

# A healthy future: tackling climate change mitigation and human health together

## Public summary

### Introduction

**Climate change poses serious, potentially catastrophic, threats to human health and to the natural world upon which we all depend. These threats are complex. Some, such as droughts, floods and other extreme weather events, impact human health directly. Others have an indirect effect, for example by threatening food supplies, widening the range of insects that spread human disease, or pushing more people into poverty. But there are also major opportunities to improve health through actions to reduce the greenhouse gas emissions that are driving climate change.**

**This report puts together the evidence of how the actions against climate change can also affect human health – and proposes four main recommendations for UK policymakers and funders to make sure that climate change action results in the best possible health outcomes.**

### Background

In 2019 the UK set a legally-binding target to reach net-zero greenhouse gas emissions by 2050. Many of the actions needed to meet this target could have benefits to human health – for instance by reducing air pollution, encouraging more physical activity by walking and cycling, and promoting healthier diets. The economic benefits of healthier lives could offset some of the costs of reducing greenhouse gas emissions.

### Climate action

There are two broad approaches to tackle climate change. *Mitigation* aims to prevent climate change by cutting greenhouse gas emissions, while *adaptation* aims to reduce the impacts of climate change that cannot be prevented. This report focuses particularly on mitigation, but also discusses how individual climate adaptations can have unintended side effects. Adaptation and mitigation measures may take place at a local level – city, town or household – and at a national level. So it's vital that we always look at the bigger picture when considering the benefits of climate actions. It's also important that we find ways to accurately measure the health benefits from climate action.

### Behaviour

It's important to bear in mind that tackling climate change isn't just down to governments – individuals and families play a key role too. A greater awareness of the health benefits from climate action may increase public support for moving towards more climate-friendly lifestyle choices.

## Health benefits

### Phasing out fossil fuels

Switching from fossil fuels will reduce air pollution, improve health and save lives. Air pollution causes between 28,000 and 36,000 premature deaths in the UK every year, and many of these deaths could be prevented by phasing out fossil fuels. The health benefits of turning away from oil, coal and gas will be greater if the UK avoids switching to polluting wood burning stoves and power plants.

We need a better understanding about the potential health impacts of the new technology that will help the UK reach its greenhouse gas targets – such as low-carbon hydrogen or carbon capture and storage.

### Transport

Domestic transport – mainly road vehicles – is responsible for 27% of the UK's greenhouse gas emissions. Supporting public transport, and increased cycling and walking, as well as switching to electric vehicles, will lead to environmental and health benefits from more physical activity and lower air pollution. For instance, increasing daily walking and cycling in urban England and Wales – similar to the levels in Copenhagen – could reduce heart disease, stroke, diabetes and other diseases and potentially save the NHS £17 billion over 20 years. However, it's important to consider the obstacles to greener travel – including the limited public transport in poorer and rural areas, and concerns about reliability and affordability. Fair access to greener travel should be a focus to avoid making life harder for many people.

### Food

Food production accounts for 23% of the UK's greenhouse gas emissions. At the same time the UK faces an obesity crisis – with more than six out of 10 adults overweight. Changes to the food system could benefit the environment and health. Continuing to reduce the UK's red meat consumption while increasing the consumption of fruit and vegetables would significantly cut greenhouse gas emissions and avoid or delay deaths from heart disease, stroke and cancer. Eating a healthy diet containing less red and processed meats, and more fruits and vegetables, is projected to increase average life expectancy by around eight months and reduce greenhouse gas emissions by around 17%.

No single action will achieve the changes needed to tackle climate change and improve health, and so we need a joined-up programme of action to encourage and enable people to switch to diets that are more plant-based, rely less on processed foods and generate less food waste.

### Buildings

In 2019, buildings were responsible for 17% of the UK's greenhouse gas emissions. Low temperatures are linked to up to 50,000 deaths a year in the UK – so warmer, better insulated homes should prevent some of these premature deaths, as well as cut the fuel bills for hard-up households – freeing up income to help with other costs. Easing fuel poverty has been shown to contribute to health and wellbeing. But sealing up buildings to reduce draughts could increase indoor air pollution, for example from cooking, tobacco smoke or radon gas. Adequate ventilation is also required to ensure good indoor air quality and maximise health benefits. We need to retrofit existing homes and improve new builds.

However, care should be taken to avoid unintended consequences – for instance, adding air conditioning to cool buildings will increase demand for electricity. We must find ways to combine improvements in energy efficiency with measures to keep homes cool – such as window shutters and shades.

## Natural environment

Action to tackle climate change using 'nature based policies' includes the considered replanting of forests to act as flood defences or rejuvenating grasslands to protect against drought. There is growing evidence that access to green space can promote good physical and mental health, and there are plenty of opportunities for well-designed nature based climate action. However, consultation with local communities and users of the countryside is vital to ensure that nature based policies are fair. Assessment of potential negative consequences, such as increased allergies or changes in the distribution of diseases such as Lyme disease, are important to ensure that the health benefits are maximised.

## Employment

Globally, around 58 million people were working in the energy sector in 2017. A move away from old carbon industries such as oil and gas towards new green jobs could cause short term disruption – triggering unemployment in some regions and sectors, with associated stress and ill health. Developing a long term vision for green jobs, with a focus on wellbeing and health and safety, as well as support for regions and sectors where this will be felt hardest, could ease the transition. The move to a net-zero economy could bring many employment benefits – more research is needed to weigh up the pros and cons.

## Healthcare

Healthcare systems worldwide are responsible for 4 to 5% of global greenhouse gas emissions. In 2020 the NHS was the first national healthcare system to commit to net-zero direct emissions by 2040 and for net-zero indirect emissions from supply chains by 2045. It now has the opportunity to lead efforts towards net-zero greenhouse gas emissions by acting as a role model for other large, complex organisations.

## Recommendations

- 1) Following on from its role hosting the 2021 United Nations Climate Change Conference (COP26) in Glasgow, the UK Government must play a global leadership role to ensure health benefits are at the heart of climate change discussions, debate and action.**
- 2) To make the most of the potential health benefits of climate mitigation and adaptation, it's vital that we look at the bigger picture and the real world implication of policies. Greater efforts are needed to identify and address the potential unintended consequences of climate action on human health.**
- 3) Greater effort is needed to measure the effects of climate action on health – including its impact on income and other inequalities.**
- 4) UK funders should support good quality research into climate and health that brings together different areas of study.**

## Read more

This is the public summary of a report written by the Academy of Medical Sciences and the Royal Society on the ways that climate action for the future will improve our health now. Find out more: [www.acmedsci.ac.uk/climatechange](http://www.acmedsci.ac.uk/climatechange)