green alliance...

WHY WE NEED TO TALK ABOUT HEALTH AND CLIMATE

An essay collection

Green Alliance
Green Alliance is an independent think tank and charity focused on ambitious leadership for the environment. Since 1979, we have been working with the most influential leaders in business, NGOs and politics to accelerate political action and create transformative policy for a green and prosperous UK.

The Green Alliance Trust
Registered charity no 1045395
Company limited by guarantee
(England and Wales) no. 3037633

Published by Green Alliance
October 2023

ISBN 978-1-915754-22-6

Designed by Howdy

Contents

Foreword

Why health and climate change can't be separated

Helena Bennett and Sophie O'Connell
Green Alliance

Although not fast enough, the world finally seems to be turning a corner on climate change: recent reports claim that the world will reach peak fossil fuel use in this decade. Action and public support for it has been driven in large part by the desire to preserve nature and wildlife. Pictures of polar bears on shrinking icebergs and koalas in burning Australian forests have moved people. But there are more immediate, self serving reasons to act and, strangely, they have taken a back seat in the story so far. This crisis is having a direct and negative impact on our health.

While the press surrounding net zero often focuses on the increasing economic costs and the inconvenience of climate breakdown to society, health is the untold story. Whether it is the direct consequences of extreme weather events or the growing mental toll on young people worried about the future they will inherit, the harm it is doing to our health and wellbeing has not been well communicated to the public or politicians.

In the July 2022 heatwave across Europe, records were broken in the UK as temperatures surpassed 40°C, leading to a fifth of hospital operations being cancelled. Research now shows those extreme temperatures caused over 61,000 premature deaths across Europe. Air pollution in the UK alone is estimated to cause between 29,000 and 43,000

premature deaths every year. And it's affecting our mental health too: people who experience flooding are 50 per cent more likely to suffer from depression and anxiety than those who do not. Sixty per cent of British children think climate change and inequality are affecting their generation's mental health.

> "At a time when the NHS is under pressure, reducing the direct impacts of climate change will save lives and money."

Public health makes climate action a priority

Public health is a critical reason to reduce climate risks as quickly as possible. At a time when the NHS is under pressure, reducing the direct impacts of climate change will save lives and money, but it will also have indirect health benefits which are rarely communicated. Insulating homes reduces cold-related illness and prevents mould and damp, linked to respiratory conditions. It helps those in fuel poverty, freeing up household income for other important purchases like food. Infrastructure for walking and cycling helps to keep people fit and cut air pollution. More green spaces help to absorb carbon from the atmosphere and contribute to greater mental wellbeing.

Within government, siloed working is a longstanding problem and, in the case of climate and health, there has been very little collaboration between departments. Civil servants working on net zero policy are not health experts, and the Department for Health and Social Care is not paying close attention to recent climate science. Public communication around climate change rarely alludes to its effect on health, and health messaging does not refer to climate change.

Joined up thinking will cut costs and improve outcomes

But integrating health and climate policy could inspire more innovative solutions and better outcomes in both areas, as well as cutting the rising cost of climate change related health impacts. A joined up and informed approach

> “This goes right to the heart of major public debates around our future healthcare system, societal wellbeing and equity.”

across central and local government, and by politicians, will help us to prepare and adapt to unfolding impacts and ensure the health service is ready for them.

We are pleased to present this essay collection, with contributions from experts in healthcare and health policy from the UK and farther afield. It explores aspects of the climate change and public health intersection. We hear both from those at the frontline of the profession and of climate change’s impacts on health, and about the health sector’s not inconsiderable contribution to climate change. What these essays together make very clear is that these two agendas can no longer be separated. This goes right to the heart of major public debates around our future healthcare system, societal wellbeing and equity, as well as the UK’s responsibility to nations suffering serious costs to health when they did not contribute to the problem causing them.

We hope this will kickstart new dialogue and debate around the need to recognise the inextricable relationship between climate and health in public policy.

Supporting community care for patients and planet

Dr Tamsin Ellis
GP and director of Greener Practice

Looking after patients from cradle to grave means general practice is seeing the impacts of the climate crisis unfold across communities and our patients' lifetimes. Record heat in the summer of 2022 highlighted how vulnerable our populations are, with children, the elderly and those with pre-existing conditions struggling with soaring temperatures. This is concerning, given that, in 2020, there were 2,985 excess deaths from heat in the UK and this is set to triple by 2050. Over the last decade we have also seen higher rates of Lyme disease and new vector-borne conditions such as tick-borne encephalitis becoming endemic to the UK. Another area of focus for general practice has been understanding the impacts of air pollution, which affects every organ in the body and causes up to 36,000 excess deaths per year in the UK.

GPs see the effects first hand

Those working in GP practices often live in or near to communities. We see first hand the detrimental impacts of the changing environment, particularly to those most marginalised. Health inequalities remain an important thread through community care, and a priority in the NHS Long Term Plan. With regard to the climate crisis, those already facing health inequalities are both least responsible and hardest hit by the changes. Populations are struggling with compounding impacts of the cost of

> “As flooding worsens over the next ten years, we know nine per cent of health centres are in flood risk areas.”

living crisis and environmental effects, for example fuel poverty and unequal access to healthy, affordable, sustainable diets.

Our estate is also at risk, as flooding worsens over the next ten years we know nine per cent of health centres are in flood risk areas, with many already struggling in premises unfit for purpose, let alone able to withstand extreme weather events. Flooding is also detrimental to our patients, impacting their mental health and causing displacement.

As sustainable healthcare becomes embedded in the new GP curriculum and awareness improves, it is important to note the pressures general practice is under. In 2022, there were 329 million appointments in primary care (almost a million patients a day) and, despite primary care providing 90 per cent of patient contacts, we receive less than ten per cent of NHS funding. As small businesses, we are struggling with capacity and being under-resourced, making it challenging to instigate practical change, based on theoretical knowledge.

We can help patients make greener choices

If well resourced, general practice could work collaboratively with public health campaigns to communicate, empower and support communities to become healthier and more environmentally sustainable.

This could involve informing and supporting greener choices for patients, prioritising the most vulnerable in our society. Funding for leadership roles across the four nations of the UK could support local knowledge for local national and international impact.

Global Action Plan, the environmental charity, provides an example of collaborative work in action. A pilot project, run from 2021 to 2022, provided online training on the causes

> “GPs have huge insight into the day to day difficulties communities have in facing the climate crisis.”

and health impacts of air pollution. Funded by the Department of Environment, Food and Rural Affairs (Defra), the project worked with 17 healthcare professionals across GP practices in the borough of Islington in North London alongside a public health campaign, as well as creating an England wide ‘clean air champion’ training programme for 43 healthcare professionals. The results showed that, following the training, healthcare professionals who reported speaking to patients about air pollution rose from seven per cent to 88 per cent. In Islington, 52 per cent of the patients who received advice from their GPs changed their behaviour as a result. These projects demonstrate the crucial role that healthcare professionals can play in supporting those vulnerable to the effects of air pollution and the importance of resourcing those working in general practice with information to empower and inform patients.

GPs have huge insight into the day to day difficulties communities have in facing the climate crisis and the factors which limit their ability to change. Therefore, we are pivotal to unlocking the community stories and understanding the personal events that shape our communities’ environments.

GPs are using their collective consciousness to impress change on NHS systems, councils and political systems which shape our environment. This has been shown by the evolution of Greener Practice, the UK’s primary care sustainability network which has grown to 34 groups across the UK and is reaching thousands of people concerned about the environmental impacts on health, and the harmful impacts of healthcare on the environment. This grassroots network has evolved to collaborate with integrated care systems to create primary care based green plans, despite significant funding challenges.

> “During the Covid pandemic many realised the importance of access to nature and green spaces.”

Prevention reduces the burden of disease

There are many co-benefits to green changes in community care. Healthcare can often be reactive, but a proactive preventative approach could also reduce the burden of disease in a changing environment. The 2020 *Sustainable health equity: achieving a net-zero UK* report, chaired by Sir Michael Marmot, outlined four areas of focus: minimising air pollution, building energy efficient homes, promoting sustainable and healthy food and prioritising active and safe transport. These changes could work towards a healthier environment for our patients and the planet.

During the Covid pandemic many realised the importance of access to nature and green spaces, as well as the need for these places for climate change adaptation and mitigation. A recent report by The Wildlife Trusts also showed economic viability stating that “for every £1 invested in regular nature volunteering projects there is an £8.50 social return”. GP practices have been working in various ways to improve access to green spaces for patients, both in the community and on GP practice sites. For example, Green Health Prescriptions in Dundee gives multiple nature-based options in the community as a realistic alternative to drug prescriptions or referrals to secondary care.

General practice has faced many challenges and continues to adapt to change. Responding to the environmental impacts on health is one of these. The importance of resourcing this work is vital to improve the nation’s health, reduce health inequality and protect the environment that we all rely on.

With thanks to Dr Veena Aggarwal, Dr Munro Stewart and Dr Sarah Williams for their contributions to this piece.

Addressing racism in climate change and health

Sonora English
Research assistant, climate and health justice research and engagement at UCL

The climate crisis is already a health crisis. Over the past year, direct health impacts of heat alone have impacted hundreds of thousands of people, with 2023 on track to become the hottest year since records began. Last year, the sixth hottest year on record, saw more than 61,000 people die between May and September in Europe due to record high temperatures. With temperatures likely to breach the critical threshold of 1.5°C above pre-industrial levels by 2027, the health crisis we are witnessing now is only just beginning.

Immediate and radical action is needed to address this crisis and it must begin by protecting those most affected. So, who is at the sharp end of this dual climate and health emergency?

The countries most affected by the climate crisis and related health impacts are concentrated in the Global South, with an estimated 98 per cent of the 400,000 climate change attributable deaths in 2010 occurring in Global South countries. Further, minoritised* people in both the Global North and South are disproportionately impacted. For example, within the UK, racially minoritised people are four times more likely to live in neighbourhoods that are at high heat risk compared to white people.

> “Racism is the context in which climate change and its health impacts are occurring.”

Racial justice should be at the heart of action

Thus, racial justice must be at the centre of action on climate change and health. This means addressing racial injustice and related systems of colonialism and racial capitalism that produce health inequalities. Such action is fundamental to addressing the root causes of the climate crisis, rather than actions that effectively put a sticking plaster on the surface of deep, festering wounds.

Inequalities in the health impacts of climate change are not inevitable or the product of some unidentified biological difference. Inequalities are created.

Discriminatory social structures such as racism and white supremacy devalue the lives, health and wellbeing of racialised people, facilitating their systematic exposure to higher health risks. Due to its structural nature, racism is not simply a factor that needs to be considered; it is the context in which climate change and its health impacts are occurring. In this context, racism and climate change interact to harm health and worsen health inequalities, causing minoritised to people bear the brunt of climate change, wherever they live (see TA Deivanayagam, 2023).

Geography does play a role in the greater exposure to extreme weather events in the Global South. However, the disproportionate vulnerability and impacts experienced across the Global South are the product of racism, colonialism and racial capitalism, as recognised by the Intergovernmental Panel on Climate Change. Colonialism and extractive economic systems, both of which are underpinned by racism, have undermined the ability of many Global South countries to adapt and quickly respond to extreme weather events. This is a legacy of colonial era economic extraction and neo-colonial policies including structural adjustment programmes, trade liberalisation and debt accrual policies that have deprived many Global

South countries of the financial resources necessary to protect their health during this emergency. As a result, where many Global North countries will be able to limit harm to health through costly adaptation measures, the cost to health in many Global South countries is paid with people's lives.

> "Centring on racial justice in action on climate change and health means breaking down harmful structures."

The climate crisis is a form of colonisation

Alongside the colonial roots of inequalities in health impacts, the climate crisis itself is a form of colonisation. Global North countries (USA, Canada, Europe, Israel, Australia, New Zealand and Japan) are responsible for 92 per cent of emissions over the safe planetary boundary of 350 ppm of carbon dioxide in the atmosphere. In other words, the same countries that have benefited from colonial and settler colonial projects and resource extraction have now colonised the atmosphere (see J Hickel, 2020). As demonstrated, this is at the expense of minoritised people around the world and the Global South.

Racism and colonialism not only shape and distribute the health impacts of the climate crisis; they are a fundamental cause. For centuries, these power structures have provided the justification and means for extraction and exploitation of land and racialised people for power and profit, and have facilitated the concentration of environmental and social harms in racialised communities, allowing these harms to go broadly ignored. Now, these same structures justify accepting large swathes of the Global South as sacrifice zones. Attempting to address the climate crisis without action to abolish racism and colonial power structures fails to address root causes. Instead, it encourages false solutions such as emissions offsetting and reliance on technologies yet to be developed (see T A Deivanayagam and R E Osborne, 2023).

Centring on racial justice in action on climate change and health means breaking down harmful structures and supporting healing. Reparative justice is central here, and can deliver accountability from those most responsible for climate breakdown, while repairing harm and supporting the creation of new social structures that support health and ecological wellbeing.

Redistribution of wealth and power is also essential, including through adopting new economic models that are not grounded in violence, extraction and growth. In pursuit of new economic models, the principles of the just transition and human rights must be upheld, with the health of those most affected by harmful power structures at the forefront.

[*] *Minoritised people are defined by S Selvarajah and colleagues as "individuals and populations, including numerical majorities, whose collective cultural, economic, political and social power has been eroded through the targeting of identity in active processes that sustain structures of hegemony".*

The Caribbean: a view from the frontline

Dr Caroline Allen
Board member of EarthMedic and co-author of the Lancet Countdown report, *Climate change and health in small island developing states*

Globally, the record-breaking temperatures of August and September 2023 have caused increasing numbers of people to reflect on the reality of climate change. People in the Caribbean are no exception. While tropical weather is generally hot, day and night time temperatures above the accustomed range, interspersed with heatwaves, challenge our usual ways to cool ourselves. Many in the Caribbean region are reporting symptoms of heat exhaustion, including fatigue, heavy sweating, a rapid pulse, anxiety, confusion and elevated body temperature. The region is becoming increasingly exposed to risks of other heat related illnesses, including heat rash, heat cramps, heat syncope (fainting or dizziness), heat stroke, triggering of acute health events including acute kidney failure and heart attack, and exacerbation of pre-existing non-communicable diseases, such as heart or lung disease.

Traditional means of coping with the heat include restricting heavy exercise to the early morning and late evening, and incorporating ventilation features, fans and air conditioning in buildings. These methods are more heavily used than ever, but they have never been accessible to everyone. Outdoor workers such as street vendors and construction workers have to face the heat and poverty is a major barrier. Most air conditioning systems aggravate climate change as they are powered by fossil fuel energy

“The Aedes aegypti mosquito, responsible for most illness from vector-borne diseases in the Caribbean, reproduces more rapidly in higher temperatures.”

and add to the urban heat island effect because hot air emissions from cooling systems get trapped between buildings.

Global recommendations to mitigate greenhouse gas emissions include the promotion of active transport, such as walking and cycling, and the development of ‘blue-green infrastructure’. Increasing the number of plants (green) and water features (blue) in the public realm combats heat, reduces CO_2 emissions and pollution, and provides a more pleasant environment, increasing opportunities for exercise and improving physical and mental health.

Active travel and exercise is much harder in the heat

In the Caribbean, the increasingly hot temperatures are a hindrance to the mass adoption of walking and cycling as substitutes for motorised transport. In Barbados, man-made canopies have been constructed in some areas to provide shade and shelter to walkers, but this is expensive. Planting more trees can help but must be done on a large scale to provide adequate shade and cooling to enable active transport and other outdoor exercise.

The design of water features must be given careful consideration, avoiding standing pools of water where mosquitoes and other disease vectors can breed. The Caribbean was a hotspot for the mosquito-borne chikungunya and Zika epidemics in 2013-16, and outbreaks of dengue fever have become more frequent as climate change has progressed. Climatic conditions have become ever more suitable to vector reproduction as temperatures rise. The Aedes aegypti mosquito, responsible for most illness from vector-borne diseases in the Caribbean, reproduces more rapidly in higher temperatures. Sea level rise and hurricanes have also increased the numbers of breeding sites.

> “In the 2016-21 period, there were six consecutive beyond normal Atlantic hurricane seasons.”

New patterns of precipitation are predicted as the region approaches 1.5°C above the 1860–1900 pre-industrial average, followed by overall drier conditions, interspersed with heavier downpours and more severe hurricanes as temperature increase reaches 2°C, which is projected to happen around the 2050s. Already, we are seeing unprecedented severe storms. In the 2016-21 period, there were six consecutive beyond normal Atlantic hurricane seasons; 2020 was the most active Atlantic hurricane season on record, with 30 named storms; 2017 saw hurricanes Irma, the strongest Atlantic storm on record, and Maria, which devastated Dominica and Puerto Rico. In 2019, hurricane Dorian devastated several islands of The Bahamas as it moved very slowly across them over three days at category three to five strength. These hurricanes are becoming even more destructive due to amplification of storm surges by climate change induced sea level rise and loss of natural barriers, including coral reefs (damaged by ocean warming and acidification) and mangrove forests (destroyed by coastal development and pollution).

Island geography can add to health risks

The varying topography of Caribbean countries brings a variety of risks from sea level rise, changes in marine ecosystems and hurricanes. Flat islands such as The Bahamas experience saltwater intrusion of water sources, harm to beaches by sargassum seaweed and gradual or sudden infrastructure destruction. A factor in the massive devastation of Dominica by hurricane Maria was its mountainous terrain, which caused rainwater to cascade down hillsides, destroying bridges, houses, health centres and electricity, water and communications infrastructure. Trees and farmland were destroyed by wind and rain. Impacts on health last long after the hurricane. Dominica, well known for the quality of its locally grown fruit and

vegetables, had to rely almost entirely on imported food of lower nutritional quality for over a year.

A study in Puerto Rico estimated that the death toll from hurricane Maria was 70 times higher than official estimates, which were based on deaths caused by forces related to the event, such as drowning and trauma. The additional deaths in Puerto Rico were attributed to infectious diseases (eg waterborne infections due to damaged water supply and sanitary systems) and non-communicable diseases left untreated because of lack of access to medical care due to damaged infrastructure.

Caribbean countries are small island developing states with few resources to adapt to and mitigate climate change. They are on the frontline of its impacts. In the aftermath of hurricane Maria, Prime Minister Roosevelt Skerritt of Dominica said to the UN General Assembly that his country was like a war zone. He pointed out, “We as a country and as a region did not start this war against nature. We did not provoke it. We have made no contribution to global warming that can move the needle. But yet we are among the main victims.” Nevertheless, Caribbean governments and civil society organisations are increasingly engaged in education, adaptation and mitigation activities to reduce their carbon and environmental footprints.

Industrialised countries with high levels of greenhouse gas emissions have a responsibility to reduce them while providing technical and financial assistance to those countries at the sharp end of climate change and its health impacts.

“Caribbean governments and civil society organisations are increasingly engaged in activities to reduce their carbon and environmental footprints.”

Health professionals should take the lead on the link between diet and climate

Dr Shireen Kassam, MB BS, FRCPath, PhD, DipIBLM
Consultant haematologist and honorary senior lecturer at King's College Hospital, London

Our food system is at the centre of the climate and ecological crises. And, as the Global Burden of Disease study has shown, it is also the driving force behind the epidemic of chronic ill health, with dietary risk factors now the leading cause of chronic conditions and premature death. Our diets are too high in meat and ultra-processed foods and insufficient in the healthy plant foods that promote health. Although shifting to a plant-based diet is one of the single most impactful actions we can take to improve our own health and that of the planet, healthcare professionals and institutions still shy away from addressing this with their patients, colleagues and communities.

Where does this reluctance stem from? Reasons cited include a disbelief that people are willing to change their eating habits. But public research, like that by B Whittall, et al, reported in the journal *Appetite*, show this may not be true. Armed with the facts, people are motivated to make the necessary changes. In the hospital setting, one 2019 US study showed it would be acceptable to hospital patients to remove processed red meat, given the causal link with bowel cancer. In my own hospital, when surveyed, most patients did not object to the idea of red and processed meat being taken off the menu.

> “In a similar way to restrictions placed on tobacco smoking and alcohol consumption the unfolding health and climate disaster may justify a similar limitation.”

Modern diets have big health and climate impacts

Our diets have, in fact, changed hugely over a very short period, and not in a positive way. The UK diet is now predominantly composed of ultra-processed foods, whereas just 50 years ago we were still cooking meals from scratch at home. There is a reluctance by the government to limit choice for fear of being considered a ‘nanny state’. Yet, when consuming certain foods is harming our health and that of the planet, this may be justified. In a similar way to restrictions placed on tobacco smoking and alcohol consumption, neither of which is of course allowed in a healthcare setting, the unfolding health and climate disaster may justify a similar limitation. Studies show that when healthy, affordable, climate-friendly food choices are presented in an appealing way, people don’t, in fact, feel restricted and opt for them either consciously or subconsciously.

The NHS was the first healthcare system in the world to declare a climate emergency, in recognition of the fact that the climate crisis is “the biggest health threat facing humanity”. With almost 1.3 million employees and 140 million meals served to hospital patients each year, switching to a plant-based menu could be the simplest way to reduce the health service’s food-related carbon footprint by more than half. £633 million is spent on inpatient food provision; yet, according to one study reported in *The Lancet* in 2021, a plant-based diet would cost the NHS a third less in food costs. If the government helped the service move away from meat and dairy towards healthy plant-based foods using subsidies, it would help to reduce the cost further.

> “The UK dietary pattern, adopted globally, would take seven planets to support it.”

New York’s hospitals are showing what’s possible

A real world example, showcasing what can be achieved, comes from New York. The city’s Mayor Eric Adams has championed plant-based meals at 11 city hospitals. This has led to 60 per cent of meals consumed being plant-based, with reductions in costs and excellent patient satisfaction. Similarly, other civil society organisations here and in the US, from universities to Michelin starred restaurants, have made bold menu changes, from removing red meat completely to making plant-based milk alternatives the default and some moving to fully plant-based menus. But the NHS has shown little ambition to follow suit.

The best available evidence informs us that, without food system change to reduce animal agriculture, we cannot meet our climate and ecological commitments and limit global warming to below the Paris Agreement’s 1.5°C threshold, let alone keep it within 2°C.

But, if we shift to plant-based diets, we can still feed a projected global population of ten billion people, while keeping the food system within planetary boundaries, as was outlined in the 2019 EAT–Lancet Commission report on healthy diets from sustainable food systems. This said it doesn’t have to be 100 per cent plant-based but, if we do eat animal-sourced foods, these should be limited to less than 15 per cent of our calorie intake to help keep agriculture sustainable. This, for example, means a maximum of one portion of red meat, two portions of poultry and three eggs per week.

The UK diet is highly unsustainable

High income countries, like the UK, need to make the greatest changes, since our current dietary pattern, adopted globally, would take seven planets to support it.

> “A plant-predominant or plant-exclusive diet is associated with significant health benefits.”

On this basis alone, an 80 per cent reduction in animal foods, simultaneously increasing the consumption of whole plant foods, is required.

The National Food Strategy’s findings in 2021, although more moderate, broadly align with this recommendation. Its report reinforced the message that a plant-predominant or plant-exclusive diet is associated with significant health benefits, including major reductions in cardiovascular disease, type two diabetes and obesity, certain cancers and dementia. If we ate according to the Eat Lancet Planetary Health Diet, for instance, it is estimated we could prevent 11 million premature deaths from diet-related causes.

Promoting plant-based menus in hospitals, and influencing the national diet more widely, would bring other major benefits for healthcare. Eliminating reliance on animals for food would vastly reduce the use of antibiotics, reducing serious health risks around antimicrobial resistance. And three quarters of all new and emerging infections with pandemic potential transfer to humans from animals. The next pandemic is predicted to arise from industrialised animal farming and will probably be a type of bird flu.

Health professionals are gradually being educated

Training and educating healthcare professionals and the public in the risks and advantages is taking place with the recommendation for a Sustainable Healthcare Curriculum for medical students, which highlights the importance of plant-based diets. But implementing recommendations takes time. It is often left up to civil society organisations to shift the dial. My organisation, Plant-Based Health Professionals UK, teaches a ‘Cooking for the Climate’ course in three medical schools. We run an accredited course at the University of Winchester and have published a textbook on plant-based nutrition in clinical practice.

It is promising that some doctors now refer to the need for dietary change as “a moral imperative” (see: S C Hull, et al, ‘Are we what we eat? The moral imperative of the medical profession to promote plant-based nutrition’ in the *American Journal of Cardiology* earlier this year). Health professionals pride themselves on evidence-based practice and have a unique authority in society, so they are in a prime position to influence and show leadership. We have come a long way since doctors advertised cigarette smoking 70 years ago. We need to be on the right side of history now when it comes to food.

Greener patient care is within our gift

Clare Nash, RN, MSc
Member of the UK Health Alliance on Climate Change

The climate emergency poses a major threat to our health as well as to our planet. Yet, by delivering healthcare, we are collectively contributing to about four to five per cent of the UK's total carbon emissions.

On 1 July 2022, the NHS became the first health system to embed net zero into legislation, through the Health and Care Act 2022. The *Delivering a net zero National Health Service* report is now issued as statutory guidance and examines a number of areas critical to carbon reduction including decarbonising the supply chain, which contributes at least 62 per cent of the NHS's emissions.

As healthcare providers, almost every patient contact requires use of a clinical product or medical device and, collectively, those items are significantly contributing to the greenhouse gas emissions of the sector.

Current NHS supply systems are very wasteful

The wide range of products we use include everything from personal protective equipment (PPE), a syringe and needle, a blood pressure monitor, to a knee replacement or a surgical robot. Such products come with their own carbon footprints, contributing to air pollution through raw material extraction, manufacture, transport, use and disposal.

> “The greenest care is the care we don’t need to deliver.”

Many of the interventions promoted by NHS England (2022) are based on moving from a linear, wasteful economy, in which the resources we use result in non-recyclable waste, to a circular one, in which materials are reduced, reused, remanufactured or recycled. A circular economy can also extend the useful life of products.

Healthcare providers can all contribute to delivering greener care through considering the lifecycle of the products we use, and how, through reducing use, moving away from single use to reuse and buying locally.

The greenest care is the care we don’t need to deliver, and it’s also vital that we put at least the same effort into health promotion and disease prevention as we do into treating illnesses and injury.

Sustainable healthcare requires us to use resources to meet the needs of people today, whilst also preserving the environment and resources for the needs of future generations. Yet, 35 years after the groundbreaking Brundtland report we are still calling for urgent action to reverse global environmental degradation and rising poverty.

There’s a big opportunity to cut climate impact

Responsibility for sustainability has largely been an ‘estates’ role, focusing on energy use, water and waste. However, the greatest opportunities for change are in decarbonising supply chains, including reducing the use of medical devices and clinical products, and moving to reuse where it is possible and safe to do so. The vast majority of greenhouse gas emissions arise from the products that nurses and other healthcare practitioners use in their practice every day.

> “Informing frontline teams about what causes the most emissions is a good starting point.”

Informing frontline teams about what causes the most emissions is a good starting point to educate on how to reduce the climate impacts of care. Below are the top 20 sources of greenhouse gas emissions in healthcare, identified by the Sustainable Development Unit in 2017.

The top 20 greenhouse gas emitting clinical products

- Blood sample tubes
- Electrode gel
- Bandages, dressings & gauzes
- Examination gloves
- Catheters, tubing and drains
- Hearing aids
- Clinical waste containers
- Medical packs
- Caps, gowns, masks & overshoes
- Medical pulp products
- Carbon monoxide monitors and spirometers
- Needle free connection systems
- Crutches, walking sticks
- Polythene aprons
- Disposable incontinence
- Patient assessment electronic devices
- Disposable medical holloware
- Single use surgical instruments
- Drapes
- Syringes and needles

> “The greatest risk to the planet is our inaction.”

Nurses are well placed to help change the system

There are around 724,000 nurses, midwives, dual registrants and nursing associates in the UK. As the largest contingent of the health and care workforce, nurses are at the forefront of providing care to communities and people affected by climate change, and are best placed to tackle the supply chain emissions from clinical products.

As the public’s most trusted profession, and implicit in the Nursing and Midwifery Council’s code of conduct, nurses have a duty to reduce both the profession’s carbon emissions, and support our employers and colleagues to be more aware of the environmental consequences of their actions.

The more conversations we have with each other about getting to net zero, the more people we can recruit to support this work, whether a family member or friend, or a colleague, manager or patient. The important thing is that change starts with us. The greatest risk to the planet is our inaction. Sometimes we can feel overwhelmed by the scale of the global crisis, leaving us feeling helpless and thinking it is too difficult and that small changes will not make a difference.

But NHS staff have shown what a resilient and determined workforce they are and, like the fight we are having to save our NHS, so we must fight for the future of our planet, as it is the only one we have.

Climate and health experts need to put their heads together

Alice Bell
Head of policy, climate and health at Wellcome

As the US climate envoy John Kerry told the World Health Assembly in May: “There’s really no polite way to put it, the climate crisis is killing people.”

It may be an obvious message to some, but it’s also one climate advocates sometimes need to poke themselves to remember. It is all too easily get pulled into details of greenhouse gas emissions, economics and engineering and forget the reason many of us joined the movement in the first place: the risk climate change poses to human health and wellbeing. Kerry himself admits he didn’t always appreciate the health dimensions of the climate crisis, but was persuaded by his daughter, global health expert and medical doctor Vanessa Kerry.

Health must be at the heart of climate action

This year’s UN climate talks promise to explore the interactions of climate and health policy in depth for the first time. At the Petersburg Climate Dialogue in Spring 2023, COP28 president Sultan Al Jaber announced the inaugural COP ‘health day’, including a high profile climate and health ministerial meeting.

This hasn’t come from nowhere. There are some COP veterans in the climate and health space, including well established players like the Global Climate and Health Alliance, Healthcare Without Harm and the Lancet Countdown. Indeed, the World Health Organization (WHO)

> “Climate can’t be separated from health any more than it can from economics or energy.”

first published a report on The potential health effects of climatic change back in 1990. As climate impacts have intensified, so have efforts to build integrated approaches to climate and health policy. Health commitments made at COP26 in 2021 led to the establishment in 2022 of the Alliance for Transformative Action on Climate Change and Health, which now boasts over 65 members.

At COP27 the WHO’s pavilion provided a focal point for health discussion, complete with a large, eye catching silver art installation connecting nature and the human body evoking both branches of a tree and bronchi of the lungs. The COP28 in December 2023 has the fresh political space of a health day, with the return of the WHO health pavilion, offering a bolder and more enticing invitation for climate wonks to engage with health issues, and for health experts to join climate action discussions. It is vital people in both climate and health policy take up this invitation to work together.

Working in silos won’t produce the solutions we need

It’s all too easy to see health and climate as separate entities, competitors even, vying for political attention and funding. But climate can’t be separated from health any more than it can from economics or energy. At the same time, health cannot afford to ignore climate change.

All over the world, health goals are being pressed by climate change, be it disease eradication, maternal and child health or mental health. Pretty much anything necessary to improve human health is now harder because of climate change. And yet, all too often, health policies, research and education are still being planned as if global temperatures were static, when they very clearly are not.

Just as health policy needs an understanding of the changing climate, we can’t build strong climate policy

> “If we simply weigh climate policies in terms of the flow of greenhouse gas emissions and finance, we risk coming up short.”

without taking the risks and opportunities for human health and wellbeing fully into account. If we’re serious about climate action, it’s going to require massive social, economic and cultural change, and it’s vital those changes are enacted in ways that maximise health and wellbeing, just as much as we need to ensure they are equitable, popular, fundable and technical feasible. If we simply weigh climate policies in terms of the flow of greenhouse gas emissions and finance, we risk coming up short, creating new stumbling blocks to progress on climate goals, or even whole new problems for the world.

One obvious role for health in climate policy is to help everyone understand the size and shape of the problem. Advocates for climate action expend a huge amount of energy trying to get people to care about relatively abstract points on a temperature scale or tonnes of carbon dioxide, when we could more directly be talking about costs to human health. Health researchers and spokespeople have a powerful role to play in helping everyone grasp the various risks coming our way.

Health is also an important dimension for climate decision makers puzzling out positive and practical ways forward. The health co-benefits of mitigation policy are well understood, but they still tend to be rather under exploited politically. We should be routinely and actively accounting for these benefits, shouting about them wherever we go and taking integrated health and climate approaches to food, transport and energy policies across the board. Equally powerful is the role the health community can play in adaptation. The climate crisis kills, but the health community is especially skilled when it comes to combating killers. It’s via health research, people and infrastructure that we’ll find some of the most powerful ways to protect each other from the storms ahead.

> “It is via health issues that most of us will first feel the climate crisis.”

It is via health issues that most of us will first feel the climate crisis. It is, in the words of Dr Githinji Gitahi, CEO of the Africa Medical Research Foundation, AMREF, “the human face of climate change.” It’s only by bringing climate and health policy together – by listening to each other, connecting expertise and ideas – that we’ll work out how best to use that human face, and best protect it. Climate and health sciences are two of the greatest achievements of humanity, it’s time to bring them together.

We can’t ignore the linking factor between planetary and human health

Libby Peake
Head of resource policy, Green Alliance

In the early days of the Covid-19 pandemic, comparisons were frequently made between the response induced by the pandemic and that required to tackle climate change. Notably, commentators frequently observed that effectively addressing both would require international co-operation and state intervention, in ways that previously seemed impossible. Dealing with both would also require changes in individual behaviour for the public good, something that was particularly in evidence in the early days of lockdown.

But the connection goes much deeper. Something that didn’t get anywhere near as much attention as it should have done, amongst all the column inches and airtime devoted to the topic, is that both the pandemic and climate change don’t just require similar responses, they are driven by the same fundamental factor. Overconsumption of the world’s limited resources is devastating planetary and human health.

According to the UN, half of global emissions and over 90 per cent of biodiversity loss are driven by resource extraction and processing, which includes materials, fuel and food. Increasingly, meeting soaring demand for these resources involves destroying pristine environments like tropical rainforests, and how could it not, when global resource consumption has tripled since 1970 and is still on the rise? The destruction occurs when developers directly

> “Destroying highly biodiverse ecosystems exposes us to unknown pathogens.”

extract materials from the land, through logging and mining, as well as when they convert land to other uses, such as for cattle farms and soy and palm oil plantations.

Environmental damage creates new health risks

Destroying highly biodiverse ecosystems doesn’t just increase the climate and nature crises, it also exposes us to unknown pathogens. Animals are responsible for three quarters of emerging infectious diseases, according to the US Centre for Disease Control and Prevention. Many unknown pathogens will be harboured by the species displaced and disrupted by increasing resource extraction and changing land use. In 2018, just before the Covid outbreak made us all more aware of the risk of ‘spillover’, whereby pathogens jump from animals, an article in the *Bulletin of the World Health Organization* estimated that birds and mammals carry more than 1.6 million viruses that could potentially make the leap to humans. Compared to just over 260 known to affect humans today, that means we’re still unaware of 99.9 per cent of the viruses that could cause future epidemics and pandemics. And, it’s worth noting, we may have got off relatively lightly with the mortality rate of Covid-19, compared to a disease like Ebola, which, like HIV, is thought to have made the jump from non-human primates to people. Ebola can kill between 25 and 90 per cent of those it infects and on average has a 50 per cent fatality rate.

Worse, animals that are particularly likely to pass on diseases to humans – rats and bats, for instance – thrive in the disrupted environments left by reckless resource extraction. Kate Jones, chair of ecology and biodiversity at UCL, has said: “Simpler systems get an amplification effect. Destroy landscapes, and the species you are left with are the ones humans get the diseases from.” And the UN has been clear that climate change itself looks set to increase the emergence of some new zoonotic pathogens,

> “Because these twin threats share a common root cause, we have an opportunity to maintain planetary and human health with one solution.”

further threatening human health. In its *Preventing the next pandemic* report in 2020, it noted: “Many zoonoses are climate sensitive and a number of them will thrive in a warmer, wetter, more disaster-prone world foreseen in future scenarios.”

We could kill two birds with one stone

This inextricable link between the planet’s health and human health may sound terrifying, but it could also be viewed in a positive light. Because these twin threats share a common root cause, we have an opportunity to kill two birds with one stone. Or, more positively, to maintain planetary and human health with one solution. The main overarching approach that will solve both problems has got to be respect for the natural support systems that enable both to thrive and, that means ending reckless resource use.

That’s obviously a lot easier to say than it is to deliver, but we know what needs to be done. Changing diets to decrease land conversion for growing animal feed is an obvious move, as should ending the scandal whereby a third to half of global food produced is wasted. And some high impact lifestyles will need to change. But many of the solutions lie in shifting design, business models and infrastructure to ensure that, at every lifecycle stage, products and the materials they are made of are able to stay in use and hold their value for as long as possible. An economy predicated on ending waste and centred around expanding activities like rental, reuse and refurbishment will ensure people can access high quality products that don’t require new resource extraction. The fact that human health and planetary health can be addressed with this one fundamental shift should surely make it a major priority in improving our chances of tackling both existential threats.

Green Alliance
18th Floor
Millbank Tower
21-24 Millbank
London SW1P 4QP

020 7233 7433
ga@green-alliance.org.uk

www.green-alliance.org.uk
@GreenAllianceUK
blog: www.greenallianceblog.org.uk