



EUROSTAT QUALITY PROFILE

Indicator (definition)	Urban population exposure to air pollution by particulate matter – population weighted annual mean concentration of particulate matter.
Eurostat Unit	E-3: Environment statistics
Other Commission DGs	DG ENV
European Statistical System Working Group (WG)	WG on Environment Statistics
Date	2 May 2007

1. Overall assessment of accuracy and comparability (Description of quality grades under the following link: http://circa.europa.eu/Members/irc/dsis/structind/library?l=/general_information/quality_profiles/annex_enpdf/EN_1.0_&a=d)

A
 B
 C
 Indicator to be developed

Data is collected from reliable sources applying high standards with regard to the methodology. However, there are differences Europe-wide regarding locations as well as classification of background stations and measuring methods; in some countries the number of stations is very limited. Therefore, comparability across countries is restricted due to the differences in the quality of the national monitoring station networks.

2. Objective and relevance of the indicator:

The indicator shows the population weighted annual mean concentration of particulate matter at urban and sub-urban background stations in agglomerations. Fine particulates (PM₁₀), i.e. particulates whose diameter is less than 10 micrometers, can be carried deep into lungs where they can cause inflammation and a worsening of the condition of people with heart and lung diseases. The Brussels European Council in March 2003 stated that to achieve the Lisbon Strategy goals requires every Member State to perform to its full economic potential; but this must also go hand in hand with improvements in our environment and quality of life. Thus, pressing ahead with action in the environmental field remains as important as ever. This is an important factor for innovation and the introduction of new technologies, which lead to growth and employment. Environmental targets will work as a catalyst for innovation and modernisation in key sectors such as energy and transport and promote new investments in clean and more resource-efficient technologies.

Restriction of the indicator's relevance and other characteristics which may lead to restrictions in using it in monitoring and reporting

The indicator depends on meteorological and natural conditions (rain out of PM and its precursors, higher emissions of air pollutants from fuel combustions during anomalously cold winters) and natural conditions.

3. Data availability: details

(**t₁**: earliest reference year available; **t₂**: latest reference year available in May 2007)

	Member States	Candidate and Acceding Countries	US and Japan	EEA-EFTA ¹
t ₁	2001–17 EU Member States (no data for BG, DK, CY, LU, LV, LT, HU, MT, RO, SI) 2002 - SI	-	-	-
t ₂	2004 -18 EU Member States (no data for BG, DK, CY, LU, LV, LT, HU, MT, RO)	-	-	-

4. Overall accuracy

¹ While being a member of the EEA, Liechtenstein has complete or partial exemptions from several statistical requirements due to its size. Thus, Liechtenstein is excluded from this overview as most of the data for structural indicators are missing.

High
Restricted
(sources, errors,
methodology, etc.)

The data is measured and collected under the Air Quality Framework Directive. The directive determines rules for the measurements and ensures accuracy of the data.

Based on the annual submissions of Member States' measured concentrations, the data is processed by the European Environmental Agency (EEA) and the Topic Centre on Air and Climate Change (ETC_ACC), and provided further to Eurostat.

Representativity of the monitoring stations is limited to the neighbourhood of their locations, and although there are strong arguments that the trends are followed also in similar locations all over the country, this can not be substantiated in full.

In some countries there is a very limited number of stations (in some cases only one) and the corresponding figures should be interpreted very carefully.

5. Comparability across countries

High
Restricted

There are differences Europe-wide regarding locations as well as classification of background stations and measuring methods, with implications in terms of quality in the national monitoring station network. Therefore comparisons across countries are not straightforward. EU-25 estimate is published even though 7 new Member States have no data available, as these member states have a relatively small weight (no estimation for BG and RO).

6. Comparability over time

High

Restricted

Although data before 2001 is available, they are not published as before 2001 they are not necessarily equivalent to the reference method (gravimetric measurement technique for particulate matter). Also the number of monitoring stations increased strongly over time. From 2001 onwards it is a stable set of monitoring stations that ensures comparability over time.

7. Development perspective for improving the quality of this indicator (including as far as possible an indication of the burden on Member States and respondents.)

The national monitoring station networks differ in quality; no data exists for BG, DK, CY, LV, LT, LU, HU, MT, and RO. Moreover, the representativity of the monitoring stations is limited and the concentrations of air pollutants are affected by the meteorological conditions. Modelled data using assimilation techniques can improve the quality of the indicator considerably.

8. Contribution to the coherence of the set/potential to qualify for an integrated policy analysis

Relevant European legislation: Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management

Council Directive 1999/30/EC of 22 April 1999 relating to limit values for sulphur, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air

Council Decision of 27 January 1997 establishing a reciprocal exchange of information and data from networks and individual stations measuring ambient air pollution within the Member States (97/101/EC) amended by the Commission Decision 2001/752/EC

Commission Decision 2004/461/EC of 29 April 2004 laying down a questionnaire to be used for annual reporting on ambient air quality assessment under Council Directives 96/62/EC and 1999/30/EC and under Directives 2000/69/EC and 2002/3/EC of the European Parliament and of the Council

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