations, located in 22 countries in EU-27, and 3 other reporting countries (Figure 39).

Figure 38: UTD Map and boxplot of PM_{10} concentrations in 2025 - 2030 daily limit value

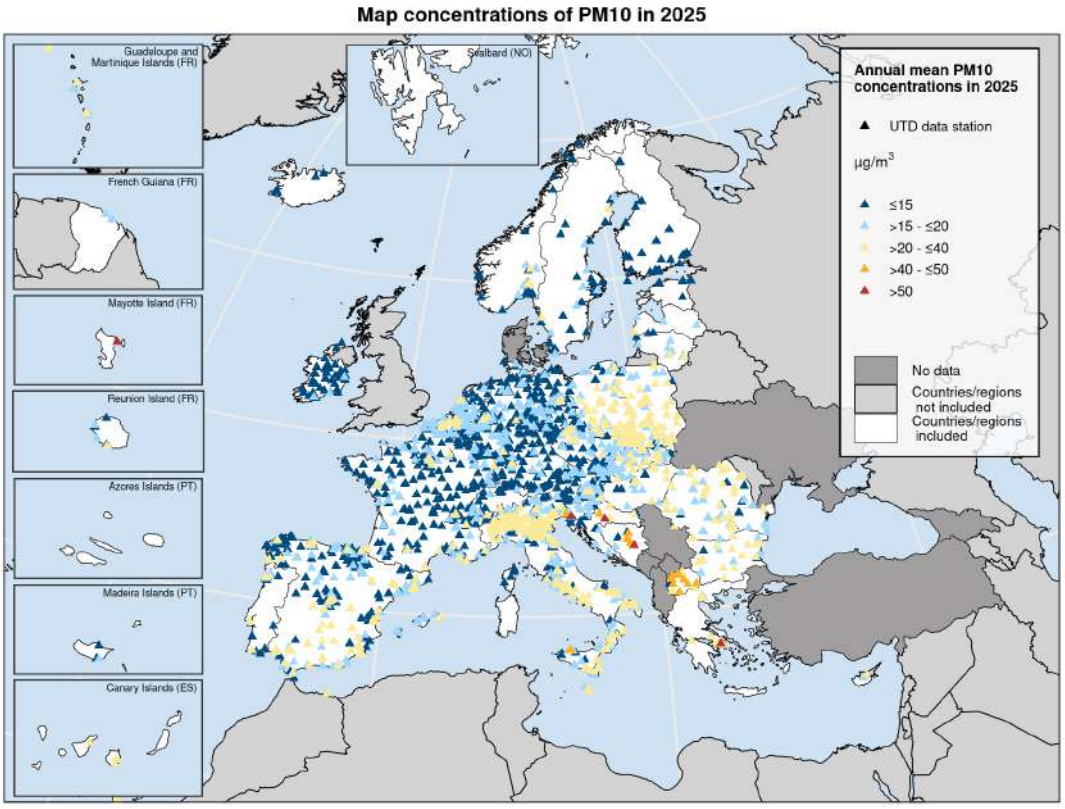


Note: The figure shows observed concentrations of PM10 in 2025. The possibility of subtracting contributions to the measured concentrations from natural sources and winter road sanding/salting has not been considered. The map shows the 95.07 percentile of the PM10 daily mean concentrations, representing the 19th highest value in a complete series. It is related to the 2030 PM10 daily limit value, allowing 18 exceedances of the 45 µg/m³ threshold over 1 year. The last two colour categories indicate stations with concentrations above this daily limit value. Only stations with more than 75 % of valid data have been included in the map.

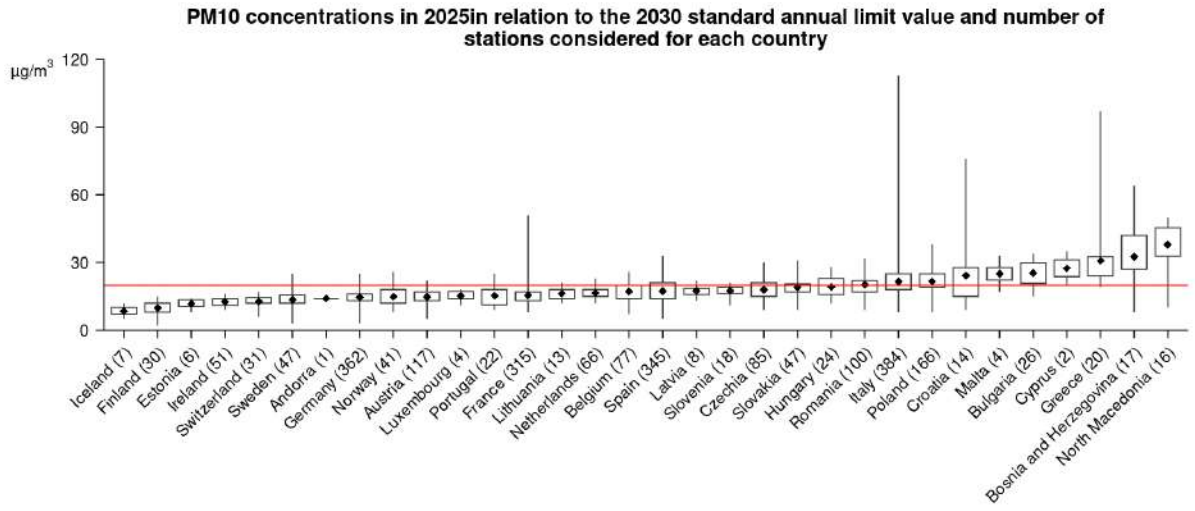


Note: The graph is based on the 95.07 percentile of daily mean concentration values corresponding to the 19th highest daily mean in complete time series. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) 95.07 percentile values (in µg/m³). The rectangles mark the 25th and 75th percentiles. At 25% of the stations, levels are below the 25th percentile; at 25 % of the stations, concentrations are above the 75th percentile. The daily limit value set by EU legislation for 2030 is marked by the horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

Figure 39: UTD Map and Boxplot of PM_{10} concentrations in 2025 - 2030 annual limit value



Note: Observed concentrations of PM10 in 2025. The possibility of subtracting contributions to the measured concentrations from natural sources and winter road sanding/salting has not been considered. The last three colour categories indicate stations reporting concentrations above the 2030 EU annual limit value (20 µg/m³). Only stations with more than 75 % of valid data, have been included in the map.



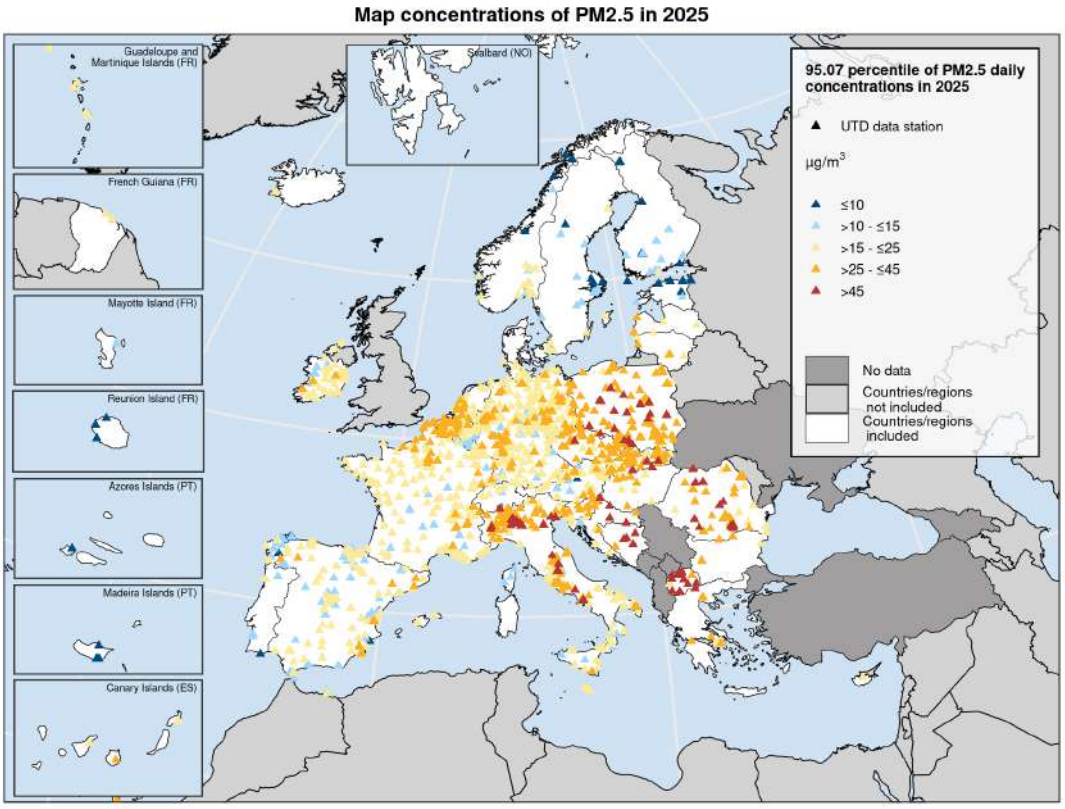
Note: The graph is based on annual mean concentration values. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) annual mean values (in µg/m³). The rectangles mark the 25th and 75th percentiles. At 25 % of the stations, levels are below the 25th percentile; at 25 % of the stations, concentrations are above the 75th percentile. The annual limit value set by EU legislation for 2030 is marked by the continuous horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

9.2 Status of $PM_{2.5}$ concentrations

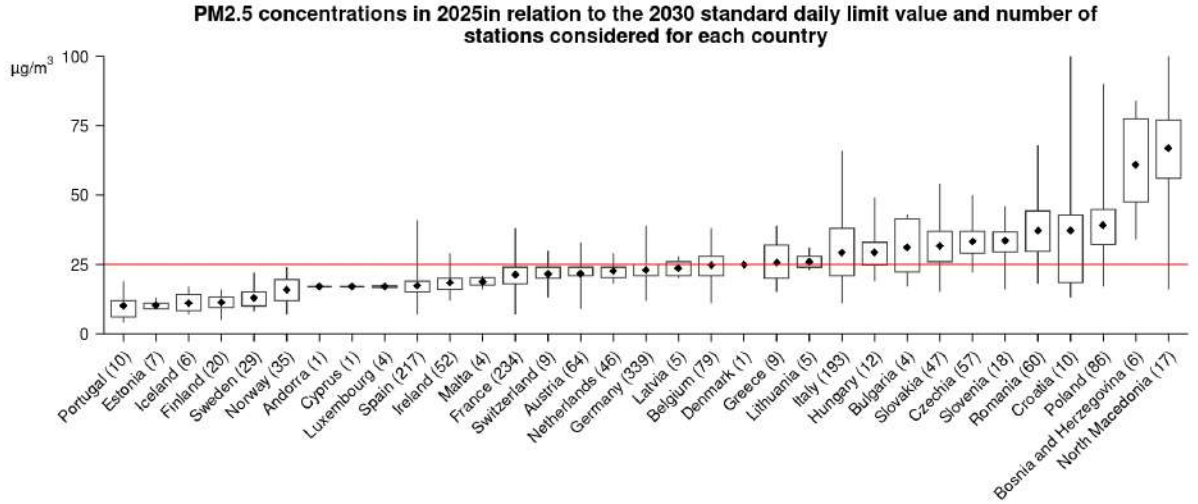
Nineteen countries in EU-27, and three other reporting countries reported $PM_{2.5}$ concentrations above the 2030 EU daily limit value of 25 µg/m^3, more than 18 days over the calendar year (Figure 40). This was the case for 34 % (573) of reporting stations (Figure 40).

The $PM_{2.5}$ concentrations were higher than the 2030 EU annual limit value (10 µg/m^3) in twenty-one countries in EU-27 and four other reporting countries (Figure 41). These concentrations above the limit value were registered in 37 % (627 stations) of all the reporting stations.

Figure 40: UTD Map and boxplot of $PM_{2.5}$ concentrations in 2025 - 2030 daily limit value

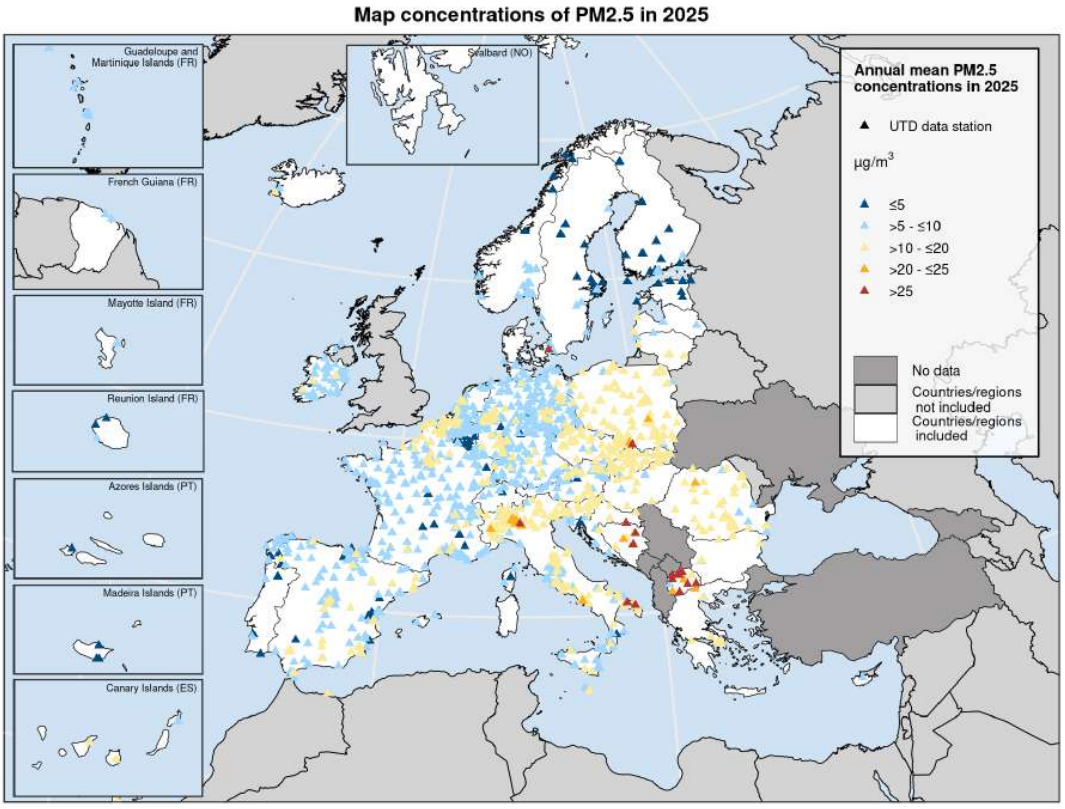


Note: The figure shows observed concentrations of PM2.5 in 2025. The possibility of subtracting contributions to the measured concentrations from natural sources has not been considered. The map shows the 95.07 percentile of the PM2.5 daily mean concentrations, representing the 19th highest value in a complete series. It is related to the 2030 PM2.5 daily limit value, allowing 18 exceedances of the 25 µg/m³ threshold over 1 year. The last two colour categories indicate stations with concentrations above this daily limit value. Only stations with more than 75 % of valid data have been included in the map.

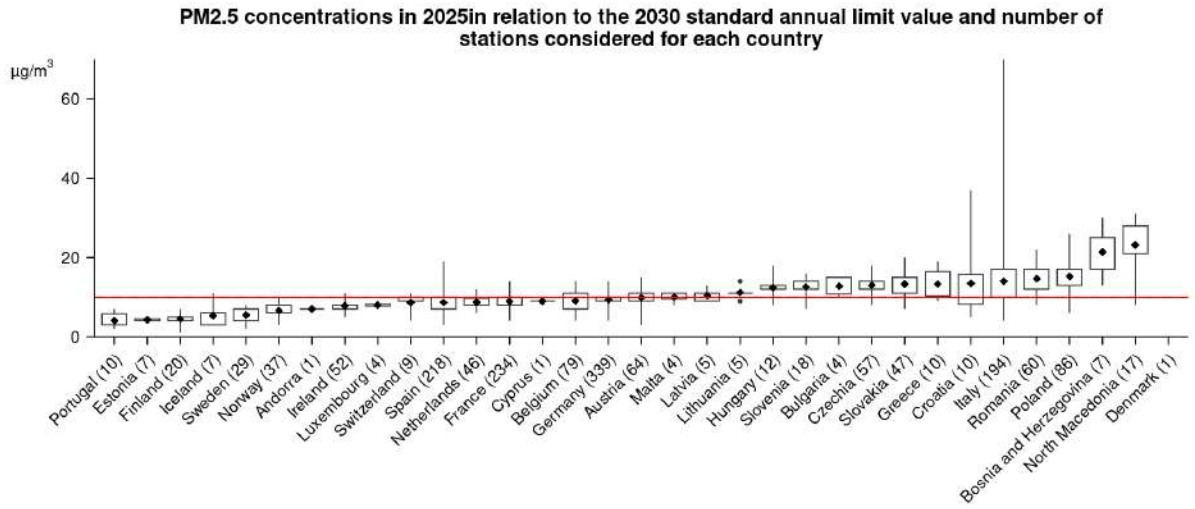


Note: The graph is based on the 95.07 percentile of daily mean concentration values corresponding to the 19th highest daily mean in complete time series. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) 95.07 percentile values (in µg/m³). The rectangles mark the 25th and 75th percentiles. At 25% of the stations, levels are below the 25th percentile; at 25 % of the stations, concentrations are above the 75th percentile. The daily limit value set by EU legislation for 2030 is marked by the horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

Figure 41: UTD Map and Boxplot of $PM_{2.5}$ concentrations in 2025 - 2030 annual limit value



Note: Observed concentrations of PM2.5 in 2025. The possibility of subtracting contributions to the measured concentrations from natural sources has not been considered. The last three colour categories indicate stations reporting concentrations above the 2030 EU annual limit value (10 µg/m³). Only stations with more than 75 % of valid data, have been included in the map.



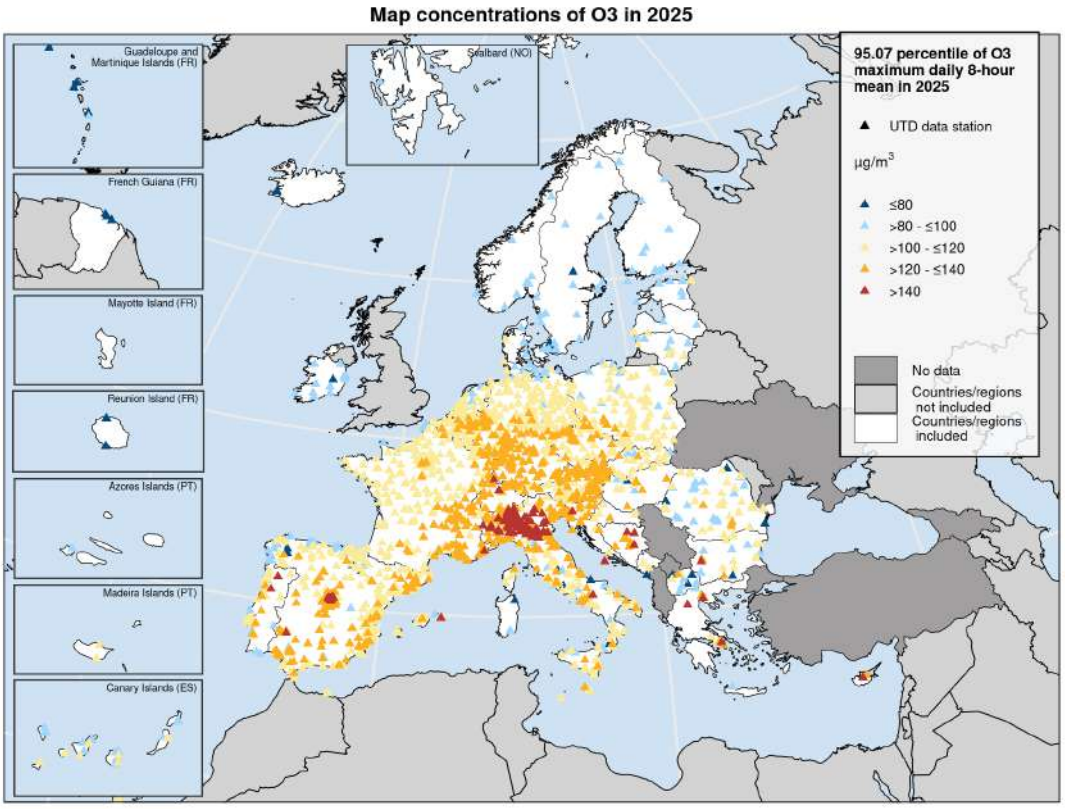
Note: The graph is based on annual mean concentration values. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) annual mean values (in µg/m³). The rectangles mark the 25th and 75th percentiles. At 25 % of the stations, levels are below the 25th percentile; at 25 % of the stations, concentrations are above the 75th percentile. The annual limit value set by EU legislation for 2030 is marked by the continuous horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

9.3 Status of O_3 ambient air concentrations

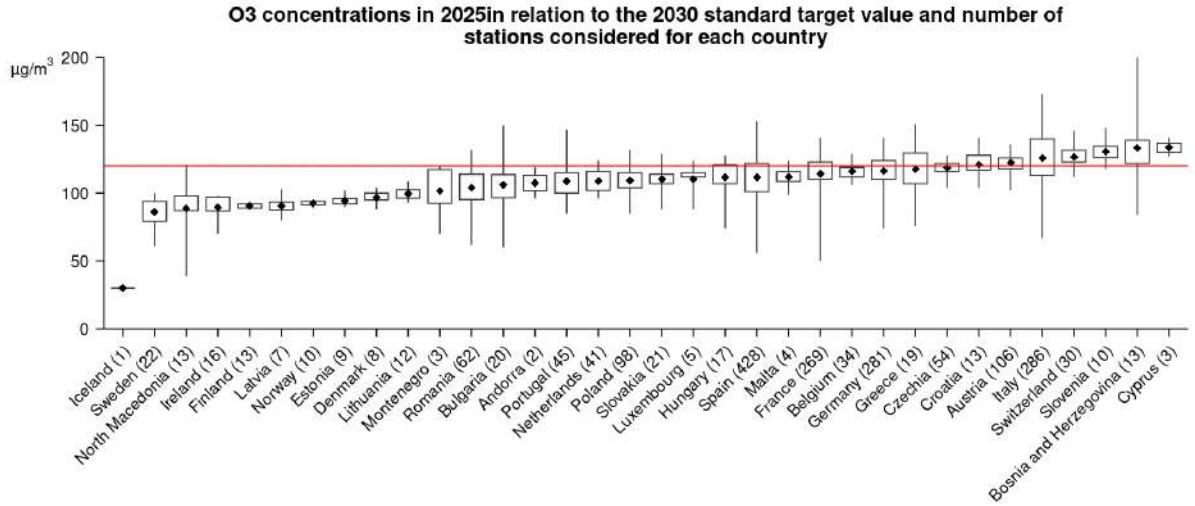
20 countries in EU-27 and 3 other reporting countries reported concentrations above the 2030 O_3 target value threshold (120 µg/m^3) more than 18 times this year (Figure 42). In total, 34 % (678 stations) of all stations reporting O_3 showed concentrations above the 2030 target value threshold for the protection of human health. Furthermore, the 2023-2025 average of the annual number of days with maximum daily 8-hour means above 120 µg/m^3 was higher than 18 (that is, above the 2030 target value) in 471 stations (26% of the total) in 20 countries of the EU-27 and 3 other reporting countries (Figure 43).

Since the 2030 long-term objective aligns with the short-term WHO AQG (100 µg/m^3 as percentile 99), please refer to the main text and Figure 23 for an overview of the current situation in relation to the 2030 long-term objective.

Figure 42: UTD Map and boxplot of O_3 concentrations in 2025 - 2030 target value threshold.

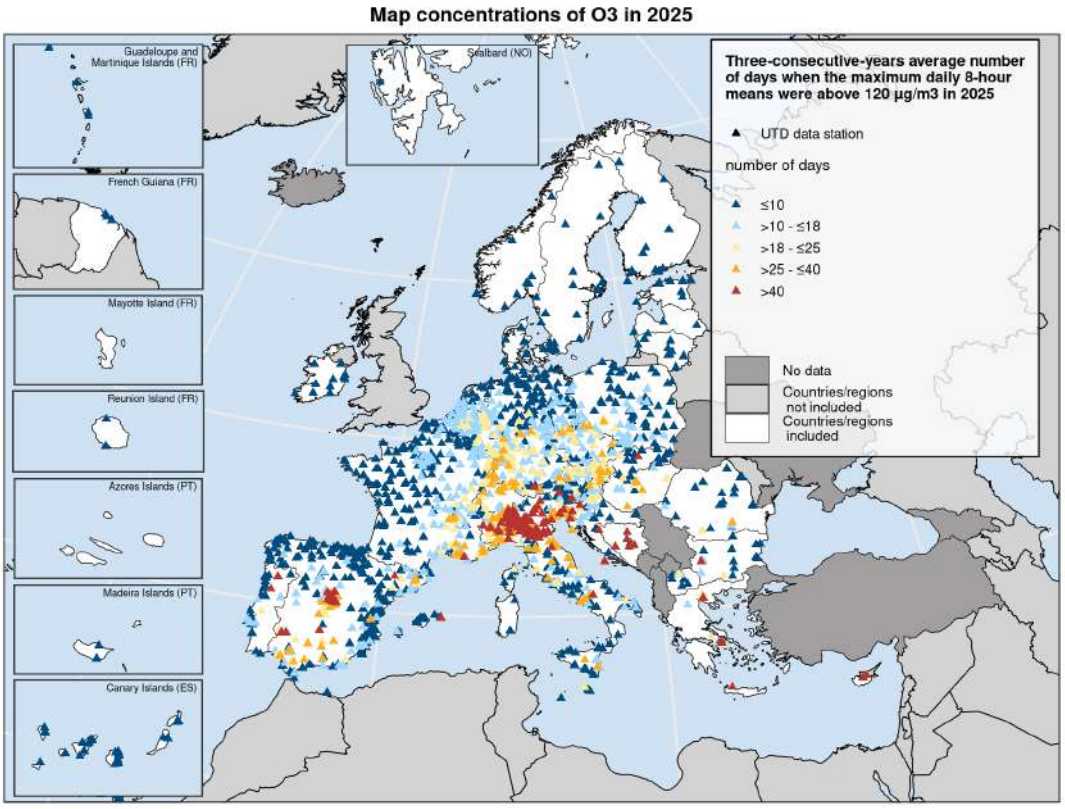


Note: Observed concentrations of O3 in 2025. The map shows the 95.07 percentile of the O3 maximum daily 8−hour mean, representing the 19th highest value in a complete series. It is related to the 2030 O3 target value. At sites marked with the last two colour categories, the 19th highest daily O3 concentrations were above the 120 µg/m³ threshold, implying values above the 2030 target value threshold. Please note that the legal definition of the target value considers not only 1 year but the average over 3 years.

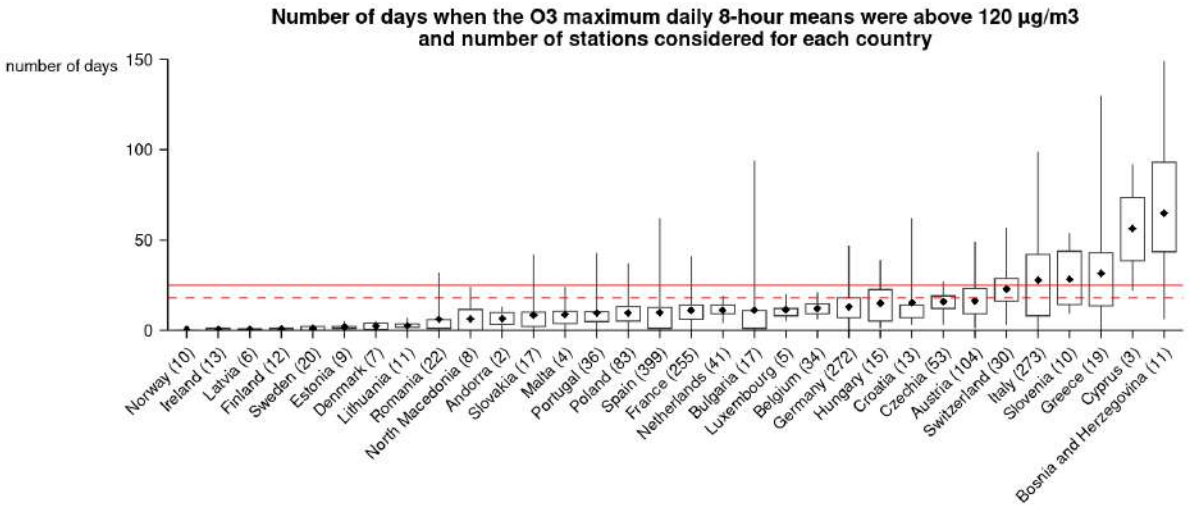


Note: The graph is based, for each country, on the 95.07 percentile of the maximum daily 8−hour mean concentration values, corresponding to the 19th highest daily maximum of the running 8−hour mean in a complete time series. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) values (in ..g/m³). The rectangles mark the 25th and 75th percentiles. At 25 % of the stations, levels are below the 25th percentile; at 25% of the stations, concentrations are above the 75th percentile. The target value threshold set for 2030 by the EU legislation is marked by the horizontal line. Please note that the legal definition of the target value considers not only 1 year but the average over 3 years. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

Figure 43: UTD Map and boxplot of O_3 concentrations in 2025 - 2030 target value human health



Note: The map shows the 2023−2025 average of the annual number of days with maximum daily 8−hour means above 120 µg/m3. The last three categories of the legend indicate stations with this average about 18, meaning above the O3 target value 2030 for the protection of human health



Note: The graph is based, for each country, on the 2023−2025 average of the annual number of days with maximum daily 8−hour means above 120 µg/m3. For each country, the number of stations considered for the three years (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) values (in number of days). The rectangles mark the 25th and 75th percentiles. At 25 % of the stations, the three−years average number of days are below the 25th percentile; at 25 % of the stations, the three−years average number of days are above the 75th percentile. The 2030 target value set by the EU legislation is marked by the dashed horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

9.4 Status of NO_2 ambient air concentrations

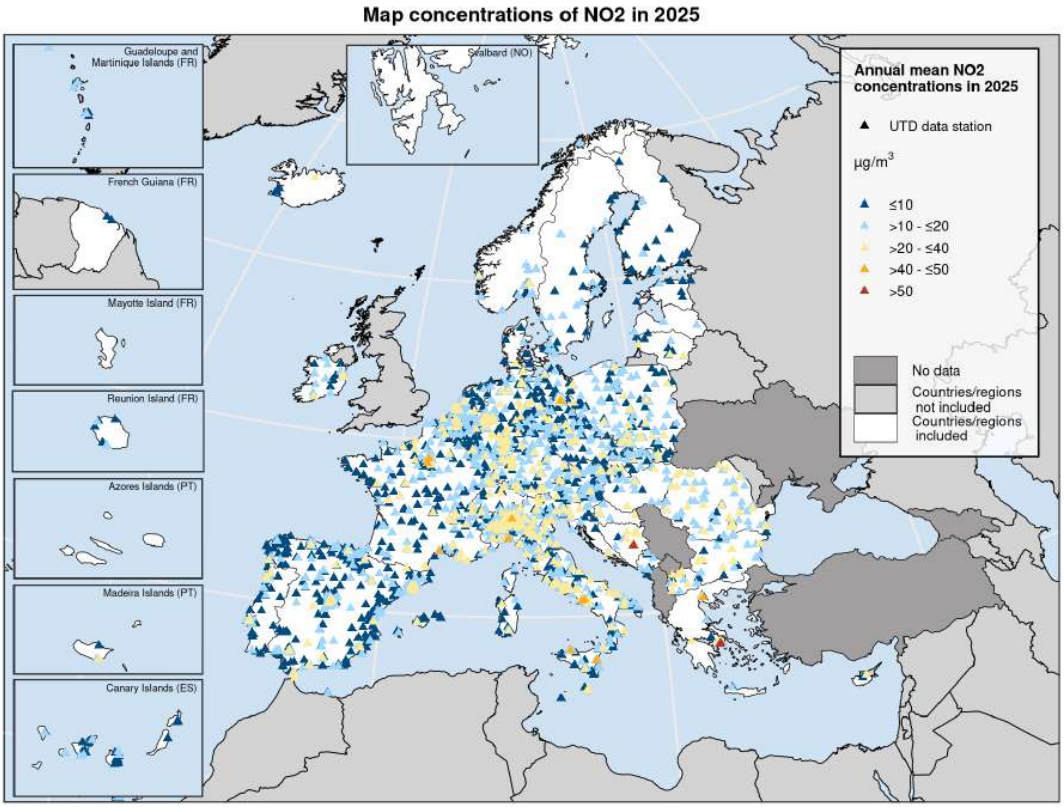
22 of the countries in EU-27 and 5 other reporting countries (Figure 44) recorded concentrations above the 2030 EU annual limit value (20 µg/m^3). This happened in 22 % (624 stations) of all the stations measuring NO_2.

73 % (457 stations) of all values above the 2030 EU annual limit value were observed at traffic stations.

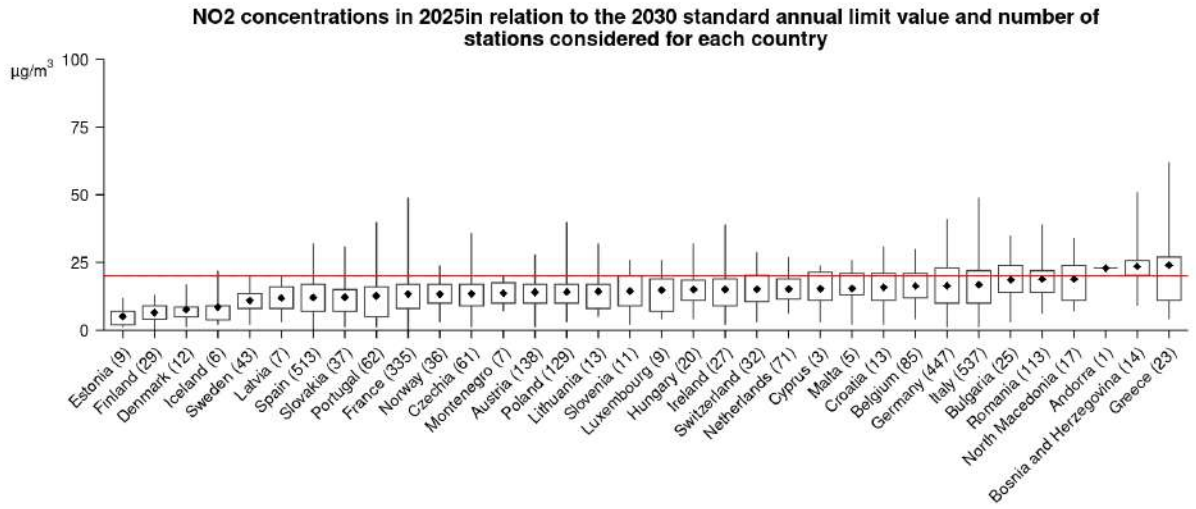
Concentrations above the 2030 EU NO_2 daily limit value (50 µg/m^3, not to be exceeded more than 18 days per year) were reported in 4 % (112 stations) of all the reporting stations in 15 of the countries in EU-27 and 4 other reporting countries (Figure 45).

Finally, concentrations above the hourly limit value (200 µg/m^3, not to be exceeded more than 3 hours per year) were observed in 0.5 % (14 stations) of all reporting stations, mostly at urban traffic stations. They were observed in eight countries (number stations): Italy (five), Bosnia and Herzegovina (three), Ireland (one), Lithuania (one), North Macedonia (one), Romania (one), Spain (one) and Sweden (one).

Figure 44: UTD Map and Boxplot of NO_2 concentrations in 2025 - 2030 annual limit value

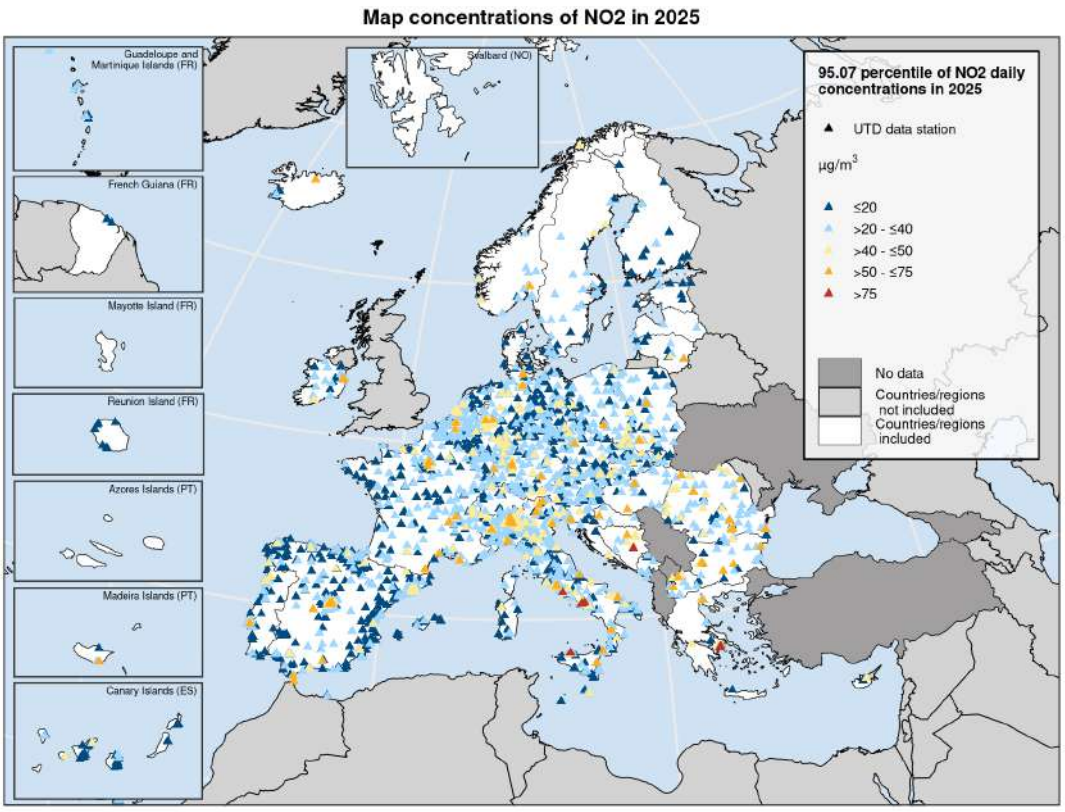


Note: Observed concentrations of NO2 in 2025. The last three colour categories indicate stations reporting concentrations above the 2030 EU annual limit value (20 µg/m³). Only stations with more than 75 % of valid data have been included in the map.

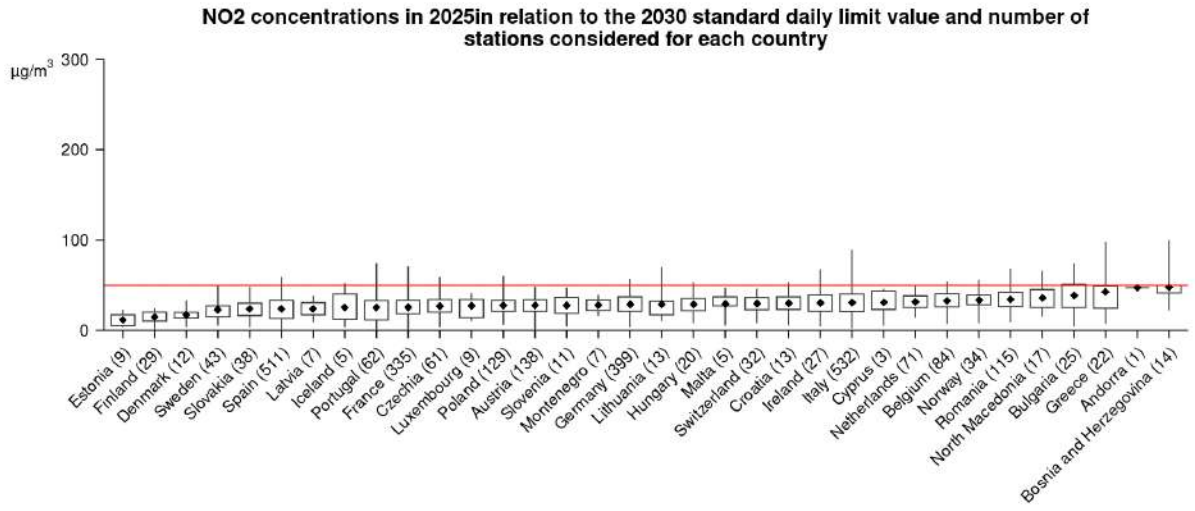


Note: The graph is based on annual mean concentration values. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) annual mean values (in µg/m³). The rectangles mark the 25th and 75th percentiles. At 25 % of the stations, levels are below the 25th percentile; at 25 % of the stations, concentrations are above the 75th percentile. The annual limit value set by EU legislation for 2030 is marked by the continuous horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

Figure 45: UTD Map and boxplot of NO_2 concentrations in 2025 - 2030 daily limit value



Note: The figure shows observed concentrations of NO2 in 2025. The map shows the 95.07 percentile of the NO2 daily mean concentrations, representing the 19th highest value in a complete series. It is related to the 2030 NO2 daily limit value, allowing 18 exceedances of the 50 µg/m³ threshold over 1 year. The last two colour categories indicate stations with concentrations above this daily limit value. Only stations with more than 75 % of valid data have been included in the map.



Note: The graph is based on the 95.07 percentile of daily mean concentration values corresponding to the 19th highest daily mean in complete time series. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) 95.07 percentile values (in µg/m³).The rectangles mark the 25th and 75th percentiles. At 25% of the stations, levels are below the 25th percentile; at 25 % of the stations, concentrations are above the 75th percentile. The daily limit value set by EU legislation for 2030 is marked by the horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

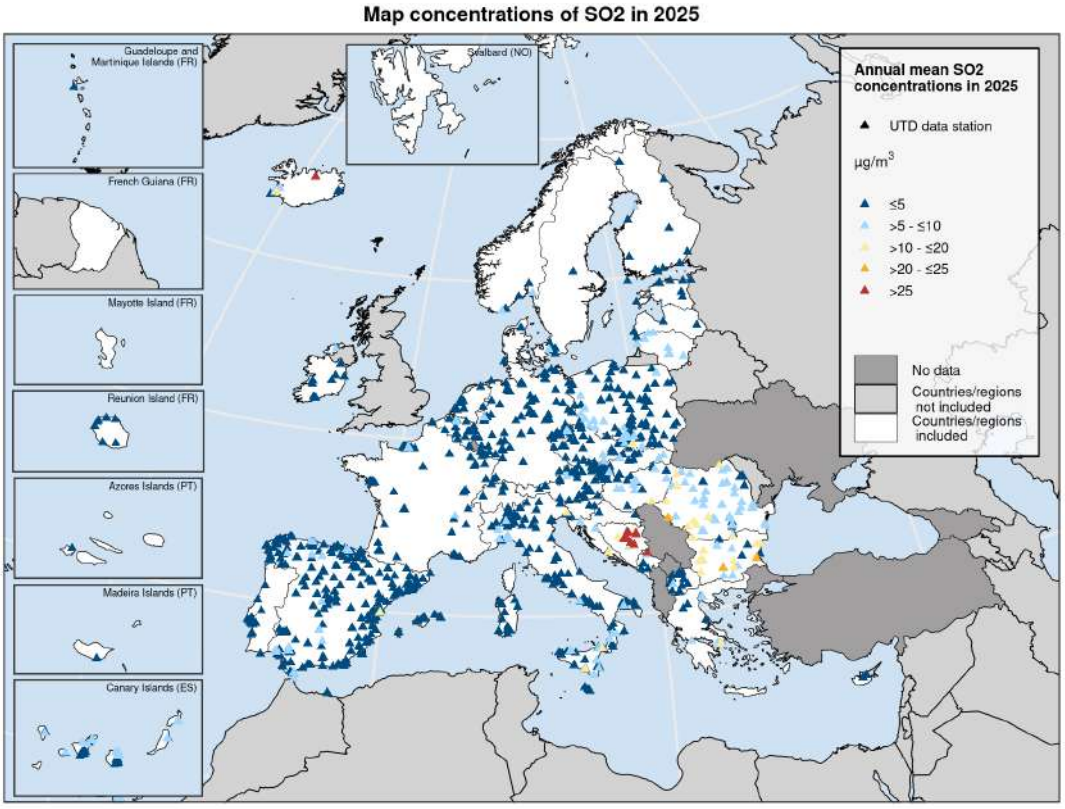
9.5 Status of SO_2 concentrations

2 of the country and 3 other reporting countries (Figure 46) recorded concentrations above the 2030 EU annual limit value (20 µg/m^3). This happened in 1.3 % of all the stations measuring SO_2.

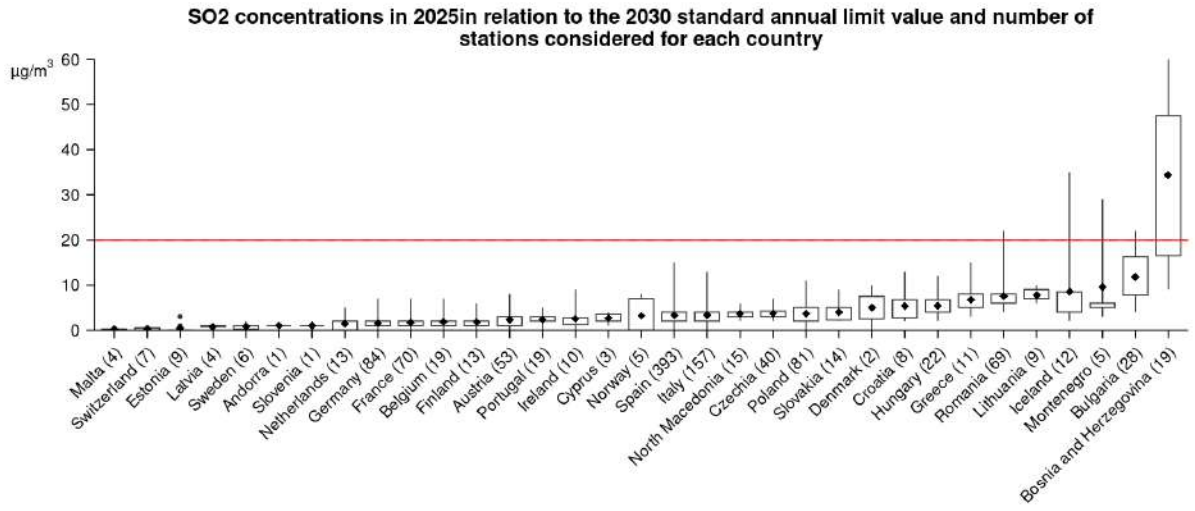
Concentrations above the 2030 EU SO_2 daily limit value (50 µg/m^3, not to be exceeded more than 18 days per year) were registered in 1 % (15 stations) of all the reporting stations in 2 of the countries in EU-27 and 3 other reporting countries (Figure 47).

Finally, concentrations above the hourly limit value (350 µg/m^3 not to be exceeden in more than 3 ocassions) were observed in 3.3 % (40 stations) of all reporting stations. They were observed in nine countries (number stations): Bosnia and Herzegovina (thirteen), Italy (eleven), Iceland (eight), Bulgaria (three), Belgium (one), Greece (one), Montenegro (one), Norway (one) and Romania (one).

Figure 46: UTD Map and Boxplot of SO_2 concentrations in 2025 - 2030 annual limit value

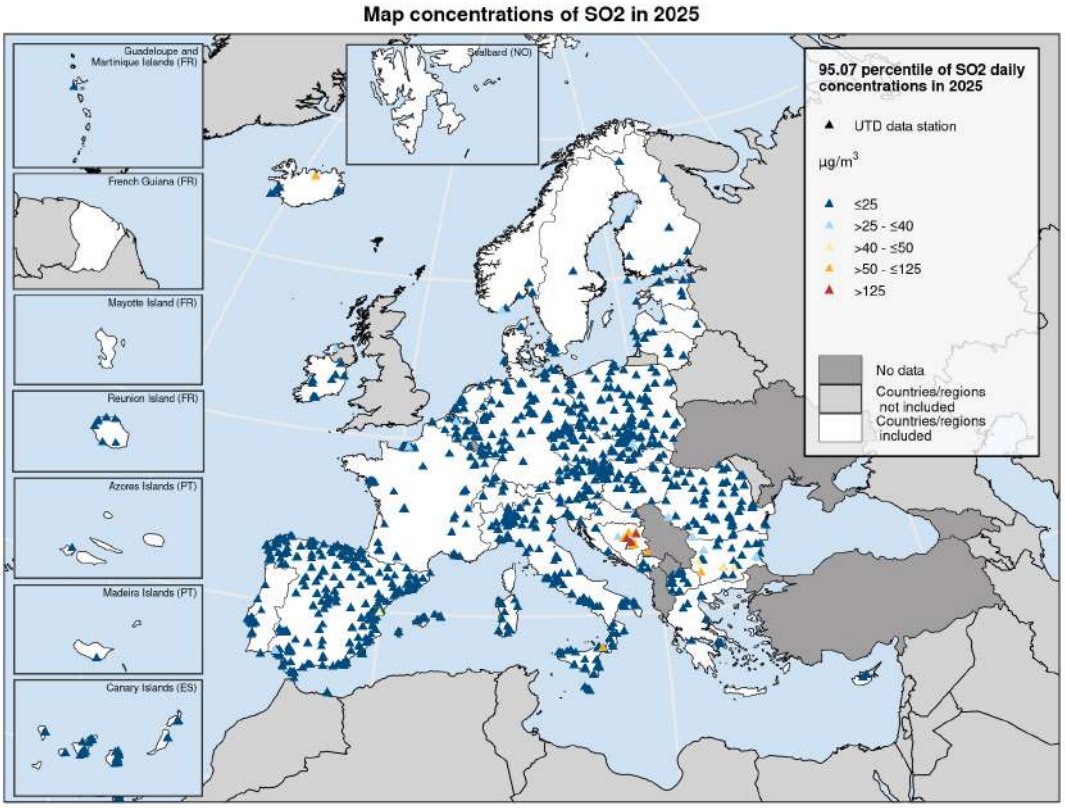


Note: Observed concentrations of SO2 in 2025. The last two colour categories indicate stations reporting concentrations above the 2030 EU annual limit value (20 µg/m³). Only stations with more than 75 % of valid data have been included in the map.

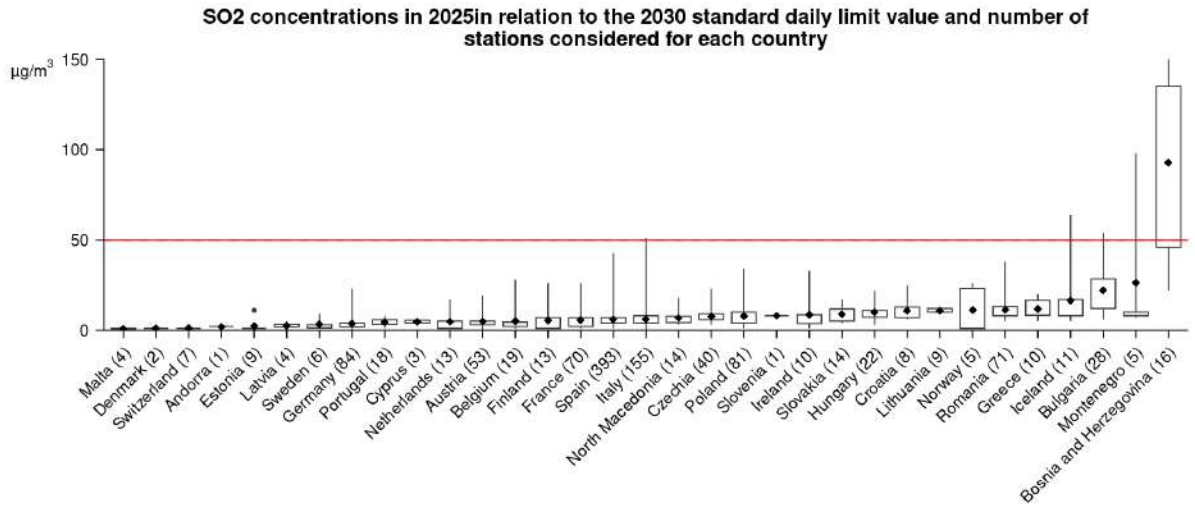


Note: The graph is based on annual mean concentration values. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whisker), highest (top of the whisker) and average (black dot) annual mean values (in µg/m³). The rectangles mark the 25th and 75th percentiles. At 25 % of the stations, levels are below the 25th percentile; at 25 % of the stations, concentrations are above the 75th percentile. The annual limit value set by EU legislation for 2030 is marked by the continuous horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

Figure 47: UTD Map and boxplot of SO_2 concentrations in 2025 - 2030 daily limit value



Note: The figure shows observed concentrations of SO2 in 2025. The map shows the 95.07 percentile of the SO2 daily mean concentrations, representing the 19th highest value in a complete series. It is related to the 2030 SO2 daily limit value, allowing 18 exceedances of the 50 µg/m³ threshold over 1 year. The last two colour categories indicate stations with concentrations above this daily limit value. Only stations with more than 75 % of valid data have been included in the map.



Note: The graph is based on the 95.07 percentile of daily mean concentration values corresponding to the 19th highest daily mean in complete ne series. For each country, the number of stations considered for 2025 (in brackets) are given. The boxplot represents the lowest (bottom of the whiske highest (top of the whisker) and average (black dot) 95.07 percentile values (in µg/m³).The rectangles mark the 25th and 75th percentiles. At 25% of the stations, levels are below the 25th percentile; at 25 % of the stations, concentrations are above the 75th percentile. The daily limit value set by EU legislation for 2030 is marked by the horizontal line. The graph should be read in relation to the above map, as a country's situation depends on the number of stations considered.

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