



Atmospheric Issues

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AIR QUALITY

THE LONDON SMOG: 50 YEARS ON

It is now fifty years since the famous London Smog of December 5th 1952, which led to more than 4000 excess deaths in the capital city.



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The 'pea souper' smog was so dense that it lasted for four days because of the associated weather conditions. This led to vehicles being abandoned and the city being brought to a complete standstill.

Hospital admissions rose rapidly. Most of those that died were already sufferers of cardiovascular or respiratory diseases. The combined effects of the fog and smoke particles from coal burning aggravated the conditions of those prone to such illnesses, causing more than 4000 to die during the 4 day smog.

As a result of the famous smog, new laws were introduced which led to a dramatic cut in levels of smoke and sulphur dioxide levels in subsequent years.

However, air pollution in London remains a problem mainly due to the large volumes of traffic within the city. The

government targets for nitrogen dioxide and fine particles are expected to be exceeded along major road networks, around Heathrow and in central London.

The National Society for Clean Air & Environmental Protection marked the anniversary of the London Smog with the publication of *The Clean Air Revolution: 1952-2052*.

Source: BBC News, 5 December 2002: <http://news.bbc.co.uk/1/hi/england/2545759.stm> & NSCA Briefing, December 2002.

EUROPEAN SINGLE-SKY DEAL AGREED

European Union Transport Ministers have made an agreement to try and improve their co-ordination of air space in the interests of safety, reducing delays and cutting air pollution.

Huge growth in airport traffic in recent years has been coupled with increasing delays for flights. The Commission estimates that one quarter of all EU flights last year were subject to delay at a cost of £2.9bn.

Creating a more unified airspace would help streamline safety procedures, and save fuel by allowing aircraft to fly in straight lines rather than zig-zagging around areas managed by different authorities.

The new deal however assures that it will not lead to the abolition or privatisation of national airspaces.

Source: BBC News 5 December 2002, <http://news.bbc.co.uk/1/hi/business/2547379.stm>

NEW TRANSPORT PLANS

The Secretary of State for Transport has announced a £5.5 billion package of new transport measures, designed to improve quality of life, tackle congestion and improve safety and reliability.

The plans include the controversial widening of the M6 motorway to four lanes between the Midlands and the North West, which environmentalists say will not lead to reduced congestion but will rather encourage more cars onto the motorway.

Other motorways to be improved are the widening between junctions 21 and 30 on the M1 and the provision of climbing lanes for HGVs on the M4 and M5 around Bristol.

Metrolink extensions have been approved for Manchester and trams will return to Liverpool. Money will be made available for 1000km of new cycle lanes and many new footpaths, road safety schemes and bus priority lanes will be introduced.

Full details of the transport package can be found in the Department for Transport News Release (10 December 2002).

Source: DfT News Release, 10 Dec. 2002, http://www.dft.gov.uk/pns/DisplayPN.cgi?pn_id=2002_0354; BBC News 10 December 2002.

LEADING AIR POLLUTION PROFESSOR SUGGESTS CANCER CAUSED BY POLLUTION

Professor Roy Harrison, a leading expert on air pollution and member of two government air pollution committees, has

suggested that one in ten deaths from lung cancer in the UK may be linked to particulate pollution (PM_{2.5}). Harrison bases his claim on US research which strongly links fine particulate air pollution from vehicles and industry with cancer.

One of the American studies found that death rates increased by 6% with every additional 10 microgrammes of fine particles in a cubic metre of air.

Lung cancer has normally been associated with smoking. Some scientists feel that the focus on smoking has led to the health effect to the population by air pollution being overlooked.

Source: BBC News, 9 December 2002, <http://news.bbc.co.uk/1/hi/health/2557617.stm>; Air Quality Management, December 2002.

AIR QUALITY STRATEGY ROLLING REVIEWS TO GO

The plans to review and update individual pollutants for the Air Quality Strategy are to be scrapped. Rupert Furness from DEFRA pointed out that the complexity of the particles objective had become such that only air pollution experts could understand it.

Furness highlighted that as far as possible the UK targets would be the same or more stringent as those set by the EU. The government intend to focus on delivery of the specified targets, whilst also taking the opportunity to review them.

Source: Air Quality Management, December 2002.

BONFIRE NIGHT POLLUTION DISPERSED BY WEATHER

The annual bonfire celebrations throughout the UK failed to cause high levels of particle pollution this year. The highest recorded PM₁₀ reading was in North London at 135µg/m³, whereas last

year the highest PM₁₀ measurement was 750µg/m³, in Bexley.

The weather conditions around November 5th 2002 were generally wet and windy, allowing pollutants to be dispersed readily. Only a few sites around the UK entered the moderate air pollution category and Brent was the only site to be in the high and very high category.

Source: Air Quality Management, December 2002.

CLIMATE CHANGE

GLOBAL WARMING AND THE ARCTIC

According to researchers at the Woods Hole Institute in Massachusetts, US, the six largest Eurasian rivers are feeding elevated quantities of freshwater into the Arctic Ocean now than they were several decades ago. Their finding seems to support the long-held prediction that freshwater runoff into the Arctic would increase as a result of global warming.

Between 1936 and 1999 a 7% increase in runoff has been observed. In addition to increased rates of precipitation, changes in ice and permafrost melt or changes in the seasonality of precipitation and runoff, may have influenced this trend.

If this current rate of freshwater influx into the Arctic Ocean continues to rise, it could have a large-scale impact on ocean circulation patterns in the North Atlantic. By reducing the density of the usually cold saline water in this part of the world, the influx could slow down or shut off the North Atlantic Deep Water (NADW) formation, the driving factor behind a global ocean circulation, which brings large amounts of warm water to the North Atlantic region via the Gulf Stream.

Paradoxically, this could result in a cooling of northern Europe by several degrees, particularly in winter. Certainly evidence from the past confirms that rapid changes in ocean circulation in the North Atlantic

can have far-reaching impacts on the global climate in only a matter of decades.

Source: National Geographic – <http://news.nationalgeographic.com>, 13th December

CANADA & NEW ZEALAND SIGN KYOTO PROTOCOL

Last month, Canada officially signed the Kyoto Protocol, the international agreement seeking to reduce greenhouse gas. Under the terms of the Protocol, Canada is committed to lowering greenhouse-gas emissions by 6% below 1990 rates by 2012, a cut of 20 to 30% from current levels.

While environmental groups praise Canada's action, industry groups and some politicians fear Kyoto will cost billions of dollars and thousands of jobs. Nevertheless, a study conducted for the government suggests that Canada's economy will grow by about 16% by 2010 with Kyoto implementation, compared to 18% under a business-as-usual scenario. There could also be benefits from cleaner energy investment, such as lower pollution-related health costs, it says.

New Zealand has also ratified the Protocol, despite accounting for only 0.2% of the world's greenhouse gas emissions. In an effort to achieve its Kyoto Protocol targets New Zealand Government has proposed introducing a new carbon emissions tax, building upon a waste strategy launched earlier in 2002.

To date more than 95 countries have ratified the Kyoto Protocol, including the entire European Union and Japan.

Source: The Globe & Mail – <http://www.globeandmail.com>, 14th December 2002; Edie – <http://www.edie.net>, 13th December 2002.

SUSTAINABLE DEVELOPMENT

CENTRE FOR ALTERNATIVE TECHNOLOGY

The Centre for Alternative Technology is running a series of residential courses in 2003 covering a wide range of sustainable issues both in theoretical and practical sessions, including energy, environmental building and environmental solutions. Some of the courses include how to build a wind turbine, solar electric systems, teaching sustainability, eco friendly DIY, an introduction to natural gardening and sewage solutions.

The Centre for Alternative Technology, founded in 1974 and situated in Mid Wales, is a display and education centre offering practical ideas and information on environmentally sound practices to everyone from the casual visitor to the postgraduate student. It has become one of the largest tourist attractions in Mid Wales and even caters for self-catering eco-holidays.

For further information and a course programme, visit their website at: <http://www.cat.org.uk> or telephone: +44 (0)1654 705950.

Source: Centre for Alternative Technology.

ENVIRONMENT IN YOUR POCKET

Key trends and other statistics on the environment over recent years are presented for easy accessibility in the latest edition of the booklet, The Environment in your Pocket 2002, published by the Department for Environment, Food and Rural Affairs in November 2002.

The Environment in your Pocket includes more than 50 key data series covering: the global atmosphere, air quality, inland water quality and use, coastal and marine waters, radioactivity, noise, waste and

recycling, land use and land cover, and wildlife. Included among the key series are all the environmental headline indicators of sustainable development. Also included are some key results from the survey of public attitudes to quality of life and to the environment, conducted 2001.

Some illustrative extracts include:

- Local authorities collected an average of over half a tonne of waste per person from households during 2000/1;
- 52 per cent of people also thought that traffic would be the environmental issue that would cause the most concern in 20 years time;
- 2001 was the third warmest year since global records began in 1860;
- UK emissions of all the main air pollutants have fallen since 1980;
- Radioactive emissions to the air in the UK fell by around 56 per cent between 1985 and 2000 and emissions to water fell by 84%;
- Between 1970 and 1999, the index of farmland wild birds for England fell by 44 per cent; 6 of the 19 species assessed showed an increase in numbers, 12 showed a decline;
- An estimated £4.2 billion was spent by UK industry to reduce environmental pollution in 2000.

The Environment in your Pocket 2002 is also published on the Department's website at:

www.defra.gov.uk/environment/statistics/eiyp/index.htm

Source: DEFRA news releases, 2002:
<http://www.defra.gov.uk/news/2002/indx2002.asp>

And finally, ARIC has a new logo. Look carefully, and you'll see the superposition of a jet engine (ARIC is now also a leading expert in sustainable aviation) and the Earth.

