

### Written evidence submitted by Global Action Plan

This submission is from [Global Action Plan](#), an environmental charity that focuses on issues where the connection between the health of people and planet is most tangible. Our current focus issues are air pollution, excessive consumption, and the education system. We mobilise people and organisations to take action on the systems that harm us and our planet. We focus on air pollution due to the significant health impacts, and positive co-benefits from air quality improvement measures to both health and climate.

#### 1. What evidence exists of the extent of air pollution directly or indirectly impacting health of individuals or communities in England?

Air pollution is the biggest environmental threat to our health in the UK regardless of age or location\*. Poor air quality harms our physical and brain/mental health from the first breath we take to the last, starting in the womb. Heart disease, strokes, diabetes, asthma, dementia – these are all serious health conditions that are caused or made worse by air pollution.

By the Government's own calculations, the health and social care costs of air pollution in England could reach £18.6 billion by 2035.

In 2015, the World Health Assembly adopted a landmark resolution on air quality and health, recognising air pollution as a risk factor for noncommunicable diseases such as ischaemic heart disease, stroke, chronic obstructive pulmonary disease, asthma and cancer. The resolution was endorsed by 194 Member States and emphasised the need for governments to redouble efforts to protect populations from the health risks posed by air pollution. Since this, there has been a wealth of health evidence on air pollution published in the scientific literature.

UK government report issued by Public Health England (2019) states that air pollution is the biggest environmental threat to health in the UK, with between 28,000 and 36,000 deaths a year attributed to long-term exposure. This damage cost was updated in [March 2023](#) suggesting the mortality burden of the air pollution mixture (based on both particulate matter (PM2.5) and nitrogen dioxide (NO2)) in the UK, is equivalent to 29,000 to 43,000 deaths at typical ages.

\*Air pollution effects human health at all stages of life. Most effected are the young, the elderly, pregnant women, those with existing health conditions and those living in areas of high pollution,<sup>i</sup> although other environmental factors, such as occupation, access to health care and housing conditions can be just as important.<sup>ii</sup>

Exposure to any amount of air pollution can be damaging to health, the greater the exposure the greater the risk.<sup>iii</sup> Health impacts associated to air pollution include damage to lung function, triggering asthma, increasing blood pressure, and increasing lung and heart-related hospital admissions and deaths.<sup>iv,v</sup> Air pollution can affect lung function development, worsening of asthma, increases in asthma hospital admissions and it also plays a part in causing asthma in some children.<sup>vi vii viii ix x xi</sup> High air pollution has been linked to low birth weight, premature birth and stillbirths.<sup>xii xiii xiv xv xvi</sup>

## 2. What evidence exists to demonstrate the impact of the Ultra Low Emission Zone in London, and other Clean Air Zones nationwide, on reducing public health risks or improving health outcomes within areas where they have been introduced?

The Ultra Low Emission Zone (ULEZ) in London aims to get the most polluting vehicles off London's streets. The existing ULEZ has [brought down](#) levels of harmful nitrogen dioxide pollution by nearly half (46%) in central London, and over a fifth (21%) in inner London. As a number of polls – including our own [Clean Air Public Insights Tracker](#) – have shown, the majority of Londoners are in favour of this policy.

Removing the most polluting vehicles from our roads has economic benefits, as well as health and environmental ones. It's estimated that the expansion of the ULEZ to inner London in 2021 will save London's NHS and social care system around [£5 billion](#).

The ULEZ extension will bring benefits of cleaner air to an extra 5 million people.

Levels of air pollution in London are still too high. Every single London borough has air pollution levels that are dangerous for human health (above the [World Health Organisation's](#) (WHO) guideline limits on air quality). Toxic air leads to around [4,000 extra deaths](#) in London each year, with the highest numbers in outer London boroughs.

## 3. Are the current national targets for outdoor air pollution ambitious and wide-ranging enough to provide adequate protection for public health and the environment in a) rural and b) urban areas?

No.

Global Action Plan firmly believes that government interventions should be based on sound evidence and given the robust and rigorous process undertaken by the World Health Organisation (WHO) to develop the WHO Air Quality Guidelines, with influence from many UK-based leading organisations in the field of air pollution and public health, we are assured that aligning the UK government's target to the WHO Air Quality Guidelines (2021) is the best tactic to safeguard the UK population's existing and future health.

In our view, the UK, should align relevant targets to the WHO Air Quality Guidelines 2021, and embed a higher air quality standard that will safeguard human health, both now and in

the future, specifically a target for **PM2.5 of 5 µg/m<sub>3</sub> by 2030** – the level that is required to protect population health from air pollution.

Any action short of this would leave the government open to accusations of not fulfilling its duty to protect the health of its citizens and open to legal challenge.

#### 4. Are measures currently in place, and those proposed in the revised Air Quality Strategy for England, sufficient to achieve national targets?

National targets are insufficient to provide adequate protection for public health and the environment, and therefore the measures to proposed to meet these targets are also insufficient to protect public health and the environment. We need targets to aim for WHO guidelines.

Imperial College London and the Clean Air Fund's report "A Pathway to Healthy Air in the UK" (2022) followed scientific air quality modelling methods and concluded that adopting the WHO interim target of 10 µg/m<sup>3</sup> for PM<sub>2.5</sub> is both necessary, beneficial and most importantly *achievable* by 2030.

#### 5. What are major barriers and challenges to achieving national targets on air quality?

Government ambition, investment and willingness to make the bold changes required. As well as having cleaner vehicles on the roads – that can be achieved through electrification and Clean Air Zones – we need fewer vehicles on the roads, which will come through providing tangible alternatives in the form of affordable public transport and safe walking and cycling infrastructure. We need as much – if not more – than the current road building budget to be invested in the latter. Local authorities cannot be expected to deliver on this without the resources necessary. We also need to tackle domestic burning – the largest source of PM<sub>2.5</sub> pollution. Most people using a solid fuel/wood burner are doing so in an urban area as an aesthetic/lifestyle choice. We need to phase out this source of emissions through an eventual ban on burning in urban areas, including support to those who need it to transition to cleaner ways to their homes.

Maintaining – and then strengthening – laws on industrial emissions – some of which currently stand to be lost through the EU Law Bill – will be essential to achieving air quality targets.

#### 6. Does the Government provide sufficient funding and devolved powers to local authorities in England to improve local air quality? If not, what additional funding or devolved powers are required?

No. The Guardian recently [documented](#), in response to the April 2023 Air Quality Strategy Consultation- that Council's lack funds, including staff resource, to implement the Government's clean air strategy.

## 7. What are the long-term health impacts of indoor air pollution?

There is a growing body of evidence demonstrates that indoor air pollution is a health hazard to people across the UK. The two major sources of indoor air pollution are:

### 1. Gas cooking:

- More than half of UK homes cook with gas, equating to over 36 million people in the UK that may be exposed to levels of air pollution that violate UK outdoor regulations.
- When in use, gas hobs and ovens emit carbon monoxide, carbon dioxide (CO<sub>2</sub>), and nitrogen dioxide (NO<sub>2</sub>) which can linger indoors for hours after use.
- The economic and welfare burden of air pollution is significant. CLASP estimates that indoor air pollution from gas cooking costs the UK around £1.4 billion annually in healthcare costs, including lower life expectancy, illnesses, greater healthcare expenditure, and lower productivity. There is also growing evidence that links combustion-related air pollution with adverse effects on brain development in young children.
- Cooking on gas adds to the health burden of indoor air pollution, emitting harmful pollutants such as NO<sub>2</sub> that can impact virtually the entire human body.

### 2. Domestic burning:

- Wood burners and open fires are the [biggest source](#) of small particle air pollution (PM<sub>2.5</sub>) in the UK.
- Even homes with "eco" wood burners are [three times more polluted](#) than those without.
- Wood burners and open fires produce more harmful PM<sub>2.5</sub> than road transport in the UK.
- The more PM<sub>2.5</sub> pollution you are exposed to, the more likely you are to die from cardiopulmonary disease or lung cancer.
- Burning wood also releases carbon monoxide -that can cause illness and impact health- and carbon dioxide that contributes to climate change.

## 8. What steps can the Government take to improve indoor air quality?

Specifically, in relation to [gas cooking](#), the Government could:

- Adopt laws to protect consumers by setting limits on pollution emissions from gas cooking appliances and ensure that hobs and ovens are efficient.
- Establish pollutant limits for cookers, the UK government will protect human and environmental health.

- Provide a new Energy Label to enable people to directly compare the efficiency and emissions of gas and electric cooking appliances.
- Accelerate the transition to cleaner electric cooking by coupling incentives for heating and home upgrades with electric cooking appliances.
- Provide incentives and grants to help households make the switch to electric cooking. The £450 million [Boiler Upgrade Scheme](#), makes grants of £5,000 available for homeowners choosing to replace fossil fuel boilers with efficient low-carbon heat pumps. [A recent study](#) suggests that a similar programme for electric cooking, finding incentives of between £100-300 would yield massive returns for the government in terms of health and energy spending.
- Set a phase out date for gas stoves in domestic and commercial settings – gas boilers are set to be phased out by 2035 or sooner in the UK under current plans, why not gas cooking?
- Educate households on the health harms of gas cooking.

In relation to **domestic burning**, the Government could:

- Map out the pathway towards a ban on domestic burning in urban areas including:
- Ending the advertising of log burners, in magazines and lifestyle programmes
- Putting health warnings on log burners and fuel
- Running a public engagement campaign on the health harms of air pollution to discourage use and help those who have to burn to burn cleaner.
- Encourage all local authorities to introduce smoke control areas in residential areas. In addition to smoke control areas, local authorities should consider introducing ‘no smoke areas’, or times when burning is prohibited in line with air pollution forecasts.
- Provide adequate funding and resource to local authorities to carry out these actions.

9. [What are the differential impacts, geographically, and across socioeconomic groups, of poor outdoor and indoor air quality? Are measures to address poor air quality appropriately targeted?](#)

There are stark health inequalities across the UK. Generally, [air pollution is worse in more deprived communities](#) (up to 20% higher). This is due to the [proximity and concentration](#) of road traffic and industrial point sources in deprived areas. The lowest income households, typically, do not have access to car and therefore [contribute least to air pollution](#).

In the North-East of England (where health inequalities are particularly prevalent), for example, air pollution is lower than the England average, however [has more attributable deaths to air pollution](#) per 100,000 people than London, despite London having considerably worse particulate pollution.

Crucially, vulnerable groups, including people with lower socio-economic status, those with existing health conditions, and /or people with accumulated exposure to a range of

stressors, experience greater health effects of air pollution, and crucially, at a lower dose ([here](#) and [here](#)).

10. How well is the Government spreading awareness of the impacts of poor air quality and promoting action being taken to tackle the issue?

To the best of our knowledge, the Government is not doing any work to spread awareness of the impacts of poor air quality and promoting action being taken to tackle the issue. In our opinion this is a significant oversight - shifting public behaviours and attitudes is essential to meeting AQ reduction targets and successful implementation of policy.

11. How well is the Government coordinating measures between national and local actors to improve air quality, both outdoors and indoors?

N/A

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Global Action Plan's [Action for Clean Air website](#) contains information and resources on clean air for

- [Health professionals](#), including a [Health Knowledge Hub](#)
- [Schools](#), including lesson plans activities and the Clean Air for Schools Framework
- [Business](#), including [whitepapers, plans, guides and webinars](#)

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<sup>i</sup> <https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution>

<sup>ii</sup> <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

<sup>iii</sup> <https://www.cleanairhub.org.uk/>

<sup>iv</sup> Public Health England, Health matters: air pollution, 2018 <https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution>

<sup>v</sup> Yang, B.Y., Qian, Z., Howard, S.W., Vaughn, M.G., Fan, S.J., Liu, K.K. and Dong, G.H., 2018. Global association between ambient air pollution and blood pressure: a systematic review and meta-analysis. *Environmental pollution*, 235, pp.576-588. Global association between ambient air pollution and blood pressure: A systematic review and meta-analysis, 2018

<sup>vi</sup> [WHO \(2005\) Effects of air pollution on children's health and development](#)

<sup>vii</sup> [Impact of London's low emission zone on air quality and children's respiratory health: a sequential annual cross-sectional study, Jan 2019 \(NO2, PM2.5, PM10\)](#)

<sup>viii</sup> [RCP, Every breath we take: the lifelong impact of air pollution, Feb 2016 \(all encompassing\)](#)

<sup>ix</sup> Zhao, Qi, et al. "Early-life exposure to air pollution and lung function development into adolescence: the GINIplus/LISA birth cohorts." (2020). (NO2, PM2.5)

<sup>x</sup> Holst, Gitte J., et al. "Air pollution and family related determinants of asthma onset and persistent wheezing in children: nationwide case-control study." *bmj* 370 (2020). (PM2.5)

<sup>xi</sup> Zhao, Qi, et al. "Early-life exposure to air pollution and lung function development into adolescence: the GINIplus/LISA birth cohorts." (2020). (NO2, PM2.5)

<sup>xii</sup> [WHO \(2005\) Effects of air pollution on children's health and development](#)

<sup>xiii</sup> [Ambient air pollution and pregnancy outcomes: A comprehensive review and identification of environmental public health challenges, Nov 2018 \(PM, Ozone\)](#)

<sup>xiv</sup> [Acute effects of air pollutants on spontaneous pregnancy loss: a case-crossover study, Feb 2019 \(NO2, PM\)](#)

<sup>xv</sup> <https://www.sciencedirect.com/science/article/pii/S0160412019314734> (Ozone, PM2.5)

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<sup>xvi</sup> Smith, Rachel B., et al. "Impacts of air pollution and noise on risk of preterm birth and stillbirth in London." *Environment international* 134 (2020): 105290. (Ozone, PM2.5)