

ANNEX VII

OZONE TARGET VALUES AND LONG-TERM OBJECTIVES

A. Definitions and criteria

1. Definitions

AOT40 (expressed in $(\mu\text{g}/\text{m}^3) \cdot \text{hours}$) means the sum of the difference between hourly concentrations greater than $80 \mu\text{g}/\text{m}^3$ (= 40 parts per billion) and $80 \mu\text{g}/\text{m}^3$ over a given period using only the one-hour values measured between 8.00 and 20.00 Central European Time (CET) each day.

2. Criteria

The following criteria shall be used for checking validity when aggregating data and calculating statistical parameters:

Parameter	Required proportion of valid data
One hour values	75 % (i.e. 45 minutes)
Eight hours values	75 % of values (i.e. six hours)
Maximum daily 8 hours mean from hourly running 8 hours	75 % of the hourly running eight hours averages (i.e. 18 eight-hourly averages per day)
AOT40	90 % of the one hour values over the time period defined for calculating the AOT40 value ^a
Annual mean	75 % of the one hour values over summer (April to September) and 75 % over winter (January to March, October to December) seasons separately
Number of exceedances and maximum values per month	90 % of the daily maximum eight hours mean values (27 available daily values per month) 90 % of the one hour values between 8.00 and 20.00 CET
Number of exceedances and maximum values per year	five out of six months over the summer season (April to September)

a In cases where all possible measured data are not available, the following factor shall be used to calculate AOT40 values:

$\text{AOT40}_{\text{estimate}} = \text{AOT40}_{\text{measured}} \times$	total possible number of hours (*)
	number of measured hourly values

(*) being the number of hours within the time period of AOT40 definition, (i.e. 08:00 to 20:00 CET from 1 May to 31 July each year, for vegetation protection and from 1 April to 30 September each year for forest protection).

B. Target values

Status: This is the original version (as it was originally adopted).

Objective	Averaging period	Target value	Date by which target value should be met^a
Protection of human health	Maximum daily eight-hour mean ^b	120 µg/m ³ not to be exceeded on more than 25 days per calendar year averaged over three years ^c	1.1.2010
Protection of vegetation	May to July	AOT40 (calculated from 1 h values) 18 000 µg/m ³ · h averaged over five years ^c	1.1.2010

a Compliance with target values will be assessed as of this date. That is, 2010 will be the first year the data for which is used in calculating compliance over the following three or five years, as appropriate.

b The maximum daily eight-hour mean concentration shall be selected by examining eight-hour running averages, calculated from hourly data and updated each hour. Each eight-hour average so calculated shall be assigned to the day on which it ends. i.e. the first calculation period for any one day will be the period from 17:00 on the previous day to 01:00 on that day; the last calculation period for any one day will be the period from 16:00 to 24:00 on the day.

c If the three or five year averages 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 target values will be as follows:

- for the target value for the protection of human health: valid data for one year,
- for the target value for the protection of vegetation: valid data for three years.

C. Long-term objectives

Objective	Averaging period	Longterm objective	Date by which the longterm objective should be met
Protection of human health	Maximum daily eight-hour mean within a calendar year	120 µg/m ³	not defined
Protection of vegetation	May to July	AOT40 (calculated from 1 h values) 6 000 µg/m ³ · h	not defined