

Directive 2008/50/EC of the European Parliament and of the Council  
of 21 May 2008 on ambient air quality and cleaner air for Europe

CHAPTER II

**ASSESSMENT OF AMBIENT AIR QUALITY**

SECTION 1

**Assessment of ambient air quality in relation to sulphur dioxide, nitrogen dioxide  
and oxides of nitrogen, particulate matter, lead, benzene and carbon monoxide**

*Article 5*

**Assessment regime**

1 The upper and lower assessment thresholds specified in Section A of Annex II shall apply to sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter (PM<sub>10</sub> and PM<sub>2,5</sub>), lead, benzene and carbon monoxide.

Each zone and agglomeration shall be classified in relation to those assessment thresholds.

2 The classification referred to in paragraph 1 shall be reviewed at least every five years in accordance with the procedure laid down in Section B of Annex II.

However, classifications shall be reviewed more frequently in the event of significant changes in activities relevant to the ambient concentrations of sulphur dioxide, nitrogen dioxide or, where relevant, oxides of nitrogen, particulate matter (PM<sub>10</sub>, PM<sub>2,5</sub>), lead, benzene or carbon monoxide.

*Article 6*

**Assessment criteria**

1 Member States shall assess ambient air quality with respect to the pollutants referred to in Article 5 in all their zones and agglomerations, in accordance with the criteria laid down in paragraphs 2, 3 and 4 of this Article and in accordance with the criteria laid down in Annex III.

2 In all zones and agglomerations where the level of pollutants referred to in paragraph 1 exceeds the upper assessment threshold established for those pollutants, fixed measurements shall be used to assess the ambient air quality. Those fixed measurements may be supplemented by modelling techniques and/or indicative measurements to provide adequate information on the spatial distribution of the ambient air quality.

3 In all zones and agglomerations where the level of pollutants referred to in paragraph 1 is below the upper assessment threshold established for those pollutants, a combination of fixed measurements and modelling techniques and/or indicative measurements may be used to assess the ambient air quality.

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4 In all zones and agglomerations where the level of pollutants referred to in paragraph 1 is below the lower assessment threshold established for those pollutants, modelling techniques or objective-estimation techniques or both shall be sufficient for the assessment of the ambient air quality.

5 In addition to the assessments referred to in paragraphs 2, 3 and 4, measurements shall be made, at rural background locations away from significant sources of air pollution, for the purposes of providing, as a minimum, information on the total mass concentration and the chemical speciation concentrations of fine particulate matter (PM<sub>2,5</sub>) on an annual average basis and shall be conducted using the following criteria:

- a one sampling point shall be installed every 100 000 km<sup>2</sup>;
- b each Member State shall set up at least one measuring station or may, by agreement with adjoining Member States, set up one or several common measuring stations, covering the relevant neighbouring zones, to achieve the necessary spatial resolution;
- c where appropriate, monitoring shall be coordinated with the monitoring strategy and measurement programme of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP);
- d Sections A and C of Annex I shall apply in relation to the data quality objectives for mass concentration measurements of particulate matter and Annex IV shall apply in its entirety.

Member States shall inform the Commission of the measurement methods used in the measurement of the chemical composition of fine particulate matter (PM<sub>2,5</sub>).

#### *Article 7*

### **Sampling points**

1 The location of sampling points for the measurement of sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter (PM<sub>10</sub>, PM<sub>2,5</sub>), lead, benzene and carbon monoxide in ambient air shall be determined using the criteria listed in Annex III.

2 In each zone or agglomeration where fixed measurements are the sole source of information for assessing air quality, the number of sampling points for each relevant pollutant shall not be less than the minimum number of sampling points specified in Section A of Annex V.

3 For zones and agglomerations within which information from fixed measurement sampling points is supplemented by information from modelling and/or indicative measurement, the total number of sampling points specified in Section A of Annex V may be reduced by up to 50 %, provided that the following conditions are met:

- a the supplementary methods provide sufficient information for the assessment of air quality with regard to limit values or alert thresholds, as well as adequate information for the public;
- b the number of sampling points to be installed and the spatial resolution of other techniques are sufficient for the concentration of the relevant pollutant to be established in accordance with the data quality objectives specified in Section A of Annex I and enable assessment results to meet the criteria specified in Section B of Annex I.

The results of modelling and/or indicative measurement shall be taken into account for the assessment of air quality with respect to the limit values.

4 The application in Member States of the criteria for selecting sampling points shall be monitored by the Commission so as to facilitate the harmonised application of those criteria throughout the European Union.

## Article 8

### Reference measurement methods

- 1 Member States shall apply the reference measurement methods and criteria specified in Section A and Section C of Annex VI.
- 2 Other measurement methods may be used subject to the conditions set out in Section B of Annex VI.

## SECTION 2

### Assessment of ambient air quality in relation to ozone

## Article 9

### Assessment criteria

- 1 Where, in a zone or agglomeration, concentrations of ozone have exceeded the long-term objectives specified in Section C of Annex VII during any of the previous five years of measurement, fixed measurements shall be taken.
- 2 Where fewer than five years' data are available, Member States may, for the purposes of determining whether the long-term objectives referred to in paragraph 1 have been exceeded during those five years, combine the results from measurement campaigns of short duration carried out when and where levels are likely to be at their highest, with the results obtained from emission inventories and modelling.

## Article 10

### Sampling points

- 1 The siting of sampling points for the measurement of ozone shall be determined using the criteria set out in Annex VIII.
- 2 The sampling points for fixed measurements of ozone in each zone or agglomeration within which measurement is the sole source of information for assessing air quality shall not be less than the minimum number of sampling points specified in Section A of Annex IX.
- 3 For zones and agglomerations within which information from sampling points for fixed measurements is supplemented by information from modelling and/or indicative measurements, the number of sampling points specified in Section A of Annex IX may be reduced provided that the following conditions are met:
  - a the supplementary methods provide sufficient information for the assessment of air quality with regard to target values, long-term objectives, information and alert thresholds;
  - b the number of sampling points to be installed and the spatial resolution of other techniques are sufficient for the concentration of ozone to be established in accordance with the data quality objectives specified in Section A of Annex I and enable assessment results to meet the criteria specified in Section B of Annex I;

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- c the number of sampling points in each zone or agglomeration amounts to at least one sampling point per two million inhabitants or one sampling point per 50 000 km<sup>2</sup>, whichever produces the greater number of sampling points, but must not be less than one sampling point in each zone or agglomeration;
- d nitrogen dioxide is measured at all remaining sampling points except at rural background stations as referred to in Section A of Annex VIII.

The results of modelling and/or indicative measurement shall be taken into account for the assessment of air quality with respect to the target values.

4 Nitrogen dioxide shall be measured at a minimum of 50 % of the ozone sampling points required under Section A of Annex IX. That measurement shall be continuous except at rural background stations, as referred to in Section A of Annex VIII, where other measurement methods may be used.

5 In zones and agglomerations where, during each of the previous five years of measurement, concentrations are below the long-term objectives, the number of sampling points for fixed measurements shall be determined in accordance with Section B of Annex IX.

6 Each Member State shall ensure that at least one sampling point is installed and operated in its territory to supply data on concentrations of the ozone precursor substances listed in Annex X. Each Member State shall choose the number and siting of the stations at which ozone precursor substances are to be measured, taking into account the objectives and methods laid down in Annex X.

### *Article 11*

#### **Reference measurement methods**

1 Member States shall apply the reference method for measurement of ozone, set out in point 8 of Section A of Annex VI. Other measuring methods may be used subject to the conditions set out in Section B of Annex VI.

2 Each Member State shall inform the Commission of the methods it uses to sample and measure VOC, as listed in Annex X.