

Air quality at risk: Brexit and lobbying from member states could stall progress on reducing pollution

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*Air pollution is linked to thousands of premature deaths across Europe each year and the European Union has a key role in addressing the problem. **Roy M. Harrison** states that although much progress has been made in improving air quality, lobbying from member states has led to a notable weakening of the resolve of the Commission to propose a real tightening of emissions ceilings. It also remains to be seen how Brexit will affect Britain's air quality given the EU has been a major driver of action in the UK.*



Air Pollution Level 5 in London, 30 April 2014. Credits: [David Holt](#) (CC BY 2.0)

Rarely a day goes by without coverage of air pollution problems in the national press. The diesel engine is widely blamed (with much justification) for the current exceedences of health-based Limit Values for nitrogen dioxide in the air, and the UK government has twice lost cases brought to court by Client Earth over its plans to achieve compliance. The cold weather in January brought some of the highest pollution levels seen in recent years, with particulate matter reaching the government's "very high" category when susceptible individuals are advised to take precautionary measures to protect their health.

The management of air quality is a complex activity and much of what goes on in the UK and other member states is driven by decisions made by the European Union. To appreciate the role of Europe in policy for mitigation of air pollution problems, it is necessary to understand some of the key features of an air quality management strategy. They include the following:

- *Limits on emissions:* This is the most obvious component, and the UK along with other member states, is subject to the National Emissions Ceilings Directive which sets overall limits and targets for future years for emissions of a number of key pollutants, specifically sulphur dioxide, oxides of nitrogen, primary (emitted) particles (PM₅), volatile organic compounds and ammonia. The levels at which these ceilings are set reflects a mixture of idealism (to achieve an improvement), practicality (so as not to place undue financial burdens) and horse-trading between the Commission and member states. Limits are also set by the EU on emissions from specific processes. Thus, the Large Combustion Plants Directive has been hugely influential in cutting emissions from coal-fired power stations and the Waste Incineration Directive set very high standards for the control of emissions from waste incinerators. Both have now been superseded by the Industrial Emissions Directive. The Commission also sets limits on emissions from new cars sold in Europe.
- *Ambient air quality standards referred to as Limit Values:* These are measures of air quality which if not exceeded ensure that the health impacts of air pollution exposure are relatively small or non-existent for most people. They are not no-effect levels, and for most pollutants there appears to be no totally safe exposure threshold for the entire population. The Limit Values set by the EU derive from recommended guidelines set by the World Health Organisation, and in some cases imply full compliance with the WHO guideline recommendation, and in other cases take account of practicability and allow a defined margin or frequency of exceedence. The fact that the UK is not in compliance with the Limit Value for nitrogen dioxide has allowed Client Earth to take the UK government to the Supreme Court and to challenge successfully our government's approach to coming into compliance. An important role of the Limit Values is in providing benchmarks against which air quality can be judged, which can help to generate public pressure to achieve cleaner air.
- *Cost-benefit analysis:* In setting emission limits for industry and for road vehicles, the EU has used cost-benefit studies to assess those measures which can improve air quality for the lowest cost. Hence, the auto-oil studies set a trajectory for reducing emissions associated with road traffic, and integrated assessment modelling is used to evaluate measures across different emission sectors.

For many years the European Commission was seen as highly proactive in driving policies that led to substantial improvements in air quality. Unfortunately, the lower the pollution levels become, the greater the incremental cost of control, and lobbying from member states has led to a notable weakening of the resolve of the Commission to propose a real tightening of emissions ceilings.

One notable example is that current proposals do not involve a significant tightening of the emissions ceilings for ammonia. Ammonia is a substance of relatively low human toxicity but contributes substantially to the formation of airborne particles (PM_{2.5}) which are highly toxic. Many studies have shown that the most effective way of achieving a rapid improvement in PM_{2.5} concentrations is to cut emissions of ammonia, but the main source is agriculture and the farming lobby has resisted strongly, despite the fact that some countries, most notably the Netherlands and Denmark, have unilaterally cut their emissions of ammonia substantially without incurring large costs. There has also been no strengthening of air quality Limit Values over recent years despite the fact that WHO recommendations have tightened. An example is particulate matter where the WHO has recommended guidelines significantly more stringent than those currently being implemented in Europe.

The general trends in air quality across Europe have shown considerable improvements, but these have slowed substantially in recent years as the legislative drivers have become less stringent and the costs greater. A success story in most of Europe is the huge reduction that has been seen in concentrations of sulphur dioxide, while on the other hand concentrations of particulate matter (expressed as PM_{2.5} and PM₁₀) have diminished only slightly over the past 10-15 years.

There remain significant pollution hotspots in a number of areas, most notably eastern Europe, where pollution control measures are less strict and there remains significant combustion of dirty fuels such as coal with inadequate controls, and the Po Valley in Northern Italy, where the problem is due to persistent stagnant weather conditions that

do not disperse the pollution. The fact that eastern Europe remains relatively dirty is not irrelevant to the UK. Because of transboundary transport of pollution, we experience many of our highest concentration days when air is received from the European mainland, and can be strongly influenced by emissions in eastern Europe which transform during their transport in the atmosphere to give us high concentrations of pollutants like particulate matter and ground-level ozone.

A highly topical question which has led to much discussion in the scientific community is the effect of Brexit on air quality management in the UK. The optimists take the view that the ability to set our own regulations will lead to a new dawn of much stricter pollution control and ever-better air quality. The pessimists amongst us (of which I am one) take the opposite view, which is that without pressure from European regulations, the UK will fall behind the standards in the rest of Europe.

Even if the UK adopts the same air quality Limit Values and follow trends in the National Emissions Ceiling (which is the subject of a UN ECE Protocol as well as an EU Directive) we will lose the threat of unlimited fines from Europe for failing to meet the regulated levels. This has been a significant driver of action in the UK which will be totally lost when we are no longer subject to the legal sanctions which can be imposed by the EU. For a country where one pollutant alone (PM_{2.5}) is estimated to play a role in 29,000 premature deaths each year, this is not a prospect to be relished.

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Note: This article gives the views of the author, and not the position of EUROPP – European Politics and Policy, nor of the London School of Economics.

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