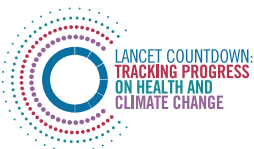


The Lancet Countdown on Health and Climate Change

Policy brief for the UK

2023



UK Health Alliance
on Climate Change



Royal College of
General Practitioners

Introduction

The climate crisis, primarily driven by human activities such as the burning of fossil fuels and the expansion of carbon-intensive agricultural practices, is impacting the lives and health of the UK population today. Continued support for extractive and highly polluting industries, fossil fuel subsidies, and investments are hindering the transition to clean renewable sources of energy. A lack of protection of the natural systems that sustain good health means built environments are scarce in green and blue spaces, and the adoption of healthy diets that also benefit the environment is undermined. This is leading to avoidable deaths and diseases from fuel-derived air pollution, energy poverty, poor physical activity levels and unhealthy diets.

As global surface temperatures continue to rise, the health risks to current and future generations increase and further strain our health systems. A better way forward is the need of the hour.

The UK is legally bound to reduce greenhouse gas (GHG) emissions by 78% from 1990 levels by 2035.¹ This will require a transformation of the energy and agriculture sectors, as well as major investments in conservation and regeneration of biodiversity.² Fortunately, many actions needed to reduce GHG emissions and restore nature can provide immediate, long-lasting and major ancillary benefits to the health of local populations, and overall improve the public health profile of the UK.

Drawing on evidence from indicators in the [*2023 Report of the Lancet Countdown on Health and Climate Change*](#),³ this policy brief focuses on three areas that would bring immense benefits to the health of UK populations: transitioning away from fossil fuels to renewable sources of energy; increasing access to green and blue space in urban environments; and promoting consumption of plant-based diets that reduce agricultural production and emissions.

Recommendations

The UK Government should urgently implement mitigative and adaptative measures to achieve the following recommendations:

1

Reduce reliance and use of fossil fuels in favour of cheaper, locally available, and reliable renewable energies, including by (1) eliminating all forms of government subsidies, investments, new licences and consent for fossil fuel exploration, extraction, and sales; and (2) redirecting funds towards subsidies to rapidly upscale production and utilisation of renewable energies, which would benefit health through alleviating energy poverty and reducing air pollution.

2

Ensure equitable access to high-quality green and blue spaces in urban environments with an adequate system for monitoring progress that aims to promote health and well-being.

3

Develop and implement policies that (1) promote healthy diets, high in plant-based foods, with an emphasis on significantly reduced consumption of red and processed meat and dairy products; (2) support farmers' transition to sustainable practices through regulation of the local food sector; and (3) promote and support the consumption of local and sustainable agricultural produce.

Transitioning to renewable and zero-carbon energy

United Nations Secretary-General, Antonio Guterres, has called for an urgent transition to renewable energy. In a statement directed at G20 leaders, he said, “You cannot claim to be green while your plans and projects undermine the 2050 net zero target and ignore the major emissions cuts that must occur this decade.”⁴

New projections in the 2023 global report of the *Lancet* Countdown show that with each fraction of a degree of global mean temperature rise, the health risks amplify, reducing our capacity to adapt and prevent poor health outcomes. Ambitious and credible mitigation efforts are therefore urgently needed to minimise the health risks, keep climate change hazards within levels to which our health systems can still adapt, and protect the health of all populations.

There is a pressing need to phase out fossil fuels and make commitments to decarbonise the energy sector. Numerous reports show that new oil and gas exploration is incompatible with climate targets. Despite this, the UK has issued new licences for North Sea oil and gas exploration, while at the same time lagging on facilitating a move to renewable sources of energy by delaying the ban on purchasing new petrol cars from 2030 to 2035,⁵ and delaying the target of eliminating gas boilers from 2025 to 2035.⁶

According to the 2023 global report of the *Lancet* Countdown, in 2020, while renewables made up 29% of the UK electricity supply, they accounted for just 5% of the total energy supply.ⁱ Low carbon sources, which include nuclear, hydrogen and modern renewable energy sources, made up 47% of electricity and 14% of total energy in the same year (**indicator 3.1.1**). However, the Climate Change Committee⁷ has reported that emissions from refineries and oil and gas production increased from 2021 to 2022. The Committee downgraded the government’s progress on renewables due to the lack of a

credible strategy for decarbonising electricity supply by 2035, including commitments for offshore wind and solar.

The UK’s fossil fuel dependency makes local communities vulnerable to highly fluctuating energy prices. This forces people into fuel poverty and ultimately undermines the socioeconomic and environmental conditions on which good health depends.

The UK continually entrenches this dependency through fossil fuel subsidies. It ranks as the seventh country in the world with the most funds allocated to net fossil fuel subsidies with a net total of US\$10.1 billion in 2020, indicating that fossil fuel subsidies were higher than carbon prices. The UK ranks only after Iran, India, China, Saudi Arabia, Russia and Egypt (**indicator 4.2.4**). Although at least some of these subsidies in the UK are aimed at reducing consumer costs and therefore reducing fuel poverty, this is short-term thinking, which ultimately keeps populations vulnerable to future energy price shocks. These funds could instead be used to promote activities that benefit the long-term health and well-being of local populations. These could include promoting renewable energy production and access through incentives, infrastructure and subsidies. Doing so could help alleviate energy poverty in the longer term, reduce the high levels of air pollution that continue to harm the health of local populations (especially the health of the most vulnerable), reduce pressure on the NHS and address inequalities.

To safeguard the health and survival of present and future generations, the government must therefore act by rapidly eliminating all forms of government subsidies, investments, new licenses and consent for fossil fuel exploration, extraction and sales, with funds redirected towards subsidies to rapidly upscale production and utilisation of renewable energies.

ⁱ Total energy supply includes not just electricity, but also heating and cooling, transportation, manufacturing, and more.

Managing rising temperatures through increased availability and use of green and blue space

The 2023 global report of the *Lancet* Countdown shows that the average summer temperature people in the UK were exposed to from 2018-2022 was 1.1°C hotter than the baseline average from 1986-2005 (**indicator 1.1.1**). High temperatures have resulted in an increase in heat-related deaths. During five heat periods between June and August 2022, 3,271 excess deaths were recorded in England and Wales.⁸

The elderly are particularly vulnerable to adverse health impacts of heat exposure. With its ageing population, this puts the UK at particular risk from climate change-related adverse health outcomes. The UK Health Security Agency reported significant excess deaths in the 65 years and over group during the 2022 heatwaves.⁹ *Lancet* Countdown data suggest that heat-related deaths in those over the age of 65 increased by an estimated 57% from 2000-2004 to 2018-2022; without global heating, this number would have only increased by 11% (**indicator 1.1.5**).

The current health impacts are just a glimpse of what the future might hold. In a scenario in which temperatures are kept to under 2°C of heating, heatwave exposure for people over age 65 is projected to increase 6-fold by mid-century (2041-2060 average) (**indicator 1.1.2**).

However, nature-based solutions have proven to lessen the effect of increasing temperatures. These can reduce heat exposure and help reduce the number of heat-related deaths while providing other immediate benefits to the health and quality of life of UK populations. A systematic review of studies concentrated in Europe and temperate regions found that park and garden areas were 0.8°C cooler than urban non-green areas, with trees having a significant impact on this cooling during the day. Park and garden cooling effects were found to reach up to 1.25km.¹⁰

In addition to the cooling effect, green spaces can have wider benefits for public health, such as improving air quality and positively impacting physical and mental health and

wellbeing.¹¹ Indeed, green social prescribing (referring people to local nature-based interventions and activities, such as walking schemes and conservation volunteering, to benefit their health) has been found to improve people's mental and physical health. The health service is currently responding through initiatives such as NHS Forest,¹² which is aimed at transforming health sites into healthy, green spaces, and NHS England has invested in a cross-government Green Social Prescribing Programme.¹³

However, there is still scarce availability of green and blue spaces in urban centres in the UK. Data from the 2023 global report of the *Lancet* Countdown shows that, out of the ten UK urban centres housing more than 500,000 people, none had high levels of green space, six had moderate levels of greenness, and four had low levels (**Indicator 2.2.3**). Inequalities in access to green space, combined with higher levels of air pollution in the most socioeconomically deprived areas, threaten the physical and mental health of the UK's most underserved populations, exacerbating health inequities. In March 2023, the Climate Change Committee Progress Report¹⁴ warned that national planning policies for managing green and blue space to enable and promote cooling in urban design are inconsistently applied, and monitoring access to green infrastructure is lacking, making it difficult to evaluate progress.

There is a transformative opportunity for governments across the UK to scale up green and blue spaces in urban environments to manage temperatures, improve air quality, and provide safe environments for people to be active, socialise and connect with nature. This will benefit the physical and mental health of all UK residents. This needs to be in combination with regular monitoring and evaluation through structured governance and sufficient funding to ensure these natural spaces are appropriately maintained for the long term.¹⁵

Shifting towards healthy and nutritious diets that support a liveable future

Across the UK, governments have not yet addressed the health and environment-harming commercial practices in the domestic food sector and food industry. Neither have they delivered clear policies to promote and enable equitable access to healthy diets and sustainable agricultural practices.

The agriculture sector contributed almost 45% of the UK's greenhouse gas emissions in 2020.¹⁶ In the same year, red meat and dairy accounted for 74% of all emissions related to the local production of agricultural products and 70% of all emissions related to the consumption of agricultural products (either locally produced or imported) in the UK (**indicator 3.3.1**). In addition to associated emissions, excessive consumption of red meat and dairy has a negative impact on health. In 2020, 42,000 deaths in the UK were associated with excessive consumption of dairy, red meat and processed meat (**indicator 3.3.2**). Concerningly, out of the 60 'very high' human development index countries, the UK has the fourth highest number of deaths linked to consumption of red meat and processed meat (**indicator 3.3.2**).

The transition to more plant-based diets can save lives and reduce the impact of the agricultural sector on climate change. Diets rich in plant-based foods are linked to reduced risk of heart disease, stroke, type 2 diabetes and certain types of cancer.¹⁷ They also have other health benefits such as lowering blood pressure, reducing blood cholesterol and promoting a healthy body weight.¹⁸

However, the recommendations in the government's Eatwell Guide,¹⁹ which promotes a healthy, balanced diet, have inadequately accounted for greenhouse gas emissions.¹⁶ Much more needs to be done to

communicate to the public the benefits of sustainable foods for health and the climate and to promote healthier diets with a greater intake of diverse and nutritious plant-based foods and reduced intake of red meat, processed meat, and dairy.²⁰

These efforts must also ensure that nutritious, sustainable foods are widely affordable and readily accessible to all. In the UK, healthy nutritious food is nearly three times more expensive than unhealthy products, making them unaffordable for low-income families and placing them at greater risk of diet-related illnesses and widening health inequalities.²¹ According to 2023 *Lancet* Countdown data, 70,000 deaths were associated with insufficient intake of nutritious plant-based foods such as fruits, vegetables, legumes, whole grains, nuts and seeds) (**indicator 3.3.2**).

Additionally, to enable the transition towards sustainable foods, farmers must be supported and incentivised to produce a variety of nutritious vegetation that enriches biodiversity and to move away from high-yield monoculture practices, which are mainly used to feed livestock. Innovative and sustainable farming methods (for soil, water, nutrients, and chemicals) can help to reduce GHG emissions while also preserving natural ecosystems, which bring further health benefits through lowering air pollution, mitigating heat impacts, and promoting mental well-being. Consistent and robust policies must be implemented to help farmers in this transition, to protect and promote their livelihoods, and to deliver a sustainable agricultural sector that can sustain healthy diets in the long term.

Conclusion

Action must not be delayed in implementing solutions to significantly reduce the UK's carbon footprint and improve the health of present and future generations. Rapidly increasing renewable energy supply, creating and enhancing urban environments with green and

blue spaces to mitigate heat stress and enable physical activity, and encouraging healthier, sustainable diets will bring multiple co-benefits for the planet and its people.

References

1. Department for Business, Energy & Industrial Strategy. UK enshrines new target in law to slash emissions by 78% by 2035. 2021; published online April 20. <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035> (accessed Nov. 10, 2023)
2. Government of the United Kingdom. 2030 Strategic Framework for International Climate and Nature Action. 2023. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1148323/2030-strategic-framework-for-international-climate-and-nature-action.pdf (accessed Nov. 10, 2023)
3. Romanello M, di Napoli C, Green C et al. The 2023 report of the *Lancet* Countdown on health and climate change: the imperative for a health-centred response in a world facing irreversible harms. *Lancet* 2023; published online Nov 14. [https://doi.org/10.1016/S0140-6736\(23\)01859-7](https://doi.org/10.1016/S0140-6736(23)01859-7)
4. IPCC. AR6 Synthesis Report: Climate Change 2023 — Headline Statements. 2023. Available from: <https://www.ipcc.ch/report/ar6/syr/resources/spm-headline-statements> (accessed Nov. 10, 2023)
5. Department for Transport. Government sets out path to zero emission vehicles by 2035. 2023; published online 28 September. <https://www.gov.uk/government/news/government-sets-out-path-to-zero-emission-vehicles-by-2035> (accessed Nov. 10, 2023)
6. Department for Business, Energy & Industrial Strategy. Plan to drive down the cost of clean heat. 2021; published online October 18. <https://www.gov.uk/government/news/plan-to-drive-down-the-cost-of-clean-heat> (accessed Nov. 10, 2023)
7. UK Climate Change Committee. 2023 Progress Report to Parliament. 2023; published online June 28. <https://www.theccc.org.uk/publication/2023-progress-report-to-parliament/> (accessed Nov. 10, 2023)
8. Office for National Statistics. Excess mortality during heat-periods: 1 June to 31 August 2022. 2022; published online October 7. <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/excessmortality-duringheatperiods/englandandwales1juneto31august2022> (accessed Nov. 10, 2023)
9. UK Health Security Agency. Heat mortality monitoring report: 2022. Updated 2023; published online July 10. <https://www.gov.uk/government/publications/heat-mortality-monitoring-reports/heat-mortality-monitoring-report-2022> (accessed Nov. 10, 2023)
10. Knight T, et al. How effective is ‘greening’ of urban areas in reducing human exposure to ground-level ozone concentrations, UV exposure and the ‘urban heat island effect’? An updated systematic review. *Environmental Evidence* 2021; 10: 12. <https://environmentalevidencejournal.biomedcentral.com/articles/10.1186/s13750-021-00226-y>
11. Mulcahy E et. al. Policy brief for the UK. 2022. <https://www.bma.org.uk/media/6332/2022-lancet-countdown-uk-policy-brief.pdf> (accessed Nov. 10, 2023)
12. NHS Forest: Green space for health. <https://nhsforest.org/> (accessed Nov. 10, 2023)
13. NHS England. Green social prescribing. <https://www.england.nhs.uk/personalisedcare/social-prescribing/green-social-prescribing/> (accessed Nov. 10, 2023)
14. UK Climate Change Committee. Progress in adapting to climate change – 2023 Report to Parliament. 2023; published online March 29. <https://www.theccc.org.uk/publication/progress-in-adapting-to-climate-change-2023-report-to-parliament/pg.197-215> (accessed Nov. 10, 2023)
15. Natural England. Green Infrastructure Planning and Design Guide. 2023. <https://designatedsites.naturalengland.org.uk/GreenInfrastructure/downloads/Design%20Guide%20-%20Green%20Infrastructure%20Framework.pdf> (accessed Nov. 10, 2023)
16. Department for Environment Food & Rural Affairs. Agri-climate report 2022. 2022; published online October 27. <https://www.gov.uk/government/statistics/agri-climate-report-2022/agri-climate-report-2022#section-1-uk-agriculture-estimated-ghg-emissions> (accessed Nov. 10, 2023)
17. Tuso P, Ismail M, Ha B, et. al. Nutritional Update for Physicians: Plant-based diets. *The Permanent Journal* 2013; 17(2): 61-66.
18. Willet W, Rockstrom J, Loken B, et al. Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. *The Lancet Commissions* 2019; 393(10170): 447-492.
19. NHS. The Eatwell Guide. 2022; published online November 29. <https://www.nhs.uk/live-well/eat-well/food-guidelines-and-food-labels/the-eatwell-guide/> (accessed Nov. 10, 2023)
20. Scarborough P, Clark M, Cobiac L, et al. Vegans, vegetarians, fish-eaters and meat-eaters in the UK show discrepant environmental impacts. *Nature Food* 2023; 4, 565-574.
21. The Food Foundation. The broken plate 2022: The state of the nation’s food system. 2022; published online July 19. <https://www.foodfoundation.org.uk/publication/broken-plate-2022> (accessed Nov. 10, 2023)

Organisations and acknowledgements

This brief was written by Elaine Mulcahy, PhD, Rachel Evans, MSc, Fern Brookes, Georgia Fredriksson, BSc, and Anandita Pattnaik, MPH. Review, guidance, and edits were provided by Suzanne Wood.

Contributions and review on behalf of the *Lancet* Countdown were provided by Camile Oliveira, MPhil, Marina Romanello, PhD, AND Elise Digga, MSc.

THE LANCET COUNTDOWN

The *Lancet* Countdown: Tracking Progress on Health and Climate Change is a multi-disciplinary collaboration monitoring the links between health and climate change. It brings together lead researchers from 52 academic institutions and UN agencies in every continent, publishing annual updates of its findings to provide decision-makers with high-quality evidence-based recommendations. For its 2023 assessment, visit www.lancetcountdown.org.

UK HEALTH ALLIANCE ON CLIMATE CHANGE

The UK Health Alliance on Climate Change is an alliance of UK based health organisations, representing more than one million health professionals. The alliance promotes for the public benefit the conservation, protection and improvement of the physical and natural environment and the advancement of health by: (a) enabling and supporting health professionals and health bodies to promote public health in the face of climate change and nature loss; and (b) supporting strategies and methods of reduction, mitigation and adaptation which benefit public health.

BRITISH MEDICAL ASSOCIATION (BMA)

The BMA is a professional association and trade union representing and negotiating on behalf of all doctors and medical students in the UK. It is a leading voice advocating for outstanding health care and a healthy population. It is an association providing members with excellent individual services and support throughout their lives.

THE ROYAL COLLEGE OF GENERAL PRACTITIONERS (RCGP)

The RCGP is the largest membership organisation in the UK solely for GPs, with over 54,000 members who are committed to improving patient care, developing their own skills and promoting general practice as a discipline. The RCGP is an independent professional body with expertise in patient-centred generalist clinical care.