



The European Environmental Bureau (EEB)
The Swedish NGO Secretariat on Acid Rain
The European Federation for Transport and Environment (T&E)

Position paper on the proposed directive on ambient air quality and cleaner air for Europe (COM(2005) 447)

Our main demands are:

1. Ensure meaningful and ambitious standards to reduce particles
Introduce PM_{2.5} cap of **12 µg/m³ combined with 20% exposure-reduction**
Make **second step to reduce PM₁₀ mandatory**
2. Maintain already agreed and adopted standards
No new exemptions for pollutants from natural sources
No new derogations for meeting limit values

Air pollution is a public health problem

Air pollution concerns everybody. An average person takes about 10 million breaths a year. Air pollution is the main cause for environment-related diseases in Europe. Recent estimates indicate that 20 million Europeans a day suffer from respiratory problems (*EEA 2005*). Air pollution directly affects their health for example by causing them need to use higher doses of medication. Furthermore every year millions of people feel ill because of air pollution, which means for example they need to stay away from the workplace or are otherwise restricted in their daily activities (*CEC 2005a*).

The WHO confirmed recently that there is a large body of evidence suggesting that exposure to air pollution, at levels common nowadays in European countries, leads to adverse health effects (*WHO 2004a*). At current concentrations air pollution is responsible for 370 000 premature deaths per year and well over 100 000 serious hospital admissions because of acute heart and respiratory-problems. The annual cost to society of these health impacts from fine particles and ozone alone has been estimated to amount to between 276 and 790 billion euro, which is equivalent to 3-9% of the EU25 GDP (*CEC 2005b*).

For children, outdoor air pollution is associated with acute lower respiratory tract infections, asthma, low birth weight, and impaired lung function. Evidence is now overwhelming that small particles (PM₁₀ and PM_{2.5}) are, for a large part, responsible for these adverse health impacts and deaths. In the context of the Ministerial Conference the Future for our Children, Environment and Health Ministers throughout Europe signed the WHO Children's Environment and Health Action Plan in which they committed 'to prevent and reduce respiratory disease due to outdoor and indoor air pollution,

thereby contributing to a reduction in the frequency of asthmatic attacks, in order to ensure that children can live in an environment with clean air' (WHO 2004b).

The proposal

Ambient air quality standards regulate the quality of the air outside our windows setting minimum standards for the protection of people's health, ecosystems and crops. The proposed new directive summarizes and consolidates four existing directives (1996/62/EC, 1999/30/EC, 2000/69/EC and 2001/81/EC) as well as the Council Decision 97/101/EC on the exchange of information and data on ambient air pollution. These directives set limit and target values for ambient air quality for some of the most important pollutants in our outdoor air.

We welcome the Commission's proposal to introduce new standards for fine particles (PM_{2.5}), but the text proposal needs to be strengthened significantly in order to ensure a better protection of public health. On the other hand we strongly object to the proposed weakening of existing limit values, which would erode the health protection provided for by the existing directives.

By strengthening the Commission proposal and by setting good ambient air standards for the future, policy-makers now have an opportunity to contribute to improve public health and environmental protection. This is important to meet the objectives of the 6th Environment Action Programme of achieving levels of air quality that do not give rise to significant negative impacts on and risks to human health and the environment, and to reach no-exceedance of critical loads and levels for acidification, eutrophication and ground-level ozone (EC 2002).

1. SET AND RETAIN MEANINGFUL STANDARDS TO REDUCE PARTICLES

1.1 Introduce PM_{2.5} cap of 12 µg/m³ combined with 20% exposure-reduction

See Art 15

The Commission proposes to regulate PM_{2.5} by introducing an exposure reduction target of 20% between 2010 and 2020, and an overall concentration cap of 25 µg/m³, to be met by 2010. We welcome the Commission's proposal to introduce new standards for PM_{2.5}. The existing health evidence clearly shows that the introduction of legally binding standards for PM_{2.5} is warranted. However, this proposal will probably not lead to increased health protection, because the legally binding concentration cap is not stringent enough to require additional emission reductions, and the reduction target is not legally binding. Experience had shown that non-binding standards do not provide enough incentive for implementation in practice.

The proposed concentration cap is less stringent than the existing daily limit value for PM₁₀ for the year 2005 – but it is only foreseen to enter into force in 2010. The new standards for PM_{2.5} for 2010 should be at least as stringent as the indicative limit values for PM₁₀ in the first daughter directive, which were foreseen to enter into force in 2010 (*see chapter 1.2*). This means that the proposed binding concentration cap should be lowered to 12µg/m³ and the exposure reduction target should be made legally binding and be applied together with the lowered concentration cap.

12 µg is at on the low end of the range proposed by the CAFE Expert Working Group on PM. It should be noted that the results from studies of longterm exposure to PM_{2.5} suggest that there is an elevated risk even at PM_{2.5} levels below 10 µg/m³. The majority of the Working Group therefore concludes that a reduction of exposure to fine PM down to such levels would be desirable from the health point of view. (*CAFE Working Group on PM 2004*). The need to reduce PM_{2.5} concentrations as far as possible is in line WHO advice which highlights that epidemiological studies on large

populations have been unable to identify a threshold concentration below which ambient PM has no effect on health (*WHO 2003*).

California adopted a PM_{2.5} limit value of 12 µg/m³ already in the year 2003 (*State of California 2002 and 2003*). On federal level, in 1997 the USA adopted an annual limit value for PM_{2.5} of 15 µg/m³ already in 1997. This level is currently being reviewed on health grounds, and PM_{2.5} limit values down to 12µg/m³ are being considered (*EPA 2005*).

1.2 Make second step to reduce PM₁₀ mandatory

See Annex XI and 1999/30/EC Annex III

The Commission proposes to drop the indicative stage II limit values for PM₁₀, which were foreseen to be confirmed in this review and to enter into force in 2010. As the coarse fraction of particles (PM₁₀) also causes health damage, the second stage PM₁₀ limit values should be made mandatory as from 2010. This is needed in order to maintain a perspective for further reductions in the future. The systematic review of the scientific evidence by the WHO concluded that effects of the PM coarse fraction are not innocuous (*WHO 2003*). The APHEIS phase-3 report assessing the impact of exposure to PM₁₀ in 23 cities totalling nearly 39 million inhabitants concludes that 21 828 premature deaths due to the long-term impacts of PM₁₀ could be prevented annually, if annual PM₁₀ levels were reduced to 20 µg/m³ and that most of the APHEIS cities would benefit if PM₁₀ levels were reduced to this level (*Medina et al 2004*).

2. MAINTAIN ALREADY AGREED AND ADOPTED STANDARDS

The current proposal maintains the existing limit and target values in most aspects. However by introducing new exemptions for exceedances caused by natural sources and derogation possibilities for when Member States must meet already agreed and adopted limit values, the Commission proposed changes, which would effectively weaken current legislation and thus lower health protection. This is clearly contrary to the 6th Environmental Action Programme. It is also contrary to the Commission's own conclusion in the Thematic Strategy on Air Pollution, where it states that: "*Air pollution continues to diminish the health and quality of life of EU citizens as well as the natural environment. The magnitude of these effects is too large to ignore and doing nothing more beyond implementing existing legislation is not a sensible option.*" (*CEC 2005c*).

2.1. No new exemptions for pollutants from natural sources

See Art. 19

The Commission proposal introduces a new possibility to "discount" exceedances of limit values or concentration caps if such exceedances can be demonstrated to be attributable to 'natural sources'. This is not based on the recommendations of the scientific community and would weaken existing health protection as the current limits apply to all pollutants in ambient air.

This article would be especially relevant for dust particles (PM). Particles are made of a mix of different components, some of them originating from natural sources such as for example re-suspended soils, sea salt, pollens and spores, some of them originating from antropogenic sources, such as combustion processes or re-suspended road dust. Often, both natural and man-made components are clustered together in a single air-borne particle.

The existing limit values for PM₁₀ as well as the proposed new standards for PM_{2.5} are based on the findings of the scientific community regarding the health effects of particles in ambient air ('exposure-response functions'). These exposure-response functions have always included the

‘natural background’ (see Brunekreef et al. 2005). This is sensible, because it reflects the real, health-damaging concentrations which people breathe. This new proposal would allow for higher PM₁₀ values everywhere as compared to existing legislation. This would therefore weaken health protection and is against the aim of the directive.

Furthermore despite much effort, it has not yet been possible to identify with confidence which chemical constituents of PM are primarily responsible for the different effects on health (WHO 2004). In addition to that, subtracting exceedances caused by natural particles will probably be impossible to implement in a transparent manner. The current proposal would leave it up to the Member States to demonstrate that an exceedance has been caused by natural particles. However, the particle composition is not very well known in many areas in Europe, as there are not enough monitoring stations, which are able to distinguish individual particle components or their origins. Because of this, air pollution experts have underlined the need for more research and monitoring regarding particle composition (ASTA 2004).

Even if the sources were known better, it would still be extremely difficult to define if an exceedance should be considered as of antropogenic or ‘natural’ origin. Should PM and other pollutants from forest fires be classified as ‘natural’ or antropogenic depending on if the fire is of natural or antropogenic origin? Resuspended soil dust may be both natural and – perhaps more often in Europe – from agricultural activities. It could even first be natural, then settle on roads, and then be resuspended by traffic.

This proposal is neither science-based nor is it in line with better regulation: it will not make these directives more simple, clear and effective (CEC 2003). Instead it will lower health protection and make the implementation of this directive intransparent and more complicated.

2.2 No new derogations for meeting limit values

See Art. 20

The Commission’s proposal introduces new derogation possibilities which would allow Member States to delay their attainment of the legally binding limit values in certain areas by up to five years. This would apply both to the limit values, which already entered into force in 2005 (PM₁₀, SO₂, CO and lead) as well as to the limit values and concentration cap which are to enter into force in 2010 (NO₂, benzene and PM_{2.5}). In effect, this will weaken already agreed and adopted air quality legislation. Moreover, it contributes to erode the credibility of firm implementation of EU legislation, since granting derogations will award those countries and areas, that have not done enough to meet the limit values.

Most countries were reportedly late in making plans and programmes to meet the limit values in 2005. Therefore the Commission initiated infringement procedures against 10 of the old Member States for lack of sending plans and programmes (CEC 2004). EEB research on the implementation of the first air quality directive found similar results: many cities were too late in making plans, plans don’t contain enough measures and lack proper financing (Elvingson 2005).

Furthermore the procedure for applying such derogations will be very difficult to monitor and enforce effectively, especially in view of the Commission’s current limited capacities. Should the Commission fail to check the hundreds of possible cases, there is an obvious risk that a coherent EU-wide level playing field could be seriously undermined.

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