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## *Atmospheric Issues*

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### AIR QUALITY

#### **AIR POLLUTION FROM FOOT AND MOUTH ANIMAL PYRES**

Concerns have been raised about the health implications of burning large numbers of slaughtered animals as part of the foot and mouth disease cull.

Levels of dioxins from incomplete burning of animal flesh are known to be potential sources of dioxin pollution. The animal pyres have largely been fuelled by railway sleepers, impregnated with creosote and tar. These are also potential sources of dioxin pollution.

There have been dense smoke plumes from these fires, which have been in remote areas, away from urban monitoring equipment. Most UK rural monitoring is limited to ozone and hence particle pollution episodes have not been highlighted.

The UK DETR has revealed that during the first six weeks of the UK foot and mouth crisis, burning animal carcasses has led to 63g of dioxin emissions being released into the atmosphere, 18% of UK annual average emissions.

*Sources: Air Quality Management, April 2001, BBC News April 23<sup>rd</sup> 2001.*

#### **TASK FORCE TARGET THE WORLD'S SMOGGIEST CITY**

A task force team of international scientists has begun to target air pollution in Mexico City, one of the world's smoggiest cities. The team is led by Nobel research prize-winner Dr Mario Molina who has previously conducted research into CFCs and the destruction of the ozone layer.

Mexico City has a major particulate problem. The city is situated in a basin, surrounded by high mountains and this, combined with a predominantly dry and sunny climate and a large number of vehicles and polluting industries gives Mexico its reputation for poor air quality.

Dr Molina has made a six-month plan with 71 recommendations as the first part of Proaire, a new governmental 10-year air quality programme. Key initiatives include reducing the amount of sulphur in gasoline, controlling diesel emissions and improving the monitoring of vehicle emissions. The measures will mean a dramatic overhaul of the city's transport system.

*Source:*

<http://www.e-volve.org.uk/articles.asp?ID=1052>

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## **CLEANER BEIJING FOR 2008 OLYMPICS**

Beijing is among the finalists for holding the 2008 Olympic Games. The City has announced a \$12.2 billion Green Olympics action plan to clean up Beijing's air, water, industry and solid waste.

Plans to control air pollution include constructing long distance natural gas pipelines and storage tanks, converting small coal burning boilers and prohibiting any kind of burning in the open. Solar energy and geothermal energy technologies are also to be used to replace the need for burning coal.

Beijing is also encouraging greater use of public transportation by expanding routes for subways and introducing dedicated highway lanes for high occupancy vehicles.

Source:

<http://www.e-volve.org.uk/articles.asp?ID=1056>

## **DETR FUNDS ARIC & NSCA**

The Environmental Action Fund awards for 2001/02 have been announced by DETR. **aric** is pleased to receive an award for operating its integrated Atmosphere, Climate and Environment Information Programme. NSCA have also received funding for the development of an educational pack on noise pollution.

## **REDUCING AIR TRAFFIC EMISSIONS**

A report has recently been published by the German Federal Environment Agency – Umweltbundesamt. The report on reducing exhaust emissions from civil aircraft is available on the Internet at: [www.umweltbundesamt.org/fpdf-k/1955.pdf](http://www.umweltbundesamt.org/fpdf-k/1955.pdf). From page 27 onwards, the report is written in English.

Source:

[www.umweltbundesamt.org/fpdf-k/1955.pdf](http://www.umweltbundesamt.org/fpdf-k/1955.pdf)

## **PARTICLES REVIEWED**

The Expert Panel on Air Quality Standards has reviewed the measurement of particles for the UK. Measurement of particles at UK monitoring stations are those particles less than 10 µm aerodynamic diameter, known as PM<sub>10</sub>. There has been controversy as to whether this is a suitable measurement or whether smaller particles, which may have more implications for health, should be measured, such as PM<sub>2.5</sub>.

EPAQS have presented their findings in a new report *Airborne Particles* which concludes that, on present evidence, the PM<sub>10</sub> measurement is the most appropriate basis for an Air Quality Standard in the UK, although the panel recommend that this should be kept under active review.

Sources: EPAQS, *Airborne Particles*, The Stationery Office, April 2000; DETR Press Release 3 April 2001.

## **LONDON WILL TRIAL HYDROGEN BUSES**

The Transport Minister, Lord Whitty, has announced that London will be one of 9 European cities to trial the hydrogen powered bus. The city of London will have three buses supplied by EvoBus, the bus division of Daimler Chrysler in 2003.

The buses are zero emission buses and are fuelled by compressed hydrogen. The other eight European cities to participate in the trial are Reykjavik, Stockholm, Amsterdam, Luxembourg, Hamburg, Stuttgart, Barcelona and Porto.

It is expected that the trial will be successful and will lead to further investment in hydrogen fuelled buses. However, this would be dependent on developing a wider hydrogen fuel infrastructure.

Source: DETR Press Release, 21 March 2001

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## **CLIMATE CHANGE**

### ***END OF THE ROAD FOR KYOTO PROTOCOL?***

George W. Bush, the President of the United States of America, last month decided to pull his country out of the Kyoto Protocol, the international agreement to reduce emissions of greenhouse gases, which threaten global warming.

The Kyoto Protocol required the US to reduce its 1990-level greenhouse gas emissions by 7% by the period 2008-2012. Bush's decision, whilst criticised around the world by other Parties to the Protocol, has been welcomed back home by many business groups, including the coal and oil industries. The Global Climate Coalition (GCC), which represents a number of corporate interests in the climate debate, also praised the new position, not so much for pulling out of the Kyoto Protocol but because the Bush administration, like the GCC, supports market-based solutions and new technologies to address climate change.

Despite this, a CNN-Time poll conducted at the end of March reveals that as many as three-quarters of the US public believe that global warming is a serious problem, whilst two-thirds think that the president should develop greenhouse gas emission reduction strategies.

The problem facing the Kyoto Protocol now is whether it can survive without the Americans on board. The Protocol will become legally binding once 55 Parties (nations) have ratified it, including industrialised nations that account for at least 55% of carbon dioxide emissions. Since the US alone accounts for 34% of all industrialised nations' carbon dioxide emissions, a workable policy without the US may now seem unlikely.

Despite this, other countries, particularly within the European Union, have stressed

that the Kyoto Protocol can survive without the US. In addition, the environmental group Greenpeace issued a statement in which it said the United States was "isolated in the world in its rejection of the Protocol."

The next round of international talks on climate change will take place in Bonn in July later this year.

Sources: Global Environmental Change Report, 13 April 2001; Environmental News Network: <http://www.enn.com/>, 22<sup>nd</sup> April, *Environment ministers to Bush: Kyoto still alive*.

### ***EUROPEAN UNION ON TARGET TO REACH KYOTO COMMITMENT***

The 15 European Union (EU) countries recorded a 4% reduction between 1990 and 1999 in combined emissions of the six greenhouse gases covered by the Kyoto Protocol on climate change. This contrasts with an 11% increase in emissions over the same period in the United States - which accounts for over a third of the industrialised world's man-made emissions.

The figures come from the latest emissions inventory produced by the European Environment Agency (EEA), in which it also warns against complacency, saying that further efforts to reduce emissions are needed to achieve the Kyoto targets.

The cut takes the EU - responsible for a quarter of industrialised countries' man-made emissions of the six gases - half way towards achieving the Kyoto target. The inventory also shows that the EU remains on track to meet its commitment to stabilise emissions of carbon dioxide, the most important greenhouse gas, at the 1990 level by the year 2000.

The favourable picture to date is largely due to considerable emissions falls in Germany and the United Kingdom, the EU's two biggest emitters, which together

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contribute around 40% of total EU greenhouse gas emissions.

However, the situation could rapidly change, the EEA has warned. Preliminary estimates indicate that in 2000 both UK and German carbon dioxide emissions increased and on present trends, more than half of the other Member States may substantially exceed their agreed share of the EU's total allowed emissions under the Kyoto Protocol.

Source: EU Business: <http://www.eubusiness.com/>, 23<sup>rd</sup> April, *EU greenhouse gas emissions down 4%*.

### ***MORE EVIDENCE FOR CLIMATE CHANGE - THIS TIME FROM SPACE***

Reporting in the journal *Nature*, (vol. 410) scientists from Imperial College London have revealed further direct evidence of an increase in the Earth's natural greenhouse effect between 1979 and 1997.

By analysing variations in the spectrum of outgoing infrared radiation collected by orbiting spacecraft in the early 1970s and during 1996-1997, the researchers were able to detect changes in the effect of greenhouse gases on temperature. The apparent change in the amount of energy emitted by the Earth is consistent with increases in atmospheric greenhouse gas concentrations over the same time period.

Source: Global Environmental Change Report, 23 March 2001

### **SUSTAINABLE DEVELOPMENT**

#### ***LOCAL AUTHORITY WINS QUEEN'S AWARD FOR CHP SCHEME***

Woking Borough Council in Surrey has become the first local authority in the UK to receive a Queen's Award for a sustainable development initiative to enhance the supply of green energy. The green energy initiative saves the

borough's council taxpayers £700,000 a year or £20 per household.

The energy is generated through "combined heat and power" plants, which run on natural gas. These recover heat as well as generating electricity, significantly improving efficiency compared to electricity supplied by conventional (fossil fuel) power stations to the national grid. By using waste heat and small networks, which reduce distribution losses, the energy is also cheaper.

Woking currently has six generating sites, which supply their localities with heat and electricity. It has established a "private-wire" network, a mini distribution system through which locally produced electricity can be sold direct to customers, without having to go through the national grid. Woking plans to introduce "fuel cell" technology in 2002, which works without burning any fuel. The first fuel cell project will support the heating and power for Woking's park and its swimming pool complex.

Source: Independent News: <http://news.independent.co.uk/>, 23<sup>rd</sup> April, *Global warming scheme lands first award for local authority*.

### ***PHILIPPINES GETS SOLAR POWER***

Financed by Spain and provided by BP Solar, the Philippines is to launch the world's largest solar energy project that will bring electricity to more than 400,000 in 150 villages. The first phase is due to begin in September in the Mindanao region of the Philippines.

The electricity will be used for home lighting, irrigation and the distribution of drinking water. Community centres such as schools and health clinics will also benefit.

Source: Global Environmental Change Report, 13 April 2001