



Briefing note:

Clean Air (Human Rights) Bill an opportunity to protect health and reduce the strain on the health service

The UK Health Alliance on Climate Change is an alliance of UK health organisations including royal medical and nursing colleges, British Medical Association, Academy of Medical Science, British Medical Journal, The Lancet, and many other health-focused organisations and faculties. Our collective voice represents more than 1 million health professionals.

Air pollution is extremely damaging to health, resulting in multiple adverse outcomes in people of all ages, including pregnant women, children, and vulnerable people. It leads to a high demand for healthcare services and lost productivity due to ill health. The Clean Air (Human Rights) Bill is a Private Members' Bill started in the House of Lords, where it passed through with cross-party support. This briefing note has been produced ahead of the second reading of the Bill in the House of Commons in February 2023.

Health burden of air pollution

Air pollution is among the greatest environmental determinants of health¹ and contributes to many serious and chronic health conditions affecting every organ of the body.² Two of the most dangerous pollutants are the gas nitrogen dioxide (NO₂) produced by vehicles and fine particulate matter (PM_{2.5}) produced by vehicles, wood burning, industry and farming. High levels of NO₂ can damage the human respiratory tract and increase a person's vulnerability to respiratory infections and asthma. Microscopic PM_{2.5} is about the same size as bacteria, small enough to fit through the walls of the lungs and into the bloodstream where they are carried around the body, often eventually lodging themselves in different organs.

Research has shown a direct link between increasing levels of pollution in the air and GP appointments for respiratory symptoms and asthma, and that exposure to traffic related pollution increases the likelihood of having multiple long term physical and mental health conditions^{3,4}. Public Health England figures for a period of five years before the pandemic showed 5% of all deaths were attributable to PM_{2.5} pollution specifically, while thousands more are living with health conditions caused or exacerbated by dirty air, increasing vulnerability to viruses like Covid19.⁵ Repeated exposure over months and years can worsen the impacts of dementia, diabetes, hypertension, lung cancer and pneumonia.²

In 2020, exposure to outdoor air pollution contributed to 27,000 deaths in the UK.³ Areas of deprivation have a significantly higher exposure to both indoor and outdoor pollution that increases the risk of childhood and adult asthma, cardiovascular diseases, dementia, cancer and hospital admissions.⁶

Global responsibility

In August 2022, the United Nations General Assembly declared that everyone on the planet has a right to a healthy environment, including clean air, water and a stable climate⁷. The Intergovernmental Panel on Climate Change has called for rapid, deep emissions cuts across all

sectors to halve emissions by 2030 stating that any further delay in concerted global action on adaptation and mitigation will miss a brief and rapidly closing window of opportunity to secure a liveable and sustainable future.⁸ The World Health Organisation (WHO) recommends countries to limit air pollution to 5 µg/m³ of fine particulate matter (PM_{2.5}), which is based on several systematic reviews specifically designed to identify the lowest concentration of pollution that produces a measurable increase in short- and long-term health risks.⁹

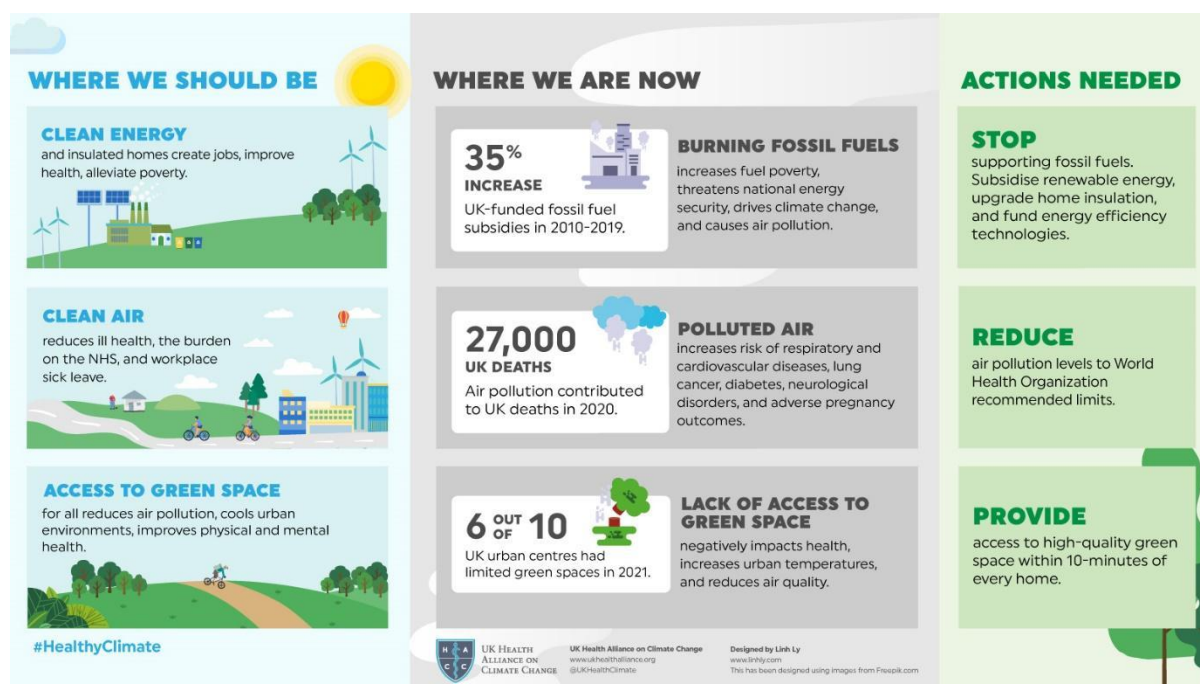
The sources of particulate pollution - road transport, domestic and industrial burning – are also the sources of a significant proportion of the UK’s greenhouse gas emissions. We must tackle the challenges of climate change and air pollution simultaneously if we are to meet the UK’s commitment to reaching net zero carbon emissions and to show leadership in doing so.

Health benefits of cleaner air

Evidence from previous research indicates that the positive health benefits of limiting PM_{2.5} to 10 µg/m³ by 2030 include 20 fewer infant deaths, 388,000 fewer asthma symptom days in children, and 6,300 fewer respiratory and cardiovascular hospital admissions annually. In total, about 98,000 life years could be gained annually with people living longer, suffering less ill health, a reduced burden on the health service and fewer days lost to absenteeism in the workplace^{10,11}. CBI Economics has reported that improving air quality could bring an annual boost of £1.6 billion to the UK economy through 3 million additional working days and reduced rates of early retirement.¹²

Current air pollution targets for England mean that a child born today will still be breathing dirty air that is bad for their health at the age of 16. It also means that our stretched health service, already struggling to meet patient demand, is facing decades of hospital admissions and GP visits from the thousands of people whose health will be impacted by poor air quality.

Action to achieve clean air would improve health and build resilience against future health crises and pandemics as well as boosting the economy and increasing productivity. In the 2022 Lancet Countdown UK Policy Brief³, we provided recommendations for actions that could be taken to achieve cleaner air for everyone. This graphic summarises where we should be, where we are now, and the actions that are needed.



References

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