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Europe's toxic air: clearer but not clean

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LONDON/BRUSSELS (Reuters) - Europeans no longer see the kind of pollution that within living memory killed thousands of Londoners in the Great Smog of 1952, but the air they breathe still bears invisible threats scarcely less deadly, and little more controlled.

While attention is given to curbing the carbon dioxide (CO2) emissions blamed for global warming, substances more directly harmful to human health, notably nitrogen oxides, are pumped out of diesel engines and from European power stations burning coal that is getting cheaper as Americans exploit new gas reserves.

The result, say those campaigning for change, is ever poorer air quality shortening lives. Yet a move by the European Commission to tighten vehicle emissions rules is being challenged by some car makers.

And, with businesses and governments in Europe desperately short of cash for new regulation or technologies, broader new air quality legislation can also expect opposition when the EU executive proposes it to member states, probably this year.

The Commission has deployed its own data, showing huge costs from pollution and substantial and growing public support for a clean-up that could benefit firms offering cleaner technologies.

But health campaigners trying to push up the public agenda an issue that they compare in gravity to smoking face a problem:

"One of the big difficulties in communicating this issue is it is not visible in the way London smogs in the 1950s were," said Simon Moore at the Policy Exchange think-tank in London.

"There is a kind of out-of-sight, out-of-mind attitude."

Over a weekend in December 1952, cold air, fog on the Thames and coal smoke belching from a million homes and factories made the Great Smog; in places, people walking lost sight of their feet, cattle were reported asphyxiated at Smithfield market and 4,000 or more people died as a result - there were nearly twice as many deaths that month in London as in the previous December.

That and numerous less dramatic events across Europe spawned clean air laws from the 1950s that got rid of visible smoke. But for all the catalytic conversion and other means to cut down CO2 emissions, unseen pollution, notably from traffic, has worsened.

TRILLION EURO COST

In all, nearly half a million of the half-billion citizens of the European Union die a premature death each year because of the air they breathe, according to the European Environment Agency (EEA), an official EU organization.

Countering fears of the cost of regulation, it puts the EU bill for healthcare, sick days and the wider impact on the environment at roughly \$1.3 trillion.

London, the continent's biggest city, has one of the biggest problems with air. It has the highest levels of nitrogen dioxide (NO2) of any European capital; the colorless, odorless gas is produced by burning fuel and can damage people's breathing.

Through complex chemical reactions, nitrogen oxides generate ground-level ozone; this has supplanted the old London "pea soup" smoky fogs as the modern definition of smog. Air in the British capital again made headlines when ground-level ozone was 80 percent over World Health Organization (WHO) guidelines on the eve of the 2012 Olympics, raising worries for the athletes.

Critics complain that successive governments have done too little to combat toxic air, which they say is Britain's biggest killer after smoking. It causes 29,000 early deaths a year in a country of 63 million, says the Committee on the Medical Effects of Air Pollutants, which advises the government.

"Air pollution is Britain's forgotten environmental and public health crisis," said Moore. "If you compare it with other health issues in the UK, after smoking, air pollution is the next one down in terms of financial costs and early deaths."

It seems likely to rise up the political agenda, however; a poll of more than 25,000 Europeans published in January by the European Commission in Brussels showed 56 percent thought air quality had deteriorated in the last 10 years and 72 percent thought the authorities were not doing enough to tackle it.



Last year, the Organization for Economic Cooperation and Development predicted urban air pollution would become the top environmental cause of mortality worldwide by 2050.

Globally, the number of early deaths from exposure to particulate air pollutants leading to respiratory failure could double from current levels to 3.6 million every year, it said.

LONDON'S CHOKING

The vast majority of those deaths will be outside Europe - horror stories of unbreathable air in Beijing and other megacities of the developing world are legion. But London's invisible nitrogen dioxide highlights Europe's problems.

NO2 levels in some highly congested patches of the city, which is roughly half the size of 20-million-strong Beijing, are about the same as the average in the Chinese capital, campaign group Clean Air London found after analyzing samples from both.

Environmental law firm ClientEarth has taken the British government to the Supreme Court in London to force it to come up with a revised plan to meet EU limits on NO2 concentrations by 2015; a decision is expected in the next few weeks.

The government has so far responded by saying air quality is on the whole good and that most British regions will achieve the EU standards by 2020, while London may take five years longer.

Environmental campaigners are not impressed:

"There's a public health problem here and the government needs to take responsibility," said Frank Kelly, professor of environmental health at King's College London.

"It's not good enough to say that we can wait to 2025."

Among those impatient for action is Rosalind Dalton, 49, who has lived in Greenwich, southeast London, for the past 25 years. She was diagnosed two years ago with chronic obstructive pulmonary disease, a condition usually associated with smoking.

Even though neither she nor her family have been smokers, she was told she had the lung capacity of a woman of 71. She has had to turn back from a short walk to her local supermarket because the air was giving her too little oxygen to go on.

"I want to see my children grow to adulthood and not worry about my life, or quality of life, being shortened by the impact of air pollution on my condition," she said.

TINY BUT DEADLY

While London's particular problem is NO2, largely caused by traffic, Europe as a whole has a problem with the broader phenomenon of ground-level ozone and microscopic particulate matter (PM), which can be small enough to penetrate lung tissue.

Almost one in three city-dwellers in the European Union was exposed to excessive concentrations of airborne PM in 2010, mostly caused by traffic, industry and fuel-burning, the EEA said recently, citing EU limits. Using tighter WHO standards, almost every city dweller in the bloc faces dangerous exposure.

Diesel-powered vehicles and coal-fired power stations pose a particular threat across the continent, researchers say.

Even rural Switzerland, famed for its clean mountain air, has a problem with heavy trucks in transit producing diesel fumes that get trapped in landlocked valleys.

In contrast to much of the world, where gasoline dominates, diesel is the main transport fuel in Europe and its emissions are particularly unhealthy. The WHO said last year diesel exhaust fumes can cause cancer and belong in the same deadly category as asbestos, arsenic and mustard gas.

As part of a raft of measures, including the car emissions law and revised air quality legislation, the EU Commission is looking to limit diesel fumes. But regulation is problematic, not least in measuring emissions.

Despite global efforts to combat climate change, coal-fired electricity also continues to make Europe sick. New shale gas output in the United States has seen Europeans import cheaper U.S. coal to burn in power stations, while the value of official financial incentives to use cleaner fuel have diminished.

German utility E.ON is among those to say it has no choice but to mothball some of its most efficient natural gas plants because it is cheaper to burn coal.

New pollution standards are also resisted by those who make fuels. At Europia, the refiners' lobby, spokesman Alain Mathuren said members lacked cash for costly reforms: "Having to spend all our funds on staying-in-business investments that do not generate returns does not leave much to improve the business."

(Editing by Alastair Macdonald)

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