COMMITTEE ON THE MEDICAL EFFECTS OF AIR POLLUTANTS

COMEAP Press Release

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COMEAP Report New Calculations Of The Effects Of Air Pollution On Health In The UK

The Committee on the Medical Effects of Air Pollutants (COMEAP) has today published its assessment of the effects on mortality of long-term exposure to air pollution in the UK.

Using 2008 data and some simplifying assumptions, the burden of human-made particulate matter (measured as $PM_{2.5}$[1]) on the mortality of the UK population, was estimated as a loss of 340,000 years of life in 2008. This loss of life is an effect equivalent to 29,000 deaths. However, the Committee considers it very unlikely that this represents the number of individuals affected. Instead it speculates that air pollution, acting together with other factors, may have made some smaller contribution to the earlier deaths of up to 200,000 people. If this number were affected, the average loss of life due to air pollution would have been less than 2 years each, though the actual amount would vary between individuals. The burden can also be represented as a loss of life expectancy from birth of 6 months (as an average across all births).

The report also predicts that if the annual average concentration of particulate matter (measured as $PM_{2.5}$) were to be reduced by 1 microgram per cubic metre, there would be an increase in life expectancy from birth of about 20 days. In addition, 4 million years of life would be gained over the next 100 years by people living in the UK. If it were possible to remove all human-made particulate matter, the predicted gain would be 36.5 million life years over the same time period, and an increase in life expectancy from birth of 6 months.

Professor Jon Ayres, Chairman of COMEAP, said: “The report clearly shows that particulate air pollution continues to have a significant effect on health in the UK and, importantly, that reducing concentrations of this pollutant would lead to significant gains

for public health. Expressing the effects of air pollution numerically is difficult and this report is, I think, the most detailed examination of the problem yet published."

COMEAP has examined carefully the many ways in which mortality effects are reported and the relationships between them. It has concluded that the mortality effects of long-term exposure to particulate pollution can be reported in terms of effects on life expectancy, and on loss or gain in life years across the population. The Committee has also been able to report the current burden as equivalent to a number of deaths occurring in a specified year, although the Committee does not advise the use of deaths when evaluating the impacts of pollution reduction as the number will vary year on year.

A copy of the report can be found on the Committee's new website: www.comeap.org.uk

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For further information please contact:
CRCE Press Office
Chilton
Oxfordshire
OX11 0RQ
Tel: +44 (0)1235 822745 or 01235 822744
Email: chilton.pressoffice@hpa.org.uk

[1] $PM_{2.5}$ is defined as the mass per cubic metre of airborne particles passing through the inlet of a size selective sampler with a transmission efficiency of 50% at an aerodynamic diameter of 2.5 µm. In practice $PM_{2.5}$ represents the mass concentration of all particles of less than 2.5 µm aerodynamic diameter

Notes to editors

- The report (The Mortality Effects of Long-Term Exposure to Particulate Air Pollution in the United Kingdom) and its supporting papers are available on the Committee's new website: www.comeap.org.uk.

- About COMEAP:
  COMEAP is an advisory committee of independent experts that provides advice to Government Departments and Agencies on all matters concerning the potential toxicity and effects upon health of air pollutants. COMEAP is supported by a Secretariat provided by the Health Protection Agency. For further information about COMEAP: www.comeap.org.uk.

- COMEAP has recently launched its new website: www.comeap.org.uk. The new website has migrated away from its original host, the Department of Health. The website provides access to information provided by the Committee in the form of news, statements, reports, meeting papers and minutes. In addition to this, it has developed a number of pages dedicated to non-air pollution scientists.