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Date

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Subject

New draft directive on air quality

Utrecht, The Netherlands, October 31, 2005

Dear Mr. Florenz,

On September 21, 2005, the Commission published a new draft directive on air quality. As scientists working on health effects of air pollution, we are concerned about the draft directive, and we would like to make three comments which will hopefully help you in your discussions. Briefly, our concerns are that (1) the proposed PM_{2.5} limit value is far too high to adequately protect public health; that (2) 'uncertainty' is being used as an argument to support this high value whereas research, in no small measure paid for by the Commission, has reduced uncertainty to the extent that an evidence based pollution reduction policy can now be strongly supported; and (3) that the exclusion of all 'natural' PM from compliance considerations in effect reduces the protection of public health from PM₁₀.

1. The proposed directive recognizes the importance of fine particulate matter (PM_{2.5}). It also recognizes that major adverse effects on health occur in Europe today as a consequence of current exposure to PM_{2.5} including, as the proposed directive mentions, an estimated 348,000 premature deaths in Europe every year. Especially, the proposed directive argues that in the next fifteen years, all EU member states should reduce their PM_{2.5} concentrations by at least 20% unless the average level is below 7 µg/m³. This part of the proposal adequately reflects the best scientific evidence on adverse health effects of PM_{2.5}. As new studies come out, concern about these effects is increasing rather than decreasing. See, for instance, the Scientific American website www.sciam.com, September 21 2005. Surely, the evidence argues strongly in favour of strong and swift implementation of policies to reduce exposure to PM_{2.5} in all but the cleanest areas of Europe. Against this background, we are concerned that the 'exposure reduction' plans in the proposed directive for the time being will not be legally binding. In fact, the only legally binding instrument that is being proposed is a 'cap' of an annual average PM_{2.5} concentration of 25 µg/m³. This is significantly higher





than the range of values of 12-20 $\mu\text{g}/\text{m}^3$ proposed in earlier position papers of the Clean Air For Europe (CAFE) activity, and, more importantly, it is a level associated with very significant adverse health effects. We are concerned that the net effect of these proposals will be that most Member States will no longer be stimulated to take exposure reduction measures, as they are already below the 25 $\mu\text{g}/\text{m}^3$ 'cap'.

2. In the Commission document, the choice of the 25 $\mu\text{g}/\text{m}^3$ level of the 'cap' is motivated by referring to 'inherent uncertainties in our current knowledge about the risks of PM_{2.5}'. Whereas complete certainty about these effects will never be achieved, European research, funded in no small measure by the Commission, has produced a wealth of data on PM_{2.5} in Europe in the last decade. This includes data on personal exposure to PM_{2.5} (the EXPOLIS study), data on spatial variability and indoor-outdoor relationships for PM_{2.5} (RUIOH studies), effect of traffic on PM_{2.5} concentrations, and effects of these concentrations on childhood allergy and asthma (the TRAPCA and AIRALLERG studies), chemical composition and toxicity of PM_{2.5} collected in many European regions including new member states (HEPMEAP, RAIAP and PAMCHAR studies), cardiovascular effects of PM_{2.5} (ULTRA and HEAPSS study) etc. Much of this work has been used in framing the answers to the so-called CAFE questions posed to the World Health Organisation in 2002-2004. In addition, more than 100 monitoring stations across Europe routinely provide data on PM_{2.5}. In combination, these and other studies have enormously improved our insights into PM_{2.5} in Europe, and several of these studies clearly document significant health effects at measured PM_{2.5} levels in Europe which are well below the 'cap'. Surely, uncertainties remain, as is always the case, and there are reasons for thinking that our estimates of adverse effects may be too low rather than too high as argued in point 1. Further research is needed to address these uncertainties. However, to choose a highly UNprotective level for the PM_{2.5} 'cap' comes dangerously close to ignoring much of the research that the Commission has paid for, and the wider international body of evidence around it.
3. The Commission proposes to allow Member States to subtract all 'natural' PM from compliance considerations. The 1999 directive allowed such subtraction only when Member States could show that specific events such as dust storms, leading to 'natural' contributions well in excess of normal 'natural' background, were responsible for non-compliance. In effect, the new proposal allows for higher PM₁₀ values everywhere compared to the 1999 directive. Potentially, it will also lead to prolonged discussions between the Commission and Member States about how high this 'natural' contribution is in specific locations. It is important to note that from a scientific point of view, such subtraction cannot be supported. The exposure-response relationships on which the limit values are based have always included the 'natural' background. Surely, there is no indication that effects of PM₁₀ on mortality are less in countries such as Spain where some of the PM₁₀ comes from Sahara dust, as was shown in the EU funded APHEA studies. Allowing subtraction of all 'natural' PM₁₀ means allowing higher PM₁₀ exposures, and this comes down to allowing more adverse effects to occur in Europe.





As scientists who have been involved in investigating the health effects of PM for many years, we are concerned that the proposed Directive does not adequately reflect the best scientific evidence we have to offer although we fully acknowledge that science is not the only driver of environmental policies. It is also not clear to us how this Directive will help to achieve the ambitious objectives of reduction of health impacts of air pollution in Europe, stated in the Clean Air For Europe (CAFE) Thematic Strategy. We are prepared to answer any questions that this letter may raise.

Sincerely, on behalf of the investigators listed below,

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