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Atmospheric Issues

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AIR QUALITY

INDUSTRIAL AIR POLLUTION LIMITS

The Expert Panel on Air Quality Standards (EPAQS) has begun work on setting limits for industrial pollutants. In the past, EPAQS has focused attention on Air Quality Strategy pollutants but because national standards are now increasingly being based on European Commission standards, EPAQS are now concentrating on Environment Agency compounds. Industrial air pollutants that will be looked at include:

- Halides (bromine, chlorine, hydrogen bromide, hydrogen chloride, hydrogen fluoride, hydrogen iodide);
- Metals (antimony, beryllium, boron, copper, mercury, selenium, zinc);
- Dioxins / furans (dioxins reported as TEQ -toxicity equivalent), PCBs (polychlorinated biphenyls);
- Organics (acetic acid, methanol, phenol, xylene (all isomers);
- Others (amines, dinitrogen oxide, hydrogen cyanide).

The Group will also, when necessary, provide advice relating to aspects of the Air Quality Strategy, for example health implications of the forthcoming World Health organization review of impacts of air pollution on health. EPAQS will also have some involvement with the review of ozone by the Committee on the Medical Effects of Air Pollution (COM--EAP), which is due later this year.

Source: Air Quality Management, July 2003

OIL COMPANIES TO HELP IMPROVE ASIAN AIR QUALITY

Every year it is estimated that air pollution causes around 500,000 deaths in Asian cities. At a recent conference, the Chairperson of the Clean Air Initiative (CAI) for Asian Cities said this would only get worse in future years. The meeting was held in Singapore and attended by delegates from the oil industry and the CAI. Under discussion were strategies for reducing the thick air pollution commonly found in Asian cities. Supat Wangwongwatana, chairperson of the CAI, warned of premature deaths if action is not taken.

World Health Organisation standards are regularly exceeded in many Asian cities because of the rapid growth in transport and growing urbanisation. Many of the vehicles are old and poorly maintained with emissions of pollution many times those of cleaner Western vehicles which are subject to European emission standards. The rapid growth in vehicle transport was highlighted as a key

Supported by the Department for Environment, Food & Rural Affairs (DEFRA)

contributor to pollution, along with growing urbanisation.

Oil giants represented at the one-day meeting were Exxonmobil, Royal Dutch Shell and British Petroleum. The conference launched the "Singapore Statement" which the oil companies agreed to adhere to. This statement commits supporters to 'contribute to better air quality management in Asia' and in particular to help reduce vehicle emissions. This is likely to be achieved through the elimination of lead in petrol, phasing down of sulphur in diesel and petrol and the adoption of cleaner fuel technologies.

Source: Edie News Release, July 25, 2003

LONDON EMISSIONS TESTING GETS GOING

Vehicle emission testing is underway in London. A pilot scheme was carried out over three years ago. £8m funding has been made available for roadside testing by Department for Transport but uptake of the money has been slow. However, £600,000 has been allocated to London authorities to carry out testing across the 29 boroughs that have declared Air Quality Management Areas. Drivers shown to be emitting high levels of pollutants will be issued with fixed penalty notices. Extra funding for the scheme is also coming from London Mayor, Ken Livingstone. The British Lung Foundation are endorsing the scheme and advertising posters are being used to inform motorists through the '*Smoking kills'* logo.

Fining will begin in September 2003 and the scheme will run until March 2004.

Source: Air Quality Management, July 2003

SMOG LEVELS HIGH IN BRITISH HEAT WAVE

The summer heat wave has elevated levels of ozone across many regions of Britain. The soaring temperatures and settled conditions have caused high levels of ozone to form across many parts of the UK. Much of this pollution has been transported from Europe, where high temperatures have also been experienced. Vehicle exhausts are the main source of nitrogen oxide pollution which converts to ozone in the presence of sunlight. Air pollution forecasts are described as low, moderate, high or very high. During the summer heat wave, high levels of air pollution have been recorded.

Levels of ozone have been highest in the southeast England, where ozone levels were between 80-100 ppb, much higher than levels normally recorded during August.

Asthma sufferers and those with breathing problems have been advised to avoid exercise and stay indoors during periods of high air pollution.

Source: DEFRA Press Release 4 August 2003, The Independent, 8th August 2003

CLIMATE CHANGE

EUROPEAN RECORDS TUMBLE IN SCORTCHING SUMMER

Temperature records in the first two weeks of August were broken all over Europe, with green campaigners warning that mankind is largely to blame. New all-time highs were recorded in Portugal, Germany, Italy, Spain, Austria and Britain, where bookmakers were forced to pay out hundreds of thousands of pounds after the mercury topped 100 degrees Fahrenheit (37.8 Celsius) on the 9th August for the first time since records

began. Portugal has suffered the highest temperatures on the continent, recording 47.3 degrees Celsius (117.1 degrees Fahrenheit) on August 1 in Amarelejo, on the Spanish border -- the hottest temperature since records began in 1856.

In France, the excessive heat has lead to a marked increase in mortality rate, with some estimating that several thousand deaths may be directly attributable to heat-induced illnesses. Forest fires in Croatia, France, Italy, Portugal and Spain have ravaged hundreds of thousands of hectares of pinewood and brush. The hot weather combined with months of severe drought has also affected grain production, with yields across the European Union expected to fall 5.7% from last year.

The heat wave was caused by an anticyclone, which anchored itself firmly over the west European landmass, holding off rain-bearing depressions over the Atlantic and funnelling hot air north from Africa.

Whilst some caution that such extremes are all part of natural climatic variations, the record European summer highs, which follow record global warmth for most of the 1990s, are worryingly consistent with models that suggest human induced global warming is largely to blame.

Source: http://www.climateark.org/ - 10, 12th August 2003

CLIMATE CHANGE IN BRITAIN'S ISLANDS

According to a report published in July by the British-Irish Council (BIC), climate change will mean warmer, drier summers and milder, wetter winters for the islands in waters surrounding mainland Britain. Increasing summer temperatures and rising sea levels will affect all the major islands - the Channel Islands, Isle of Man, Western Isles, Orkney Islands, and Shetland Isles.

Islands in the south of the region will be hardest hit - summer temperatures in the Channel Islands could rise by 4°C by the end of the 21st century, while summer rainfall could drop by nearly half. Meanwhile, the frequency of hot summer days in the Channel Islands and the Isle of Man is predicted to increase four- to five-fold and there could be a 70 - 85% reduction in frosts.

Days of heavy precipitation may increase by 30 - 50% in winter, but decrease 40 - 50% in summer. Rising sea levels are expected to lead to higher storm surges, especially for the Channel Islands.

The results come from a new model developed by scientists at the Hadley Centre at the Met Office. This is the first time that a climate model has been detailed enough to examine how climate change will affect such small-scale regions. Taking account some of the uncertainties in the predictions, the report can now be used to prepare different regions and sectors of the economy for the impacts of climate change.

Source: Defra News Releases - http://www.defra.gov.uk/news/2003/indx2003.asp - 24th July 2003

ALPINE GLACIERS MELT IN SUMMER HEAT WAVE

Whilst Alpine glaciers have been in retreat for a century and a half, this summer the rate of melting has increased dramatically due to the record temperatures experienced across much of Europe. Predictions made in the 1990s, which forecast that the glaciers would shrink to just 10% of their 1850 size by the end of

the 21st century, may already need to be revised.

This year a number of factors have combined to intensify the rate of melt, including a freak weather event last November when a cloud of dust was blown north from the Sahara Desert. As glacier surface ice melted with the coming of spring, the dust was exposed again, helping give the ice a greyish appearance that reduced reflection and increased the amount of sunlight absorbed, thereby increasing the melting.

For those living in glacial valleys, the thinning of the glaciers when combined with heavy rain brings the danger of flash floods. Melt water can form lakes either on the surface of the glacier or below it which can suddenly be released with devastating consequences.

Source: http://www.planetark.org/ - 25th August 2003

ARCTIC ICECAP MAY DISAPPEAR BY 2100

According to an international team of researchers, the Arctic ice cap will melt completely within the next century if carbon dioxide and other greenhouse gas emissions continue to heat the Earth's atmosphere at current rates. Since 1978, the ice cap has shrunk by nearly 4% per decade, a total of one million square kilometres. During the summer it is now only six million square kilometres.

A total melting of the ice cap would release a massive flow of cold water, which would strongly reduce warm surface ocean currents such as the Gulf Stream, which influences Europe's temperate climate. Such melting, however, would not raise sea levels, since the ice cap is already floating in water and displacing its own mass.

The disappearance of the Arctic ice cap would, however, benefit maritime transport, as it would create a new northern shipping route along Russia's northern coast that could save some 10 days in journey time between Europe and Japan.

Source: http://www.afp.com/english/home/ - 14th August 2003

OZONE DEPLETION

2003 OZONE HOLE HEADED FOR RECORD

According to Australian scientists based in the Antarctic the ozone hole over the polar continent is growing at a rate that suggests it could be headed for a record size this year. Growth is currently similar to three year ago when a new record for the aerial extent of the Antarctic ozone hole was set at almost 28 million square kilometres. The prediction is based on the exceptional cold temperatures that are now present in the stratosphere where the ozone hole forms.

Ozone is a protective layer in the atmosphere that shields the Earth from the sun's rays, in particular ultraviolet-B radiation that can cause skin cancer, cataracts and can harm marine life.

The full extent of the 2003 ozone hole will not be known until the end of September, as August and September are the coldest months for the South Pole. Temperatures begin to warm by early October and the ozone layer there will then start to recover.

Source: http://www.planetark.org/ - 25th August 2003