

## **Declaration on need for stricter European Regulation of Air Pollution**

Munich and Paris, September 2-6, 2006

We are scientists active in the area of air pollution and health who are meeting at two important international meetings in Munich (ERS) and Paris (ISEE and ISEA). We are deeply concerned about the current approach to air quality control in the EU and make the following statement.

The political authorities of the European Union are about to adopt a new air quality Directive (CAFÉ Directive). As it stands, this new Directive would mark a serious reduction in public health protection from air pollution within the Member States, with health impacts amounting to thousands of premature deaths per year. It would also send a negative signal to other countries in the world, and might slow down, or interrupt, future efforts towards controlling sources of pollution.

Research funded by local, national, and international public funding agencies has generated substantial evidence for acute and long-term effects of current levels of air pollution. This research provides strong and quantifiable arguments in favour of sustained efforts to improve air quality in Europe as an efficient mean to protect the health of people. While the Directive could provide a unique opportunity to improve health and reduce related health care costs, the current Directive project fails to prioritize public health. We emphasize in particular that :

- The proposal issued by the Commission and amendments proposed by Parliament would be clearly weaker than regulations that are currently in force, especially Directive 1999/30/EC, from 1999, with respect to suspended particles, so-called PM10. The problems include the proposed level of limit values, the time allowed for reaching these levels, and the possibility that all so called "natural" contributions be removed from compliance considerations. These would lead to accepting higher PM10 concentrations than are now being allowed.
- Consistent with new scientific evidence, fine particles, called PM2.5, will be considered (after the year 2010) by the new Directive. However, the annual mean not to be exceeded after 2015 is currently discussed at levels between 25 and 20  $\mu\text{g}/\text{m}^3$ , levels causing serious health consequences. These consequences occur both in the short term (bringing forward death among frail subjects, increase in the frequency of asthma attacks among children, hospital admissions for respiratory conditions, myocardial infarction and stroke etc.) and in the long term (increased risk of lung cancer and of chronic bronchitis, cardiovascular death, reduced development of the pulmonary function of children, etc.), as demonstrated by numerous studies that were published in recent years, notably in the United States and in the European Union<sup>1</sup>.
- While the new proposals relax the 1999 regulations, the scientific evidence that has accrued after the 1999 Directive comes to contrary conclusions. Effects of air pollution have now been established for concentrations far lower than the proposed limit values. There is no evidence for a threshold concentration of no effect, so any further improvements in air quality will likely lead to additional health benefits. Moreover, several studies have shown that reductions of air pollution lead to immediate improvements in public health. In the EU Member States, air pollution has improved during the last 20 years - although unevenly according to countries and

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<sup>1</sup> For recent reviews, see Pope A & Dockery DW. Health effects of fine particulate air pollution: lines that connect. *J Air Waste Manag Assoc.* 2006 Jun;56(6):709-42 and ERS Env & Health Committee Position paper on European Directive on PM 2006 <http://www.ersnet.org/ers/default.aspx?id=24678>

pollutants – due to implementation of policies aiming at better control of emission sources (residential heating, industrial activities and, of course, traffic exhausts), and due to the general evolution of the European economy. This process of improvements needs to be continued to protect health.

- Other countries and competent authorities that deal with air quality, at the international level, adopt much more ambitious objectives. If the current Directive were to be adopted, the EU would seriously lag behind the United States (where the current PM<sub>2.5</sub> annual limit value has been 15 µg/m<sup>3</sup> for almost 10 years), the State of California (annual standard of 12 µg/m<sup>3</sup>), and Canada (where exceeding a 30 µg/m<sup>3</sup> daily value is not allowed more than 7 times a year). Moreover, in a recent report based on the best scientific evidence, WHO<sup>2</sup> has established a PM<sub>2.5</sub> annual average Air Quality Guideline of 10µg/m<sup>3</sup>. The scientific data used in all these instances is the same; what apparently differs, is the level of ambition to reduce pollution further.

Scientists from the Apehis Study have estimated the potential health impact of reducing PM pollution to progressively lower levels, and are presenting their results at the Paris ISEE-ISEA conference<sup>3</sup>. These calculations, based on cutting-edge research, suggest that in 26 Apehis cities (population of more than 41.5 million in Eastern and Western Europe) reduction in annual mean PM<sub>2.5</sub> levels to 25 µg/m<sup>3</sup> would result in small increases in life expectancy, equivalent to 4,500 fewer premature deaths/year in these cities, whereas reductions to 15 or 10 µg/m<sup>3</sup> would result in 13,300 and 22,300 fewer premature deaths/yr respectively, in people age 30 years and over<sup>5</sup>. Such reductions in air-pollution levels could have a major impact on the mortality rates and health status of the 450 million inhabitants of the European Union.

We urge the European Union authorities to heed the accumulated scientific evidence and set more ambitious policy goals, in order to provide health protection to the European population, and also for the benefit of the inhabitants of other regions of the world which tend to look for guidance in the most developed areas of the world.

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<sup>2</sup> WHO, 2005 <http://www.euro.who.int/Document/E87950.pdf>.

<sup>3</sup> Ballester F, Medina S, Goodman P et al. Health impact assessment on the benefits of reducing PM<sub>2.5</sub> using mortality data from 28 European cities. ISEE-ISEA Conference, Paris 2-6 September 2006 (abstract P-003)

<sup>5</sup> Boldo E, Medina S, LeTertre A, Hurley F, Mücke HG, Ballester F, Aguilera I & Eilstein D on behalf of the Apehis group. Apehis: Health impact assessment of long-term exposure to PM<sub>2.5</sub> in 23 European cities. *European Journal of Epidemiology* (2006). Available: <http://www.apheis.net/>