



Environment

How philanthropy can help communities look after the environment and ensure the region rises to the challenge of climate change





www.communityfoundation.org.uk/vitalsigns

About this Vital Signs report

Vital Signs is a Community Foundation resource presenting information about a range of issues affecting our area. It draws on statistics, published research, local expertise and knowledge gathered through funding across the region to 'take the pulse' of communities and inform a better philanthropic response to their needs. We see it as the start of a conversation and would love to hear your views about the ambitions of local communities and what more philanthropy and charitable funding could do to meet them.

This is our third Vital Signs North East 2024 report. It examines how philanthropy can help communities look after the environment and ensure the region rises to the challenge of climate change.

Vital Signs will explore ten themes during 2024:

Economy – How can philanthropy help build a strong regional economy where everyone benefits from increased prosperity?

Education – What opportunities can charitable funding create for people to learn, develop skills and achieve their potential?

Health – How can charitable funders improve the overall health of our region, and reduce differences in health outcomes between richer and poorer people?

Homes – Can philanthropists help ensure that there are decent, secure homes for everyone who needs them?

Environment – What support can philanthropy provide to help communities look after the environment and ensure the region rises to the challenge of climate change?

Access – How can philanthropists help people overcome the barriers they face in getting access to opportunities and services?

Community – What can charitable giving contribute to the task of ensuring our communities are strong, welcoming and able to cope with the challenges of uncertain times?

Culture – How can philanthropy help foster the North East's unique culture, from iconic theatres, museums and concert halls to diverse community arts, heritage and sports groups?

Justice – How can charitable funding support work to protect people from crime, prevent discrimination and give opportunities for offender rehabilitation?

Living standards – How should philanthropic funds support those faced with a decline in living standards due to economic pressures and rising costs?

In addition to reporting on each of these themes we will produce a brief printed summary of our findings.

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"I think we can turn things around. We have the knowledge. The skill. We know how to do it. But will we? Because this is the big thing." Jane Goodall, 2022

A note on terminology

In this report we use the following geographic terms:

"The North East" or "The North East region": this refers to the North East English region which will soon cover the Tees Valley Combined Authority and new North East Mayoral Combined Authority

Tees Valley: this refers to the area covered by the Tees Valley Combined Authority comprising Darlington, Hartlepool, Middlesbrough, Redcar & Cleveland and Stockton-on-Tees

The North East sub-region: this refers to the area to be covered by the new North East Mayoral Combined Authority comprising Northumberland, Newcastle-upon-Tyne, North Tyneside, South Tyneside, Gateshead, Sunderland and County Durham.

Executive summary

This publication is one of a series of Vital Signs reports that the Community Foundation Tyne & Wear and Northumberland is publishing in 2024 looking at the needs and aspirations of communities from Northumberland to Teesside and how philanthropy can help meet them.

Our focus here is the environment and how charitably-funded local action can go some way towards addressing three main challenges that we face.

The first of these is climate change. In 2023, data from the EU climate service showed global temperatures at 1.5 degrees C above preindustrial levels across the entire year, whilst ocean temperatures also reached new heights.ⁱ Largely because of fossil-fuel consumption, but with other greenhouse gas producing activities and deforestation also playing a part, we are already experiencing climate impacts which will become more extreme unless emissions are curbed. The heatwaves, droughts, storms, wildfires and floods of 2023 give us a sense of what this might mean for life on our planet.

The second is the decline in biodiversity. This is the loss of communities of living things and their environments (ecosystems) and genetic diversity on land and in rivers, seas and oceans. It is being driven by human activities ranging from building, forestry and agriculture to pollution and overexploitation. It will accelerate if climate change continues unabated and could have massive repercussions. Biodiversity is essential to human life – the quality of air we breathe, food we eat, materials we use, our safety from risks like extreme heat or flooding, our health and the medicines we rely on all depend upon it. Finally, the third is the range of environmental issues that present immediate challenges to us in our everyday lives. These include air and water pollution, litter and waste management and access to green spaces. All can have a significant effect on both our health and quality of life.

According to the Living Planet Report (World Wide Fund for Nature, 2022) the connected problems of climate change and the loss of biodiversity combine to constitute an emergency. But just as the latest TV documentary about Antarctica or the Amazon proves that there are still natural wonders worth saving abroad, a day at Seal Sands, in the Durham Dales or off the Farne Islands should remind us that the same is true closer to home. Much can be done locally to address the root causes of climate change or protect local ecosystems - and every little bit of philanthropic support for this does something to chip away at the larger problems. And alongside this, action on more immediate local issues – from clearing the undergrowth from paths around the local green space to educating people on the benefits of recycling - helps to build community resilience and a commitment to environmental issues.

So, in this report we have sought out areas where there is scope for optimism, and concluded that there are three areas where philanthropists and charitable funders can make a real difference.

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The Community Foundation believes charitable funding can have a significant impact in three key areas:

Providing support to address local environmental issues such as:

- activities that increase awareness and a sense of agency within communities in relation to climate change, loss of biodiversity and other environmental problems;
- projects run by specialist environmental charities and other local civil society organisations that tackle environmental issues directly within communities, with a particular focus on encouraging partnership working between them;
- work on poverty, housing, education, employment, health inequalities and community cohesion that addresses the lack of resilience within disadvantaged communities to climate change;
- capacity building for community organisations wishing to contract for the provision of environmental and related services.

Enabling people and communities in the North East to benefit fully from the opportunities that the 'Green Industrial Revolution' presents. These range from the possibility of contributing to the development and manufacture of new technologies (e.g. renewables and electric vehicles) to the prospect of employment in areas of skills shortages such as retrofit and heat pump installation. Such help could include:

- vocational programmes that encourage young people to develop an interest in Science, Technology, Engineering and Mathematics (STEM);
- support for those with exceptional ability in STEM subjects to realise their full potential, particularly if they are from disadvantaged backgrounds;
- funding for vocational support for young people not in education, training or employment (NEET), adults furthest from the labour market and groups at risk of social exclusion.



Ensuring that communities have a voice on environmental issues in particular by enabling charity sector infrastructure organisations, and civil society organisations working in the environmental space, to work with other community organisations to support an independent voice for communities in relation to them. In our view, this is essential to ensure that consultation on environmental matters includes as broad a range of stakeholders as possible, especially those whose voice is less often heard in such processes. In recommending this we are mindful of the exciting opportunities being opened up as a result of devolution.

How philanthropy can help communities adapt to climate change, protect biodiversity and address local environmental issues gap

The North East faces several environmental challenges. We think it is important to place these in a wider context, as any local action is very much related to issues of a global scale. It would be easy to let the issue of climate change dominate our thinking. And, indeed, it presents an existential challenge, exacerbating a lot of our other environmental problems and demanding to be treated as an emergency. But although it provides our starting point, it is not the only pressing issue we will consider. We will also look at the related and alarming reduction in biodiversity and a range of other environmental issues affecting quality of life in our communities.

Climate change

In 1908 the Swedish scientist Svante Arrhenius wrote a book called 'Worlds in the Making' to popularise his theory that by burning fossil fuels humanity might cause the earth to warm by increasing levels of carbon dioxide (CO2) in the atmosphere. In doing so he was well ahead of his time. But in reality, the process he described had already been underway for much of the previous century, fuelled in no small part by the inventors, industries and coal of North East England.

The basic science behind the phenomenon Arrhenius described is straightforward. Gases in the atmosphere act like the glass in a greenhouse, absorbing the sun's heat as it radiates from the earth and preventing it from escaping into space. Increasing the level of such gases amplifies the effect. The advent of the industrial age (from the mid-eighteenth century) led to additional 'greenhouse gases' being pumped into the atmosphere: mainly carbon dioxide from burning fossil fuels like coal and later oil with the invention of the automobile, but also methane and nitrous oxide from agriculture and industry. Inevitably, from around 1850, atmospheric temperatures began to increase, and this process of global warming has continued to the present day.

Our region's economic fortunes began to change for the worse not long after Arrhenius's book was published. The record for North East coal production was set by 1913, and a gradual decline in the region's energy-intensive heavy industry accelerated as the century progressed culminating in large scale de-industrialisation during the 1980s. Although the regional economy has now partially recovered, our table of indicators in Appendix 1 shows the North East's contribution to greenhouse gas emissions has fallen rapidly since 2005 to become the lowest of any English region at around 5.3%.

The industrial era - in which the North East played a pivotal role - delivered many longterm benefits. It provided the foundation for modern Western economies capable of providing a standard of living that our ancestors, along with the current inhabitants of many countries across the globe who were more burdened than benefited by contact with Europe, could scarcely hope to enjoy. But this was achieved at the cost of a 40% increase in atmospheric CO2 since 1850 and a global rise in temperatures of more than 1 degree C in 2011-2020 compared with 1850-1900." Arrhenius predicted that only good things would emerge from such a development - not least the gradual thawing out of his native land! But we now know that the consequences of rapid disruption to the earth's complex climate is both damaging and dangerous.

Our understanding of the causes of global warming and its impact increased significantly as the twentieth century progressed, and in particular following the development of climate modelling in the late 1960s and advances in 'extreme event attribution' after 2000. That uncontrolled greenhouse gas emissions represented a global environmental threat became the consensus view of the scientific community. In particular, there was a fuller understanding of the potential scale of global warming's impact: disruption to ocean currents triggering massive climate changes; an increase in heatwaves, wildfires, droughts and storms threatening food security and prompting mass population movements; rising sea levels causing the loss of large areas of habitable land and a catastrophic decline in biodiversity due to loss of habitats and ocean acidification; changes in the nature and extent of diseases affecting humans, animals and plants.^{III} And alongside this came a greater awareness of the impact of overconsumption and changes in land-use (e.g. urban development, intensive agriculture, deforestation) on the level and impact of emissions.iv

And increasingly we are learning from experience about the effects of climate change. The World Meteorological Association report on the **Provisional State of the Global Climate 2023** noted that the year saw an unprecedented level of atmospheric greenhouse gases, ocean and air temperatures as well as an extraordinary range of extreme weather and climate events. And it also highlighted that, although global warming and climate change is affecting us wherever we live, it is those countries that have gained least from the economic developments that caused it which experience its worst effects. The International Institute for Environment Development has noted that *"over the last 50 years, 69% of worldwide deaths caused by climate-related disasters were in LDCs [least developed countries](despite being hit by 18% of disasters and home to only 13% of the world's population)." ^v This is despite contributing little more than 1% of global CO2 emissions.^{vi}*

A global injustice thus lies at the heart of the climate emergency. Of course, this report is concerned primarily with North East England and the role of philanthropy here, and there are certainly regional issues of climate injustice that we will explore below. But this does not preclude us from recommending that philanthropists and charitable investors, whatever their focus, should inform their work with an awareness of the need to address the unfolding catastrophe now affecting billions of the world's poorest people in Africa, Asia, Central and South America, small islands, the Arctic and many of the world's indigenous communities. Charity may begin at home, but it can no longer be confined to it.



Three reasons to be optimistic about the environment

It's not too late: the **Living Planet report** concluded that "we have the knowledge and means to address climate change and biodiversity loss." **The Kunming-Montreal Global Biodiversity Framework (2022)** agreed by the United Nations Biodiversity Conference (COP15) links these two issues and sets a pathway to halting the loss of global biodiversity by 2050.

'Net zero' is becoming central to the planning of government and

business: this is the target of reducing greenhouse gas emissions to a level where they can be re-absorbed from the atmosphere naturally. Around 91% of global GDP is now covered by national government net-zero targets, opening huge commercial possibilities, and major corporations from Microsoft and Unilever to Nissan and Siemens are mobilising to take advantage of what the UK government calls "the economic opportunity of the 21st century."

Public awareness of our environmental problems is high: 64% of adults questioned in the 2021 **British Social Attitudes Survey** recognised the danger of climate change, and 40% were very concerned about the environment. **A major study by Natural England in 2019** found that two-thirds of those surveyed were worried about biodiversity loss. Other issues often affect the overall priority or urgency we afford to the environmental challenges we face, but nevertheless there is a growing commitment to action. In the 2021 survey cited above, 75% of adults had made some lifestyle changes out of concern for the environment.

For more positive environmental coverage visit: **https://happyeconews.com/** For the case against optimism visit: **https://www.jonathonporritt.com/mainstream-climatescience-the-new-denialism/**



By the early 1990s growing awareness of the existential threat posed by climate change had resulted in the initiation of international action to mitigate or reverse its effects under the auspices of the United Nations. From 2005, the Kyoto Protocol committed governments in industrialised countries to control greenhouse gas emissions and set a framework for measuring progress; a decade later the Paris Agreement linked this to a goal of keeping warming to well below 2 degrees C above pre-industrial levels and pursuing efforts to limit it to 1.5 degrees C. In 2023, parties to the agreement met in Dubai to take stock of progress on measures designed to address climate change: notably by reducing emissions significantly by 2030 by phasing out fossil fuels in favour of greener energy, building resilience to a changing climate and supporting the world's most vulnerable countries. Significantly it also linked climate issues to concerns around biodiversity and pollution.

The **UK Climate Change Act 2008** commits us to cut emissions to net zero by 2050. This is the point at which greenhouse gas emissions are negated by natural and/or human-caused processes. Policies were set out in the **Net Zero Strategy** (2021) and **Powering Up Britain: The Net Zero Growth Plan** published in 2023, by which point national emissions were 48% less than in 1990.

The Net Zero Strategy was upbeat. It signalled a desire for the UK to lead a 'Green Industrial Revolution' focusing on reducing emissions in particular through the adoption of new net-zero-friendly technologies. It set out an ambition for power generation, fuel sources, industry, domestic and commercial heating and transport to be decarbonised whilst carbon capture and recycling was boosted. But it was also wary of popular opinion, stressing that shielding consumers and vulnerable groups from excessive sacrifice was a priority. The Growth Plan is somewhat more detailed and reflects both the changing international context following the invasion of Ukraine by Russia (a major supplier of fossil fuels to western Europe) and the focus on

extending the agenda to include biodiversity and pollution that would be agreed later that year in Dubai. But, as important, it placed even greater emphasis on the transition to net zero as an economic opportunity – indeed the £1-trillion *"economic opportunity of the century."*

And there is no doubt that there is a strong case for doing so. The extension of national government net-zero targets to cover 91% of global GDP - up from 68% in 2020 - has the potential to drive a race to develop and adopt low-carbon technologies, materials and products to improve efficiency, cut costs and exploit new markets.vii Somewhat controversially, these include carbonoffset schemes that enable companies to compensate for their emissions by funding projects that reduce them overall like renewable energy and reforestation.viii As the report stated the ambition was to exploit this opportunity - for 'green and growth' to go hand in hand – by encouraging targeted public and private investment in low-carbon technologies such as renewables, hydrogen, carbon capture, nuclear, sustainable materials, energy storage, clean transport and heat. And the benefits of this were not seen as accruing solely to the more prosperous regions of the country, with opportunities identified for those in need of 'levelling-up' like the North East. Is it possible that new clean industries like hydrogen hubs or wind turbine and electric vehicle manufacture will reinvigorate our regional economy by solving a problem its old carbon-intensive industries had once helped to create?

But, again, there seemed to be concerns, with the cost-of-living crisis ongoing, about whether the public could be kept on board. By the end of 2023, the Prime Minister was outside Number 10 promising *"a more pragmatic, proportionate, and realistic approach to meeting Net Zero that eases the burdens on working people,"* and a further softening of climate commitments may occur in the preelection period.^{ix} Is the public sufficiently concerned about climate change to accept the measures that might contain it? In 1990, the issue was certainly considered less of an immediate priority than it is today. For decades since, despite opposition from vested interests within the fossil fuel and related industries, a variety of actors have sought to raise awareness of the threat: some seeking to complement government action and others to apply pressure to ramp it up. They have ranged from civil society organisations^x such as those associated with the **Climate Coalition** campaigning within the narrow confines of charity law, to individual activists (most notably Greta Thunberg) and social protest movements such as Extinction Rebellion utilising non-violent civil disobedience. And, whatever the merits or impact of their individual approaches, it seems to have worked. Public attitudes have changed, with government polls showing an increase in the number of people – particularly young people - concerned about climate change. A government poll in 2019 suggested a majority of us thought government could do more about the problem.

Data published by government in 2024, however, presents a more nuanced picture. The proportion of people surveyed with at least some concerns about climate change remains high at over 80%. But there were substantial variations in the degree of urgency felt and some evidence that pressing concerns around the cost of living may be affecting our sense of this issue's priority. Those very concerned were more likely to be women, to have higher qualifications, to be older and to live in rural areas. Interestingly, it was also reported that a large proportion of those surveyed (68%) wanted more information on actions to reduce climate change like energy saving, choosing products with less environmental impact and green financial options. There are also significant regional variations in attitudes. And some within the environmental movement are concerned that pressures on household budgets combined with a lack of awareness, complacency or loss of focus on the urgency of the issue could be exploited for short-term political gain.

So what does all this mean for the North East? Durham is home to one of the historic Meteorological Office stations and so

we have trend data dating back into the nineteenth century. This shows mean average temperatures rising by 1.62 degrees, with nearly all this occurring since the 1950s. Days of air frost have fallen, and rainfall increased since the 1990s. The last ten years have seen both our hottest day and wettest winter.xi Extreme weather events in the North East are not new. In 1771 heavy rain and unseasonably warm weather caused a Great Flood that devastated communities along the Tees, Wear and Tyne. However, climate change is increasing the frequency and intensity of disruptive weather here. Notable examples since our last Vital Signs report include the Anticyclone Hartmut 'Beast from the East' coldwave (2018), Storm Arwen (2021), the 2022 heatwave and Storm Babet (2023). And the rise in sea levels presents a major challenge to coastal and riverside communities particularly in Tees Valley.^{xii} Most readers will not need a reminder of the disruption that Arctic temperatures, heavy snow, torrential rain, flooding, high winds and extreme heat have caused, but it is worth considering their economic impact: Storm Arwen alone was estimated to have caused insurance losses of £250-300m across the UK.

The North East is particularly vulnerable to the impact of climate change disruption, and especially to extreme weather events. Our built environment was not generally designed for the challenges that we are likely to face. Our housing stock, offices, factories and urban spaces may not be able to cope with the impact of storms, heavy rainfall or extreme temperatures. Regional infrastructure (e.g. roads, railways and utilities) may prove vulnerable – Storm Arwen for example left many of us without power for over a week. This is likely to impact particularly heavily on rural communities, which will also have to contend with the effect of extreme weather on agriculture and a possible increase in wildfires. And a report to Parliament in January 2024 raised concern about progress on the development of flood defences across the country, while a separate analysis of Environment Agency data suggested 7% of our regional flood defences are in poor or very poor repair.

Overall local government action relevant to net zero and biodiversity across England was assessed by **Climate Emergency UK** in 2023 using a Council Climate Action Scorecard methodology developed in consultation with members and officers from local government as well as other stakeholders.^{xiii} This looks in detail at progress in the following domains:

- for local authorities: building and heating, transport, planning and land use, governance and finance, biodiversity, collaboration and engagement and waste reduction and food;
- for combined authorities: buildings, heating and green skills, transport, planning and biodiversity, governance and finance and planning and engagement.

Total scores for our North East authorities are given below, along with the England average, and these are indicative of relatively slow progress across much of the region. It should be noted, however, that these scores incorporate a wide variance in individual domains (see 'score range') and are not weighted for factors like disadvantage:

Local authorities	Total score	Score range	England average	
Durham	47%	24% (TRA) - 83% (C&E)	37%	
Newcastle upon Tyne	37%	11% (G&F) - 67% (C&E)		
Sunderland	31%	9% (TRA) - 71% (C&E)		
Gateshead	29%	63% (C&E) - 6% (WRF)		
North Tyneside	27%	1% (G&F) - 58% (B&H)		
South Tyneside	26%	11% (G&F) - 62% (C&E)		
Northumberland	26%	-2% (PLU) - 48% (B&H)		
Darlington Borough	22%	8% (G&F) - 62% (C&E)		
Middlesbrough	21%	7% (PLU) - 52% (C&E)		
Redcar and Cleveland	20%	-8% (G&F) - 37% (C&E)		
Hartlepool	17%	2% (G&F) - 49% (B&H)		
Stockton-on-Tees	14%	-9% (G&F) – 48% (B&H)		
Combined authorities	Total score	Score range	England average	
North of Tyne Combined Authority	44%	0% (P&B) - 61% (G&F)	46%	
Tees Valley Combined Authority	23%	0% (P&B) - 57% (BHG)		
North East Combined Authority	8%	0% (BHG/P&B) – 29% (TRA)		

Key B&H (building and heating); TRA (transport); PLU (planning and land use); G&F (governance and finance); BIO (biodiversity); C&E (collaboration and engagement); WRF (waste reduction and food).

BHG (buildings & heating & green skills); TRA (transport); P&B (planning and biodiversity); G&F (governance and finance); P&E (planning and engagement)

Other points worth noting from the exercise are that half of local authorities scored below the national average on biodiversity (exclusively in the North East sub-region) and a similar proportion did likewise for collaboration and engagement.

To summarise we have identified three major problems facing the region:

Low personal and community resilience

Individuals and communities in the North East are likely to suffer more, and recover less quickly, from problems caused by climate change. People in the North East are generally older than elsewhere in England, their life-expectancy is lower and long-term health issues and disability are more prevalent (affecting 1 in 5 residents). High levels of poverty mean that a third of our children and young people are growing up experiencing widening health inequalities. Our population's make-up and its relatively poor state of health, underpinned by widespread disadvantage, make it more susceptible to mental and physical health problems resulting from extreme weather events. A third of the North East population lives in areas that rank amongst the 20% most deprived in England.^{xiv} Poorer areas do not generally benefit from the local services, social networks, political influence and other resources which protect more affluent areas during disruptive climate-related events and enable a quicker recovery after they end. The availability, accessibility and therefore uptake of services, particularly health services, is also generally lower, and this will also heighten the impact of negative events.



A lack of climate change awareness and commitment to action

Government research tends to suggest that the North East is relatively complacent about climate change. Our level of concern about climate change, and our awareness of net zero, are the lowest and joint-lowest respectively of all English regions. Our table of indicators in Appendix 1 shows that a higher number of people in our region than elsewhere in England either do not feel well informed about climate issues or do not believe that working with others to address the problem will make any difference. This raises the risk that sections of the population may become susceptible to misinformation.^{xv} It also shows a relatively low commitment in our region to recycling, which suggests that a lack of knowledge and sense of agency may translate into a lower commitment to actions that reduce emissions. But behavioural change is essential if we are to tackle climate change. We need, for example, for people to move to cleaner transport (walking, cycling or public transport) and to make changes in areas like diet, consumption of fast-fashion and home heating. A concerted effort may be needed to change hearts and minds in the region; for example, 69% of us have little awareness of the need to change how we heat the places we live and work in if we are to reach net zero.xvi

Research on how levels of education shape attitudes suggests that the lack of understanding of the implications of climate change, and sense that there is nothing that can be done about the problem, may be higher in those disadvantaged communities which are most at risk. Certainly, there is evidence that fewer people in poorer areas are taking action to reduce climate change in their daily lives.^{xvii} But, as stated elsewhere, attitudes are affected by the presence of competing priorities, not least those arising from the cost-of-living crisis.

Barriers to achieving widespread net-zero-related economic benefits

As we have seen, the global task of mitigating and adapting to climate change opens up a range of economic opportunities as part of a 'Green Industrial Revolution.' The North East has the potential to become a national hub for the development and production of renewables, hydrogen, decarbonised heat, transport, buildings and materials. Examples of this being unlocked already exist across the region: **Energy Central** in Northumberland; Lhyfe in North Tyneside; **Nissan** in Sunderland; **Power Roll** in County Durham and the **hyGreen** in Redcar and Cleveland. And the need to address skills shortages in areas like retrofit and heat pump installation also opens up new areas of employment for local people. The challenge, as noted in our Vital Signs reports on the Cost-of-Living Crisis (2022) and Economy and Education (2024), is to ensure that all this results in real benefits for people in the North East by raising productivity and wages whilst reducing unemployment. And there are substantial challenges given the region's underperformance in key areas of education and training and high rates of economic inactivity.

We believe that philanthropy could help to address these problems by:

- supporting work that enables communities to build their resilience to climate-related disruption. This includes supporting community organisations that provide a focus for self-help, provide services to alleviate disadvantage, support those at risk due to their mental or physical health, promote community cohesion and which can advocate for individuals and communities on housing or environmental issues, or in crisis situations. Under this heading we also include work that enables community organisations to model carbon reduction while reducing their running costs (e.g. installing insulation, heat pumps or solar panels);
- enabling people and communities in the North East to benefit fully from the
 opportunities that the 'Green Industrial Revolution' presents. This could include vocational
 programmes in STEM subjects and support for young people not in education, training or
 employment (NEET), adults furthest from the labour market and other groups at risk of
 exclusion.
- building awareness of how climate change will affect us in the North East, and how individuals and communities can help address the climate emergency. This might for example involve support for work that helps educate young people about climate issues or funding for local campaigning in line with Charity Commission guidelines. It could also include financial and capacity building support for regional and local civil society infrastructure bodies, and community organisations working in the environmental space, which raise awareness of climate change issues and provide an independent voice for communities in the net zero planning process. Devolution offers the potential for involvement in a co-ordinated and localised approach in the North East and Tees Valley combined authority areas. Philanthropy can help ensure that this possibility is realised.

All aboard? How philanthropy can help those most at risk from extreme weather events by tackling climate injustice

We often imagine that natural disasters act as 'great levellers,' casting everyone into the same boat regardless of their rank or station. But this is rarely true. In the case of climate change, we have known for decades that its effects generally compound rather than sweep away social inequalities. Here we look at the role of philanthropy in combatting what has been termed 'climate injustice.'

As climate change leads to more extreme weather events the difficulties faced by those living on low incomes or in poverty will increase, with Black, Asian and minoritised ethnic communities, disabled and older people likely to be particularly affected.^{xviii} And they be impacted to a greater extent and at a greater relative cost than better-off peers.^{xix} There are three dimensions to climate injustice.

1. Vulnerability to the effects of climate change

Disadvantage is often concentrated in places where location, landscape and the quality of housing (particularly in the private rented sector) provide lower protection from the worst effects of extreme weather events (e.g. heatwaves, storms and riverside/coastal flooding). People in these communities are more likely to experience physical or mental health problems as a result of them, particularly if they are already predisposed to illness due to their age, disability, ethnicity or pre-existing health issues associated with poverty.^{xx} And often they will lack the financial resources (e.g. money to insure or replace property), social capital (e.g. helping networks, or contacts with influence over local responses) and accessible local services (e.g. sources of guidance on flood protection measures or emergency medical services) that might provide some cushion against hardship and support a quick return to normal life which would be seen elsewhere.

And the indirect effects of escalating climate change will also be felt more keenly by the poor. It is already disrupting global agricultural distribution, causing food to become more expensive. This will have a greater impact on low-income households given the predominance of food costs within their domestic budgets. In the longer term, climate-related forced population movement could (however beneficial immigration proves to the UK in the longer term) place a strain on essential local services and create increased tension within communities.

Ultimately, if the situation worsens, communities vulnerable to extreme weather, from poor urban areas and riverside communities to former seaside resorts with a high elderly population, may find themselves in a spiral of decline as those people and businesses that can do so choose to relocate. But this is not inevitable if we build resilience to climate change within communities at risk. Civil society organisations are well placed to help by taking a holistic approach to addressing issues that underpin current vulnerabilities.

2. Cost-benefits of measures to combat climate change

In general those on low-incomes and in poverty contribute less as consumers to the greenhouse gas emissions that are driving climate change. For example, in the UK the wealthiest 5% of people consume more energy than the least wealthy 50%. And yet there is little focus within climate change policy on containing over-consumption by more affluent households. Instead, the burden of paying for measures to control climate change is relatively higher for poorer households who are less responsible for causing the problem and suffer more acutely from its effects. The drive to reduce carbon emissions comes at a cost and, while there is an awareness of the need to regulate the burden imposed on different social groups, this does not always translate into action. Taxation – direct and indirect – is already used as a lever to achieve net zero; as its role increases so will the implications for the poorest fifth of households that already expend 42% of their incomes in tax.^{xxi} And money invested to reach net zero targets in the energy sector, agriculture or manufacturing is passed to consumers in the form of higher prices – a levy imposed regardless of ability to pay.

Of course into this cost-benefit calculation we could factor the likely benefits of creating a new low carbon economy in terms of jobs. But again, the major gains will be for the betteroff as the best opportunities will not be open to those lacking qualifications and support or who experience discrimination in the job market. Lower energy costs from renewables could be, perhaps, the most significant benefit for poorer households.

In an obvious way philanthropic giving that assists low-income households or improves the quality of life in disadvantaged communities will contribute immediately to a more equitable distribution of the burden of combating climate change. And it is also one that offers many additional benefits to those at the sharp end of the problem.

3. Influence over climate policy

A recent IPSOS/Net Zero Living research

report concluded that there was a general lack of confidence in the fairness of climate change measures, and concern at how they would affect the poor and marginalised. It concluded that public support would hinge on whether the issues were properly communicated, and actions decided on with the participation of affected communities.

Since climate change affects us all, it seems reasonable we should all have an input into how we combat its effects. But there are significant barriers to overcome. Concern for the environment may be prevalent within disadvantaged communities, but commitment to action appears to vary with socio-economic status. The latest government research shows that 50% of those living in the most deprived areas reported being worried about climate change, compared to 72% in the most affluent areas.^{xxii}

In part this may reflect the failure to increase levels of educational attainment within disadvantaged communities since there is evidence of a clear correlation between climate concern/action and levels of gualification. The most trusted sources of information - scientists and academia are often the least accessible to those with basic or no gualifications. But perhaps most important is the fact that people experiencing disadvantage often have less time, energy, skills or resources to invest in influencing decisions about issues that affect them. And they face considerable barriers when they do, resulting in a real problem of 'consultationfatigue' among more active community members.

So poorer communities will need additional support to become engaged, otherwise there is a risk of exclusion from decisionmaking related to the climate change agenda. Philanthropic funding is well-placed to provide the independent financial support that is required for this purpose.

In summary Philanthropy has a role to play in reducing climate injustice by:

helping to build the resilience of disadvantaged communities at risk from extreme weather events by continuing to fund community organisations working on poverty, housing, education, employment, health inequalities and community cohesion;

supporting work to raise awareness of climate change and promote local action on environmental issues within disadvantaged communities;

funding work that supports the involvement of local people in decisions relating to the local environment and climate change.

Biodiversity and other environmental issues

Biodiversity describes the variety of animals, plants, fungi and micro-organisms like bacteria in a particular area. In nature, these components work in balance as ecosystems. Biodiversity is important because it supports everything we need for life as we know it to continue: food, drinkable water, medicine, shelter and, for humans perhaps, even our will to carry on living.

Globally we are witnessing a massive loss of biodiversity. Its primary cause is human activity that disrupts delicate ecosystems. We now use a third of the earth's land surface and 75% of its freshwater resources for crop and livestock production. Over-exploitation for food, timber and medicine impacts heavily on the natural world. And as the world economy has developed, so additional factors such as the spread of settlements, pollution, pesticide use, human-caused climate change and invasive species (non-native animal or plants that damage ecosystems) have also piled on the pressure.^{xxiii}

Three-quarters of the land-based environment, and more than half the ocean environment have now been changed by the activity of humanity.

The effects have accelerated over the past few decades: the World-Wide Fund for Nature^{xxiv} estimates there has been a 69% decline in



global populations of mammals, fish, birds, reptiles and amphibians since 1970. And the rebound on humanity has begun to take effect. Three-quarters of crops across the globe require pollination. The loss of insects that pollinate plants is estimated as costing 500,000 lives a year.^{xxv}

And as more species face extinction than ever before, the process could lead to catastrophe. Awareness that this cannot go on – we currently consume at a level it would require 1.6 Earths to support – has prompted global action. The Strategic Plan for Diversity 2011-2020 was agreed by 196 countries. But although progress was achieved in key areas like incorporating biodiversity into national accounting systems and reducing deforestation, none of the targets were fully achieved. There has been action since through the UN to develop biodiversity goals, but a key challenge remains that any commitment to progress on biodiversity challenges assumptions that have long underpinned our economic model, notably the commitment to growth. We have explored some of the thinking around alternative economic models in our 2024 Vital Signs Economy report.

The UK is one of the most nature-depleted countries in the world. Since the 1970s, 41% of all UK species have declined and 15% face extinction. The primary cause is intensive agriculture with unsustainable woodland management. Climate change, urbanisation, pollution, water-cycle change and invasive species also contribute. Government responsibility for addressing this rests primarily with the Department for Environment, Food and Rural Affairs (Defra). Despite some limited successes based on partnership between government, non-governmental organisations (NGOs), farmers, landowners and scientists, the department accepted in the early 2020s that both protected and unprotected habitats were under pressure, with many species declining and invasive species posing a significant threat. Progress lagged that achieved in other G7 countries. Our table of indicators in Appendix 1 uses the decrease in birdlife in 2016-2021 as a general biodiversity measure, and the Royal Society for the Protection of Birds was particularly damning in its assessment of

progress claiming that *"only around 5% of the UK's land is protected and effectively managed for nature."* The House of Commons Environmental Audit Committee concluded in 2022 that the 25 Year Environment Plan adopted in 2018 lacked clear objectives, milestones and measures of progress. It also suggested that commitments to protecting 30% of UK land within National Parks, Areas of Outstanding Natural Beauty and other types of protection would only be meaningful if a consistent failure to deliver on biodiversity within them was addressed. A similar point was also made in relation to marine protection areas.^{xxvi}

If the loss of biodiversity presents a long-term existential threat, there are also a range of more immediate hazards. Air pollution is a global issue caused by households (particularly through wood burning), motor vehicles, industry, construction and increasingly large-scale forest fires. The major health hazards arise from particulate matter, carbon monoxide, nitrogen dioxide and sulphur dioxide. The World Health Organisation sets guideline safe limits, but 99% of the world's population breathes air that exceeds them. Pollution is another major issue, with substances impacting on health ranging from toxic minerals and chemicals (e.g. lead, asbestos, dioxins and organophosphates) to microplastics, noise and human and animal waste. Finally there is a growing issue around how negative changes to the environment and a lack of access to green spaces impact on humans' physical and mental wellbeing. Examples include what has been termed "climate anxiety and eco-despair" (reactions to the felling of the Sycamore Gap Tree in Northumberland being a case in point), trauma caused by extreme weather events, increased stress due to a lack of access to the calming effect of natural environments and agitation associated with exposure to excessive noise.xxvii

In the UK, serious attempts to protect the population from environmental hazards began in the late-Victorian era, which was also noted for the creation of urban green spaces and managed rural landscapes – often via philanthropy. And problems like air, land and water pollution have been the subject of much legislation between the original Clean Air Act (1956) and the latest Environment Act (2021). Nevertheless, it is estimated that environmental factors account for 14% of the total disease burden of the UK. The greatest threat is air pollution, with 5% of total mortality attributable to particulate generated by traffic and domestic woodburning alone. But other significant problems include the contamination of coastal and inland waters with a range of pollutants, most notably sewage. The Rivers Trust claims that just 15% of English river stretches reach good ecological health standards, while half of coastal waters had excessive nitrogen levels in 2021, raising the possibility of harmful algae blooms. Other notable forms of pollution in the UK identified by the Environment Agency include chemicals used in products ranging from plastics to non-stick pans, an increase in rare earths and lithium from rechargeable batteries, drug resistant microbes from agricultural waste and noise (mainly from traffic). The latter may appear an odd thing to include, but it accounts for over £1bn of medical costs per year. But of course the environment is not just a source of hazards, it is also a positive force in human lives. As elsewhere, people in England benefit from time spent in green spaces and a largescale study in 2019 found that two hours or more a week in open green spaces significantly improved both health and wellbeing.xxviii Similar effects are found amongst those spending time beside lakes or at the coast and in all settings the effect is amplified by evidence of biodiversity. However a 2020 Environment Agency report^{xxix} noted that access to beneficial environments was often restricted, particularly in deprived areas where environmental degradation and all forms of pollution were more prevalent. The state of local public green spaces, and perceptions of their safety, often mean their benefits are lost to those who need them most.

The Environment Act (2021) and associated Regulations (2022) was designed to address the environmental issues outlined above, and were complemented with a Defra Environmental Improvement Plan (2023). These documents embody a new framework for long-term and binding environmental objectives and associated indicators of progress that must be applied across all policy areas, with a new Office for Environmental Protection providing scrutiny to ensure progress is made.

In relation to biodiversity, key developments include Local Nature Recovery Strategies^{xxx} that bring stakeholders together to act according to local priorities and mandating a 10% net gain to biodiversity within the local development planning system. The intention is to halt species decline by 2030. There are also major developments in relation to pollution. The Act envisages targets for reducing air pollution, and a clampdown on sewage discharges into rivers, waterways and coastal waters. The Defra plan includes commitments on air pollution from domestic and traffic sources, water pollution from agriculture, and chemical and pesticide pollution. Responsibility is placed on producers to reduce waste, with proposals to reduce single use plastics and impose a 'polluter pays' principle. There are new measures to promote greater recycling and deter waste crime. And there is a commitment to improve the beauty of nature (sic) which largely amounts to improving access to green spaces and protected areas.

But the government's watchdog, the Office for Environmental Protection, has begun to bark. Its most recent progress report in January 2024 covering progress achieved the previous year described the government as *"largely off track"* with the Act's implementation. Progress on biodiversity was assessed as lacking in focus and urgency; on air pollution progress was considered acceptable, but on water, chemical and pesticide pollution and recycling it was considered somewhat off-track. The jury remained out on issues relating to enhancing engagement with nature and green spaces.

The North East tends to follow the national pattern in having significant biodiversity loss and other environmental problems. Biodiversity is under threat and our table of indicators in Appendix 1 shows a somewhat worse picture for the decline of bird species than elsewhere in England which may be indicative of more severe problems. Examples of issues that impact negatively on regional biodiversity include:

- damage to coastal habitats from commercial exploitation, dredging, pollution, recreational activity, shipping, coastal erosion and development;
- pollution of rivers and watercourses due to agricultural and industrial pollution and sewage discharges and damage to related ecosystems as a result of inappropriate management, agricultural use and invasive species;
- damage to inland habitats as a result of changes in land use and agriculture (e.g. scrub and hedgerows, derelict and unmanaged land, rough grassland, wildflower meadows, wetlands and ponds); pollution and flytipping; and destruction of buildings suitable for habitation;
- damage to woodlands due to development; inappropriate planting; introduction of invasive species and disease;



- damage to public green space habitats due to over-maintenance, recreational use and the introduction of invasive species;
- disruption of ecosystems as a result of herbicide and pesticide use in agriculture (e.g. due to the decline in insect populations on farmland);
- attrition of species resulting from factors such as road traffic, predation by invasive and domestic species, a loss of prey and linear commuting routes (e.g. hedges) and displacement by invasive species.

A lack of public awareness in our region of issues relating to biodiversity seems to underpin a low appreciation of the importance of habitats, resulting in activity that degrades them or disrupts ecosystems. It may also have a bearing on behaviours that contribute to air, noise and other forms of pollution. As our table of indicators in Appendix 1 shows, the region does fairly well overall in relation to air pollution – although there are local problems relating to traffic and domestic woodsmoke – but has a particular problem with fly tipping and, as previously mentioned, recycling rates are relatively low.

Our data also suggests that the region is relatively well served with green spaces (e.g. parks, public gardens and playing fields). But with high levels of disadvantage, it is likely that access is restricted as a result of environmental degradation and concerns over safety. The latter is a particular concern for groups that may be at greater risk such as women, older people, disabled people and visible ethnic minorities. A 2022 survey by the Northumbria Police and Crime Commissioner, for example, found that 62% of women felt unsafe in parks after nightfall.^{xxxii}

The North East has a thriving body of specialist environmental civil society organisations that together play a key role in work to arrest the decline in biodiversity and address other environmental issues across the region. An even larger number work in communities where a loss of biodiversity is occurring as a result of human activity or that face local environmental problems. Examples of Community Foundation support for such work in recent years include:

- funding for the Natural History Society of Northumbria's work with young people on environment and climate change in the North East;
- grants to Northumberland Wildlife Trust, Northumberland Rivers Trust and Tyne Rivers Trust for a range of projects focused on preserving biodiversity;
- capital funding for improvements at the Northumberland smallholding run by West End Women and Girls Centre, Newcastle;
- support to Our Villages Crawcrook and Greenside CIO in Gateshead to engage volunteers in clearing litter;
- an award to the Friends of Holywell Dene in Northumberland for a vehicle to transport tools and materials used for its maintenance;
- assistance with start-up costs to enable Voluntary Organisations' Network North East to develop its convening role and support to the sector on climate issues.







In our view philanthropy has a particularly important role to play in:

- enabling specialist civil society organisations to raise awareness of, and address, issues relating to biodiversity or the local environment. This could include work that reconnects people with the natural world and improves local understanding of the importance of local habitats and ecosystems such as that featured in our case study on Tyne Rivers Trust; environmental projects that enable communities to help restore and maintain them and support for individuals to address skills shortages within the environmental conservation field as illustrated by our Durham Wildlife Trust case study;
- **improving the condition and accessibility of local green spaces.** This could include work to improve the physical condition of local green spaces, address issues of physical accessibility; promote greater use and address issues of crime and anti-social behaviour;
- enabling sector infrastructure organisations, and civil society organisations working in the environmental space, to raise awareness of biodiversity and environmental issues and provide an independent voice for communities in relation to them. This could include funding to support local partnership projects, environmental campaigns and widening community participation in environmental planning and consultations.

Philanthropy and the environment: case studies

How Durham Wildlife Trust helped two young people into employment in environmental conservation

Durham Wildlife Trust is a nature conservation charity working across South Tyneside, Sunderland, Gateshead, Darlington and County Durham. Its mission is to protect wildlife and promote nature conservation. It manages more than 50 nature reserves and two visitor centres alongside a range of species and habitat recovery schemes and educational activities.

In April 2022, the Trust received a £6,200 grant from the Curtin Parp Fund at the Community Foundation to fund the training, equipment and travel costs for two volunteer conservation trainees as part of a scheme aimed at diversifying the environmental sector workforce. It provides groups currently underrepresented – notably women, people from Black, Asian and minoritised ethnic communities and disabled people – with opportunities to gain the skills and experience necessary to address recognised shortages in areas such as forestry. It also fosters the development of participants' leadership qualities, by allowing them to become involved in managing teams of volunteers.

"It is well reported and understood that UK wildlife faces an uncertain future. Every person has a stake in securing nature's recovery and the benefits that brings to local communities and wider society," says Mark Dinning, Head of Conservation at Durham Wildlife Trust. "We are very proud to offer the opportunity of the Conservation Traineeship, providing people with the training and skills to be a force for nature whether this is in their personal or professional life. Increasing the diversity of voices championing nature's recovery empowers a much greater number of people to take action and enjoy the benefits a healthy planet brings."

The Durham Wildlife Trust scheme is supported by a range of charitable funders in addition to the Community Foundation, and so is able to provide financial support to those trainees who might otherwise be excluded from attending. And it has a good record of enabling progression into paid employment – in particular locally within the Trust itself.

"As I neared the end of my traineeship and started to look for employment I had a lot of time to reflect on just how much I had learnt during my time with Durham Wildlife Trust, and how much I had developed as a professional and conservationist.

I was confident that the skills I had gained and training I had completed would allow me to pursue a career I would feel was meaningful, and which would allow continuous learning about the natural world. I was (and still am) very grateful to the people that supported me throughout my traineeship, be it volunteers or my colleagues, and to the charities who provided funding for my role (ALA Green Charitable Trust and The Curtin PARP Fund).

Recognising that the sense of community and shared motivation present within the Trust is something that can be hard to come by, I feel very lucky to have been given the opportunity to join the Trust last October as a full-time member of staff... I am now looking forward to see where my career will take me in this exciting and expanding field."

Mary-Anne Rielly, former Volunteer Conservation Trainee. (You can read Mary-Anne's blog about her experience as a Conservation Trainee, from which the above is an extract, <u>here</u>.)

The placements started in early 2023, and during the following year the two volunteer conservation trainees gained accredited qualifications in a range of vocational subjects from chainsaw use to trailer driving, botany and pesticide use. They were also trained in key areas ranging from volunteer and contractor management to habitat and birdsong identification. This meant that by the year's end they had gained the experience and skills necessary to manage nature reserves with a diversity of habitats from ancient woodlands to specific types of grassland. And happily both were then able to progress into paid work with local environmental charities, with Mary-Anne Rielly (whose blog we feature) now working for the Durham Wildlife Trust as a Conservation Volunteer Coordinator.

How Tyne Rivers Trust increased awareness of local environmental issues amongst young people on Tyneside

A grant of £5,000 from the Northumberland Village Homes Trust Fund at the Community Foundation went towards the Tyne Rivers Trust's River Schools programme in primary schools during 2022-3. The Trust had struggled in the past to engage with schools that had limited access to rivers, particularly as they only had funding for one-off visits and delivery to single classes. The grant allowed for more visits and a wider range of activities with several classes.

368 children at St Aloysius Federation in South Tyneside and Simonside Primary School in Newcastle benefited. Using a range of fun indoor and outdoor activities, the Trust focused on helping the children learn about local rivers and the living things within them. The sessions explored wider issues of climate change and extreme weather, pollution in rivers, loss of biodiversity, food production in terms of the children's local environment and the places where they lived. The sessions enhanced the national curriculum with a range of memorable, hands-on experiences. The children were encouraged to think both about how practical measures at home could help slow the flow of water, reduce flooding and increase biodiversity. They also looked at how larger-scale measures from planting trees and creating ponds to greening urban areas and restoring peatland could help address droughts and flooding linked to climate change. Finally they had the opportunity to examine how issues like reducing littering and plastic pollution could help protect river life.

"We try to empower the children by making them aware of the changes they can make, the contribution they can make to a better planet on a local level.

One of the class teachers said the children really enjoyed it and found the session really interesting, 'especially a little boy in Year 1 who is so enthusiastic about all things environment'.

Another commented on how they had boosted the children's confidence and mental health as well as giving them a better understanding of their local environment."

Dr Ceri Gibson, Tyne Rivers Trust



Philanthropy in action: greening the Community Foundation

The Community Foundation recognises the growing climate emergency and its responsibility to support the global effort to transition to a low-carbon economy. In 2022, it joined over 100 other charitable trusts and foundations signing up to the UK's Funder Commitment on Climate Change. This comes after many years of developing an increasing interest in environmental issues inspired by the concerns of staff, grantees and donors.

Rob Williamson, CEO of the Community Foundation, explains: "Climate change affects us all. It is not only an environmental issue; it's about society and the economy, because it impacts most on poorer and vulnerable people. It's also a local issue, because it's in our own communities that we'll experience climate change, but also where people and organisations can take action to address it."

The Foundation was a relatively early adopter of climate work through its Local Environmental Action Fund, a ground-breaking collaboration with donors and funders set up in 2006. Over £1.7m in grants has been awarded since then. Trustee and staff engagement in the Fund, and through other areas of learning, further stimulated the Foundation's work in this area.

As an endowed foundation, one of the biggest impacts the Community Foundation has is through its investments. And, in 2020, the Foundation's trustees agreed to develop and implement a responsible investment approach taking account of environmental, social and governance factors alongside financial objectives. A new investment policy was adopted following engagement with trustees, staff, donors and grantees to understand their expectations. The policy aligns with the United Nations Paris Agreement and commits to the Foundation's portfolio being net zero by 2050 at the latest. The Foundation also aims to address the carbon footprint of its operations, including transport and energy use, by ensuring its premises are as 'green' as possible and reducing waste production through reuse, recycling and disposal initiatives. The Foundation looks to procure environmentally and socially responsible goods and services and use quality local suppliers and services. And it supports biodiversity through planting in the landscaped area outside its office building.

Meanwhile, the Foundation supports others to take climate action through the funding and support it provides to local charities and community organisations, including through the Local Environmental Action Fund. Support has been given to collaborative work including the North East Climate Change Coalition and the Going Green Together network and to help with energy audits of community buildings.

Recommended resources for Philanthropists and charitable funders interested in environmental issues:

- The Funder Commitment on Climate Change hosted by the Association of Charitable Funders
- Environmental Funders Network (2021) Acting on the Climate Crisis: a resource pack for funders

Appendix 1: Table of Indicators

Key area	Indicator	North East	England	South East	Date*
Climate change - emissions	% reduction in estimated greenhouse gas emissions per capita 2005 -2021	64%	45%	49%	2023
Climate change - public understanding	% that agree with the statement "There is so much conflicting information about climate change it is difficult to know what to believe"	57%	51%	51%	2023
Climate change - public commitment to action	% that agree with the statement "If everyone does their bit, we can reduce the effects of climate change" Household waste recycling rates 2022-2023	81% 31.2%	81% 41.7%	85% 45.4%	2023 2024
Biodiversity	Median % change in breeding bird populations 2016 -2021.	-4.4% (n=48)	-3.5% (n=113)	-2.7% (n=74)	2023
Other local environmental issues	Days on which the Daily Air Quality Index Score indicated moderate, high or very high pollution levels 01/01/2021-01/01/24.	39	103 (average for all English regions)	133	2023
	Fly-tipping incidents per 1000 population	24	19	11	2024
	Average population per park, public garden or playing field	6867	8557	7028	2021

* Links to Source

Notes

Our **biodiversity** measure is a somewhat "rough and ready" one. Nevertheless Dr Richard Gregory of the Royal Statistical Society has argued that **"birds, for Europe, are about the best indicators of the general state of biodiversity that we have."** We have opted for the median % change rather than using the mean to allow for the skewing effect of exceptional cases of population decline or (more rarely) recovery. N = the number of species surveyed.

Air Quality: we include this simply because it is acknowledged by the UK government to constitute the largest environmental risk to public health in the UK. **Moderate, high or very high pollution levels** are those that have a detrimental health impact on the general population and/or susceptible individuals. As ever, regional figures can hide substantial local variations.

Fly-tipping: whilst this can be used as a proxy measure for a lack of concern towards the local environment research suggests the reasons for it are more complex. However we have included it as an indicator of

environmental degradation since **research from the Department for Environment, Food and Rural Affairs** suggests around 56% of the public feel it affects them, in particular as a result of smells/vermin (70%) and/or making local areas appear unpleasant/in decline (61%).

Household waste recycling rates are included as an indicator of progress towards reducing our use of resources and energy to benefit the environment. How recycling services are delivered is a major factor but beyond the scope of this report. Levels of public commitment to, engagement in, recycling are also a major influence as they impact on compliance (it seems over half UK households only partially recycle).

Parks, public gardens and playing fields: we have chosen this as a broad measure of the availability of, and pressure on, green space.

Public understanding and attitudes: in the absence of other data we use that relating to Climate Change as an indicator for general understanding of, and attitudes towards, environmental issues.

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- For a comprehensive summary of what is predicted for Europe see **https://www.eea.europa. eu/publications/europes-changing-climate-hazards-1/what-will-the-future-bring**

And on pathogens see https://www.imperial.ac.uk/news/241611/covid-wont-last-pandemicclimate-change/

Oceans absorb a large proportion of carbon dioxide emissions, but this is making them more acidic with dire repercussions for marine eco-systems such as coral reefs. Other natural regulators of atmospheric carbon dioxide are trees and peat bogs, but human activity has reduced their extent and the effects of climate change can render them less effective or even change them into net contributors to greenhouse gas emissions.

See https://www.iied.org/2020-review-climate-impacts-least-developed-countries

vi See https://unctad.org/topic/least-developed-countries/chart-october-2021

- vii We note the potential for change only, as much will depend on the level of government investment in this area and transparency in corporations' setting and measurement of Net Zero goals.
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- See https://www.gov.uk/government/speeches/pm-speech-on-net-zero-20september-2023
- The term 'civil society' describes the connections between people with common interests coming together voluntarily to do things out of care for others, creativity or to pursue a cause. Charities and other types of community groups are the backbone of UK civil society organisations. For further discussion see: https://civilsocietycommission.org/wp-content/uploads/2021/05/ What-is-civil-society.pdf
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- xii To get a sense of how rising sea levels will affect our region see the interactive tools at https://coastal.climatecentral.org/

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Let's talk

We hope that this report will inspire more of you to give to causes that help communities look after the environment and ensure the region rises to the challenge of climate change.You can help inform our work on this and the other Vital Signs themes by completing the Vital Signs North East 2024 questionnaire. Just visit **www.communityfoundation.org.uk/vitalsigns** or scan the QR code below

If you would like to discuss this report further, or what you could do to help, please contact us:

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