PCAN PLACE-BASED CLIMATE ACTION NETWORK

MARCH 2024

CLIMATE COMMENTARIES

A COLLECTION OF ARTICLES FOR THE PLACE-BASED CLIMATE ACTION NETWORK (PCAN)

UKRI Economic and Social Research Council

FOREWORD

This collection contains commentaries published by the Place-based Climate Action Network (PCAN) between 2019 and 2023. PCAN was set up to bring together UK academics and practitioners engaged in climate change at the local level. It is a platform to exchange knowledge, share ideas and test new concepts on how to reduce emissions and enhance climate resilience.

We have found short, pithy commentaries to be an effective way to share insights and communicate findings. Taken together, the commentaries provide a powerful insight into the practicalities of tackling climate change at the local level. They demonstrate the diversity, richness and multifaceted nature of local climate action in the UK.

The premise of PCAN is that local contexts matter. The commentaries suggest that time, too, is a contextualising factor. Over the past five years, climate action has evolved.

Early commentaries were shaped by the wave of climate emergency declarations by local councils after 2019. Engaging stakeholders, the need for a just transition and the search for finance were important themes. Then COVID-19 hit and parallels between climate change and the pandemic began to dominate the commentary pages. This led to an increased awareness of resilience, to climate and other shocks, as an important aspect of place-based climate action. A key theme throughout has been institutional experimentation and in particular our experience with local climate commissions.

The premise of PCAN is that empowering local actors leads to better, faster, more effective and fairer climate outcomes. Our commentaries seem to bear this out.

Sam Fankhauser
Professor of Climate Change Economics and Policy at the Smith School, University of Oxford and Research Director for Oxford Net Zero.

ABOUT PCAN

The Place-based Climate Action Network (PCAN) was funded by the UK Economic and Social Research Council (ESRC). It commenced in January 2019 and brought together the research community and decision-makers in the public, private and third sectors.

PCAN consisted of five innovative platforms to facilitate two-way, multi-level engagement between researchers and stakeholders: three city-based climate commissions (in Belfast, Edinburgh, and Leeds) and two theme-based platforms on adaptation and finance, with a business theme integrated into each climate commission.

PCAN was about translating climate policy into action 'on the ground' in our communities and supported a wider network of new and evolving climate commissions, including at county level (Surrey, Essex) and at regional level (Yorkshire and the Humber). This relationship continues through the PCAN Plus network.

PCAN built on the policy connections, networking capacity and research strengths of its host institutions, the London School of Economics and Political Science, Queen's University Belfast, the University of Edinburgh, the University of Leeds and the University of Oxford.

The Place-based Climate Action Network ended in April 2024.

Legacy content can be found on the Grantham Institute website: https://www.lse.ac.uk/granthaminstitute

The archived PCAN website can be found here: https://pcancities.org.uk

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Please cite as: Lock, K. and Howarth, C., eds., 2024. Climate Commentaries, Place-based Climate Action Network (PCAN), UK.

This work was supported by the UK Economic and Social Research Council through the Place-Based Climate Action Network (PCAN) (Ref ES/S008381/1)

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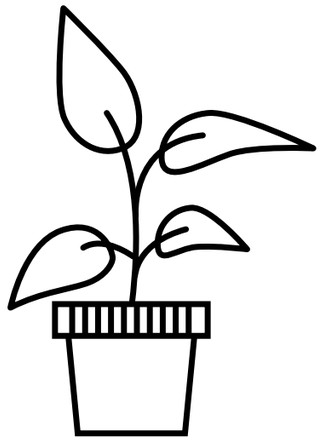

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HOW DOES THE UK PUBLIC VIEW THE CO-BENEFITS OF CLIMATE ACTION?

Neil Jennings and Pauline Paterson
(8 November 2023)

It's my firm belief... no one in this country, no one should have to choose between heating and eating and that would be my primary concern over anything, to be honest, because I think that's a social thing that as a country, we should be thoroughly ashamed that we've been brought to this.

65+ year old female, white, Greater London

Recent announcements by the UK Government have disappointingly included a watering-down of a number of climate-related policies, such as weakening energy efficiency standards in the private-rented sector. This has been accompanied by a narrative that attempts to pitch 'actions that are good for the climate' as being in opposition to 'actions that are good for people and the economy'.

Not only does this appear to be a rather cynical attempt to use climate change and climate action to create political division, it's also a false dichotomy.

Climate action isn't just about avoiding the worst impacts of climate change in some distant future. It is about improving the lives of people in the here-and-now, by bringing with it a range of win-wins or co-benefits that help tackle a host of other issues that figure high on people's day-to-day list of concerns – from the cost-of-living crisis, to security, health and housing. Our recently published research, funded by the Place-based Climate Action Network (PCAN), shows just how popular these co-benefits of climate action are with the UK public, and why they resonate.

What did we do?
We surveyed a nationally representative sample of the UK population (on the basis of age, gender and ethnicity) in May 2022 to understand how important they perceived eight different co-benefits of climate action to be (see box below for these co-benefits). We then conducted eight focus groups (Dec 2022 - Apr 2023) to further explore why particular co-benefits were perceived as being more important than others and why opinions varied between different groups of people.

What did we find?
All eight co-benefits were perceived as being very important or important by the majority of survey respondents. Warmer homes that are more affordable to heat, improved energy security, improved air quality and health, and reduced inequality were perceived as particularly important. When thinking about warmer homes that are more affordable to heat, 76% of survey respondents perceived this to be important/very important to themselves and this value was as high as 86% when people considered its importance to the UK as a whole. This particular co-benefit resonated because it tied in directly to the non-climate challenges people were facing, such as the struggle to keep their homes warm because of the poor insulation of their property and facing the choice between eating-and-heating.

How do opinions vary?
Female respondents perceived all eight co-benefits to be more important than male respondents. Opinions also varied on the basis of ethnicity, with people from ethnic minority backgrounds much more likely to perceive improved air quality and health to be important compared to white people, for example. We also found that people who experienced problems caused by not tackling climate change, such as living in a poorly insulated home or breathing unclean air, were much more likely to support climate action related to those issues.

You open the window. All the dust is coming and if you close, there's no air, so it's a big problem as well because you cook and you open it, if you live on the road and the cars are very bad. So, by the time you clean the house and there's a lot of dusting... And then most [of] the kids, they're asthmatic, they have thing on skin and bad situation. You go to GP, prescribe cream. You need to target the real problem... For me I think air pollution is really, in the UK at the moment, very bad.

45-54 year old female, African heritage Greater London

As illustrated by the quote above, many of the co-benefits of climate action were things that people wanted to see more action on anyway and the fact that it could also benefit climate change was seen as an added bonus.

One particular focus group that stood out was with a Somali community group in West London. We asked participants to state which of the co-benefits was most important to them, and improved air quality and health was head-and-shoulders above the rest. When asked why this was so important to them, almost all participants shared their experience of them and their children living with asthma and eczema and other ailments caused by air pollution. In this case, attendees were united by their shared heritage but came from different geographical parts of the borough.

We need to talk more about... climate action
Awareness of the co-benefits of climate action wasn't particularly high amongst focus group participants, but when people became aware of the opportunities, they were very supportive. When asked what came to mind when they thought of things that could be done to tackle climate change, people often mentioned relatively small actions, such as recycling. This mirrors findings from previous studies and poses a challenge. If people perceive the scale of climate action to only be small and incremental, why would they perceive that climate action can bring with it any significant benefits to their lives, such as helping them to breathe clean air or live in a home they can afford to heat?

Climate action can provide short-term, local benefits from actions that help to address the long-term, global challenge posed by climate change. But to bring these co-benefits into reality requires well-designed and equitable policies that make it as easy as possible for all sections of society to shift to lower-impact lifestyles.

As highlighted by the Climate Change Committee, the UK also requires "a coherent public engagement strategy on climate action" Such a strategy can help to increase awareness of the many benefits that climate action can bring and help to counter disingenuous narratives that try to pitch climate action as being in conflict with poverty alleviation or the economy.

Organisations communicating with the public, such as local and national government, should weave information about these co-benefits into their communications on climate change to highlight the near-term, and often local benefits that reducing greenhouse gas emissions can bring to people's lives around the country. Locally-driven action can help to move the dial on climate action by engaging the public and creating a greener, cleaner, fairer future. These co-benefits of climate action can make a real difference to people's lives and they are popular. We should talk about them more!

Warmer homes that are more affordable to heat

Improved energy security

Improved air quality and health

Reduced inequality

Connecting with nature and biodiversity

Reduced risk of local flooding and of extreme heat

Stronger communities

Job creation

CLIMATE EMERGENCY DECLARATIONS: WHAT DO THEY TELL US ABOUT UNIVERSITIES RESPONSE TO CLIMATE CHANGE?

Briony Latter
(25 June 2021)

62%

of local governments have taken further action to a greater extent than universities in updating or creating new climate action plans

The past two years have seen a sustained and high level of publicity around climate change in the UK, with the concept of climate change as an emergency becoming mainstream. One way this has manifested has been the use of climate emergency declarations, for example by organisations and individuals in different sectors (i.e. culture and music), local governments and universities.

In new research by myself and Dr Stuart Capstick, we analysed 37 declarations by UK universities in order to understand how they are responding to, and positioning themselves in relation to climate change.

Whilst a wide range of organisations have used declarations, we focused on universities as part of the Centre for Climate Change and Social Transformations' (CAST) research around how transformation can be embedded within society. Universities can play an important role in tackling climate change, not only through research and education, but also through addressing their own carbon emissions. However, the scale and nature of change needed to tackle their emissions is substantial.

The first climate emergency declaration by a UK university came from the University of Bristol in April 2019. Over the next year another 36 followed suit. Universities' climate emergency declarations offer a chance to see what image they are trying to portray publicly and what their intentions are at a time when climate change was (and still is, despite Covid-19) particularly visible and of high public concern.

How did universities use the declarations?
We found that universities tended to use the declarations as publicity and promotion, detracting from new commitments and action. They could have used the declarations to consider the role of universities in tackling climate change and the transformation required to do so. Instead, the declarations were more concerned with promotion.

There are multiple ways in which the climate emergency declarations can be seen to be promotional, such as focusing on previous or ongoing work over future plans. This included universities talking about launching sustainability institutes and the number of climate-related publications they have produced. The declarations showcase achievements on climate change and wider sustainability issues within the universities themselves, such as action they have taken to reduce plastic use, source renewable energy and install charging points for electric cars.

This promotional aspect was also demonstrated through leadership (often in an international context), in the form of awards, rankings, expertise and being the best or first at something. While these achievements are important and give a good indication of the extent to which universities are addressing climate change, it is questionable whether this should be the focus of the declarations.

Though much of the wording in the declarations is promotional, many do include action-oriented statements. Universities show a commitment to tackling climate change in tangible ways such as policies, targets and committees, but more transformative change was rarely touched upon. These commitments legitimise and provide ways for the universities' actions to be scrutinised in future.

Despite an element of competition between universities brought about by the focus on leadership, we found that the declarations are also used to show universities as part of a bigger whole and that the climate emergency is a shared problem. The universities appear keen to demonstrate that other organisations have already declared a climate emergency, giving more legitimacy to their declarations by showing they are part of a wider initiative.

Staff and students are positioned as key collaborators and activists in relation to the universities' climate work. External stakeholders such as councils and the local community are mentioned, but to a lesser extent and depth. Despite these being public documents, the primary audience appears to be internal stakeholders, given staff and students are likely to pay close attention to how their university is responding to climate change.

How do universities and local governments compare?
Whilst we focused on universities, PCAN has looked at the use of climate emergency declarations by local governments. Interestingly, there appear to be many similarities between them. Declarations by both universities and local governments seem to be concentrated in the spring, summer and early autumn of 2019, with the number of declarations decreasing significantly after that. Some universities and councils declared climate and ecological emergencies, and both used the declarations to publicly acknowledge the severity of climate change.

However, there are also some notable differences. Thirty-seven UK universities declared a climate emergency in the first year; less than 25% of the total number of UK universities (though more have declared since). A much higher percentage of local governments across the UK have declared climate emergencies (almost 75%) compared to universities. This perhaps suggests a difference in how universities see their role in society, compared to local governments, or the extent to which they feel climate change and broader environmental issues are directly within their control.

Additionally, whilst our research didn't specifically look at this topic, it appears that many local governments (62%) have taken further action to a greater extent than universities in updating or creating new climate action plans. However, there have been further steps taken by some universities. Examples include the creation of a White Paper by the University of Exeter that recommends new carbon reduction targets and changes to infrastructure, strategy and culture, and a Climate Action Plan from Newcastle University that outlines a ten-point plan to meet their carbon targets and tackle climate change.

In our paper we argue that the absence of a declaration does not by extension indicate that no action is being taken (a point made by PCAN in its Trends in Local Climate Action in the UK report). Conversely, further action will not necessarily follow a declaration being made. We conclude, in a similar vein to that of PCAN, that it remains to be seen what impact the declarations will have, over and above action that universities were already taking on climate change. Declarations should provide a basis for taking further action, rather than being a goal in and of themselves.

EFFECTIVE LOCAL AUTHORITY CLIMATE ACTION

James Dyson and Nuala Burnett
(6 May 2021)

21%

elimination of total emissions if local authorities with authority-wide net-zero targets are successful

UK governance approaches are rooted in centralised production and dissemination of major policies. However, 60% of decarbonisation in the CCC's Sixth Carbon Budget 'balanced pathway' relies on societal changes. This highlights the importance of a pathway to net zero that is flexible to social and geographical variations and puts community consent, engagement, and understanding at its core.

In the UK, local authorities are under-resourced. Since 2010, funding has been reduced by 7% in Scotland, 8% in Wales and 21% in England. Despite these cuts, following widespread climate emergency declarations, local governments have committed to ambitious net zero targets and 62% have developed new or refreshed climate action plans. These actions are invaluable first steps for local authorities to engage with climate action, forming a bridge between policies and people.

The value of local authority-led climate action

There is a natural role for local authorities in enabling climate action with active involvement from residents. Local authorities have engaged with residents to inform climate action plans through online consultations and climate change citizens assemblies or juries. At least 18 have carried out assemblies and juries, and many more have conducted online public consultations. Examples of participatory democracy, such as the Oxford Climate Assembly and regional collaboration on climate change, such as Climate Emergency Devon, represent a new role for authorities to engage residents. As achieving net zero in the UK requires increasing societal change, practices which foster engagement will become increasingly valuable.

Involving local authorities allows consideration of local particularities, adding a dimension of justice unique to local government. For example, urban authorities with high levels of air pollution will have cleaner air as a co-benefit of climate action. Tower Hamlets Council includes a substantial explanation of the link between climate action and improved air quality in its climate action plan.

On a macro scale, there are also significant regional disparities, for example decarbonisation in rural and urban areas (highlighted by UK100's Countryside Climate Network). Rural areas benefit geographically from the ability to focus on carbon sequestration, with projects such as the Yorkshire Peat Partnership highlighting how rural communities are able to out-perform urban areas.

Alongside their capacity to drive local involvement and feed into a wider strategy of decarbonisation, local authorities will contribute significantly to the UK's achievement of net-zero. BEIS projects that the UK is not likely to meet its fourth and fifth carbon budgets, despite these targets having been set en route to the less challenging 80% baseline reduction by 2050 (as opposed to 100% net zero, introduced in 2019 and recently set in law).

Given the complexity of meeting these goals, and place-based nature of successful climate action, local authorities form a key piece of the national strategic approach. If local authorities with authority-wide net-zero targets are successful, based on preliminary analysis of the PCAN dataset and BEIS data, this could potentially eliminate 21% of total emissions produced by the UK (based on data from 2018, the latest date for which local authority carbon dioxide emissions estimates are available).

Challenges in local climate action

The current state of local climate action, especially in England, is fragmented and inconsistent. The devolved governments of Wales and Scotland have provided direction on their local authorities' role in the road to net zero. Without the same level of direction for authorities in England, there is significant variation between English authorities on their level of readiness to address net-zero.

This is not isolated to local climate action. A recent Institute for Government report on the government's response to the pandemic finds the relationship between central and local government must be addressed urgently. Among local authorities which claim to be proactive on climate change, some major decisions remain inconsistent with targets. For example, Cumbria Council's support for a new coal mine, airport expansion plans approved by City Councils of Leeds (subsequently put on pause by the government) and Manchester, and Chelsea and Kensington's removal of a major bike lane.

Inconsistent interest or capability to tackle climate change among UK's local authorities has serious consequences for their residents. A disproportionate number of new homes built in disadvantaged areas will also be in high flood-risk zones in the future, demonstrating the importance of consistent integration of climate policy into planning and across all areas of UK local authority operations. Nottingham's pilot of net-zero retrofits on housing using the Energiesprong approach, which we feature in the PCAN Trends in Local Climate Action in the UK report, is an example of this being done well by Nottingham City Council planning department working with a housing association and an innovative building company.

There is a risk of reinforcing social, economic, and environmental inequality between authorities set on ambitious climate action and those that continue with "business as usual", or are not able to dedicate resources to climate action. This risks creating a future where some councils are left behind in mitigation, adaptation and associated social and economic benefits and threats.

Moving forward

UK local authorities are ambitious and have been proactive in their approach to tackling climate change, and they have great potential to facilitate the UK's decarbonisation. Furthermore, with in-depth knowledge of their local areas and the ability to engage with residents on a more personal basis, local authorities are well-placed to facilitate local climate action.

To move action forward, local climate action should be better integrated into UK policy. National government should support this integration by facilitating knowledge sharing and joined-up climate action plans, reinforcing the capacity of, and need for, local authorities to spearhead an efficient and inclusive transition to net zero.

Westminster should produce a national framework for local climate action in England, with connections to policy in the devolved governments where possible and appropriate. The framework would contain strategic regional partnerships responsible for making connections between individual climate action plans, and climate-relevant transboundary sectors, such as transport and resource management. This was a recommendation in the Climate Change Committee's report on Local Authorities and the Sixth Carbon Budget, and it was also a key ask of national government in PCAN's report and Green Alliance's report on The Local Climate Challenge.

Climate action plans are a crucial first step to delivering deliberated and transparent decarbonisation. The government should allocate resources to a challenge fund for under-resourced and ambitious local authorities to gain the necessary resources to produce their own plan. This will contribute to levelling-up climate action across the UK, avoiding the undesirable situation where local resilience to climate change and associated social, technical and economic shifts is defined by access to the resource and the political will to tackle the issue.

SOCIETY AS A CO-DESIGNER OF CLIMATE ACTION: LEARNING FROM COVID-19

Candice Howarth
(16 July 2020)

> **The pandemic has caused misery, loss and hardship across the world, and should not be seen as a model for climate action. However, cleaner air, less traffic, a less frantic pace of life and a less wasteful relationship with food are seen as positive side-effects of the lockdown policies.**

Candice Howarth talks about her recent paper in which she and her co-authors draw lessons from Covid-19 for the fight against climate change. They argue that people are willing to change their behaviour, as long as there is a clear social mandate.

There has been an abundance of commentary on what can be learned from the Covid-19 pandemic for climate change. Some call for better infrastructure to make more room for pedestrians and facilitate safe travelling while maintaining social distancing others, for green investment to underpin the post-Covid-19 recovery and that this finance must be green, just, resilient, rooted and responsive.

Covid-19 has also demonstrated that behaviours can change abruptly, but these changes come at a cost, and we therefore need a 'social mandate' to ensure these changes remain in the long-term. By a social mandate, we mean a situation where society offers support to government (for example) to take action to protect our collective well-being, with the processes and the outcomes of this action being broadly accepted as being legitimate.

Climate change requires a more carefully planned and calibrated, inclusive, less disruptive and more sustained response than Covid-19, which must be co-designed with society. This would enable behavioural changes that improve wellbeing and underpin climate action over the years ahead.

Sustaining positive behaviour change
In our recently published paper we suggest that deliberative engagement mechanisms, such as citizens' assemblies and juries, could be a powerful way to build a social mandate for climate action as the world shapes its post-Covid-19 era. Citizen juries and assemblies could enable citizens to co-design climate action by encouraging more deliberative processes and communication and involving citizens throughout the policy development and implementation process.

The pandemic has caused misery, loss and hardship across the world, and should not be seen as a model for climate action. However, cleaner air, less traffic, a less frantic pace of life and a less wasteful relationship with food are seen as positive side-effects of the lockdown policies. Thus, there may be opportunities to bed-in and maintain certain types of behaviour changes that would be positive low-carbon steps.

Covid-19 and climate change
Our paper explores what responses to Covid-19 can tell us about what may and may not be possible or desirable in a transition to a net-zero future, and with the right policies some of the behaviour changes (e.g. reduced travel) that the lockdown has imposed might be sustained.

We have seen how quickly and effectively governments can intervene to completely reshape society and lifestyles; and that society in turn has largely been supportive of this. However, climate change and the pandemic are different: while the threat of Covid-19 is immediate and direct, the impacts of climate change are longer term and more diffuse.

Driven by necessity, the global response to Covid-19 has been radical and swift; in contrast, the global response to climate change, has lacked a sense of urgency. The Covid-19 crisis has not necessarily changed things for climate change; similar measures to those imposed in order to restrict the spread of the disease may not be accepted for climate.

> **Climate change requires a more carefully planned and calibrated, inclusive, less disruptive and more sustained response than Covid-19**

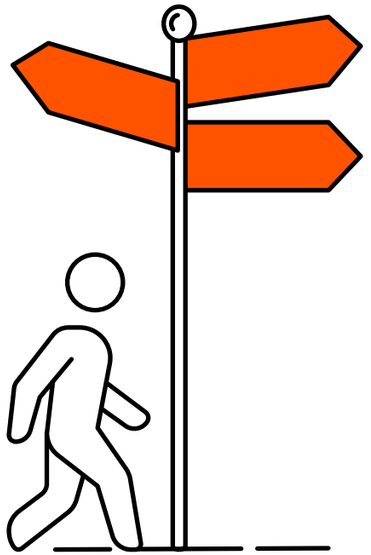
Working with citizens
The fundamental question about society's role in co-designing climate action requires an exchange between citizens and state. Citizen juries and assemblies are processes that can help to create the social mandate to move forward on socially-inclusive climate action.

These deliberative democratic processes with citizen's input at their core can help design solutions and can increase public trust and inclusion in the design and delivery of solutions and any conditions, behavioural or otherwise, that are required. (This is true as long as such engagement with citizens is taken forward by, for example, the recommendations taken fully into consideration in the design and implementation of climate solutions.)

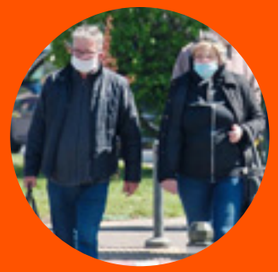
Juries and assemblies are a structured way of equipping citizens with a coherent and robust narrative on climate change, supporting them to imagine different ways of living and giving politicians the mandate to take action. They make society a co-designer of climate action rather than having solutions imposed on them and therefore more likely to respond favourably to these solutions.

A glimpse of the future?
The global response to Covid-19 has had environmental side effects that the climate community has aspired to achieve over a number of decades: reduced carbon emissions, cleaner air, less noise, more space for nature. However, these benefits have been achieved at a massive cost to welfare and the economy. Covid-19 has increased our awareness of how vulnerable we can be in the face of global phenomena, and how without foresight and planning we are left ill-prepared.

A lack of preparation and planning to reduce emissions that contribute to climate change and to respond to its impact, could lead to more stringent and less socially-accepted measures. We must leverage this fresh appreciation to promote a lasting move towards low-carbon behaviour.



COVID-19: RECLAIMING THE STREETS



Alice Creasy
(30 April 2020)

40,000

roughly the number of people who die from air pollution every year

1/3

land in richest London wards was taken up by private gardens, compared to just over a fifth in the poorest 10%

From Delhi to Dundee, New York to Newcastle, people across the world are confined to their houses and flats, trying to figure out the best way to work, parent, live and survive from home. Allowed out for only essential trips or for one limited amount of (local) exercise, people are being forced to appreciate the value of outside spaces and explore new ways of moving through cities and towns without using a car.

While this has brought with it many benefits, it has also put pressure on pedestrian infrastructure as many people struggle to maintain social distancing on busy urban walkways, towpaths and narrow pavements. With mounting pressure on pedestrian infrastructure in cities, this blog explores some of the ways in which citizens and governments are making space for people in towns and cities and question what this means for the future of urban travel.

Safe spaces?
The impact that lockdowns have had on travel has been stark; from local roads to international airspace, levels of movement have plummeted. In the UK for example, road travel has fallen in recent weeks to levels not seen since 1955. Similar patterns have been seen across the world and pollution levels have dropped in some of the planet's worst-affected cities including Mumbai and Beijing.

In the UK, as levels of air pollution dropped in the week the lockdown was announced, sales of bikes and trainers rose dramatically as gyms closed and people looked for a reason to leave the house. In many ways, this trend has been positive as people are rediscovering their communities, appreciating the value of nature and improving their physical health. However as local walkways and pavements, parks and proms become busier with people desperate to leave the confines of their homes, social distancing becomes harder.

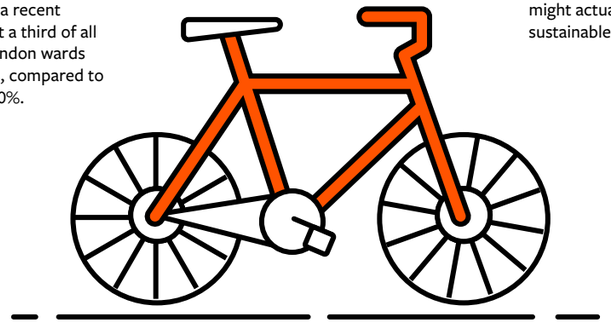
As warmer weather approaches and despite Britons are being urged to stay at home, many parks and other green spaces have become dangerously busy, with some being forced to close and activities such as sunbathing banned across the country. However, the decision to close parks and ban certain activities has been criticised by some commentators who point out the detrimental impact this could have on those living in inadequate accommodation with no outside space who need public green spaces more than ever.

Reclaiming the streets
The disproportionate impact these measures are having on economically deprived communities was highlighted in a recent Guardian piece which noted that a third of all land in the wealthiest 10% of London wards was taken up by private gardens, compared to just over a fifth in the poorest 10%.

> **"As people everywhere look for reasons to leave the sofa and breath some fresh air, perhaps now is the time for towns and cities to take a bold stance against cars by making room for pedestrians and expanding green spaces."**

It also noted the potential for these restrictive measures to have a particularly acute impact on BAME communities who make up half of residents in the poorest wards, compared to 20% in the richest 10%.

With increasing pressure on pedestrian infrastructure, governments and citizens across the world are finding ways to make room for people in the city. In the UK, Hackney Council has announced plans to use low-cost planters and bollards on selected streets to protect people from a growing number of speeding drivers on the borough's roads. The plans will still allow access to emergency vehicles and key workers but prevent rat running drivers.



Similarly in Richmond, London an initiative coordinated by local community organisations and businesses has seen bollards being used to widen pavements. Outside of the capital, in Bristol, some citizens have taken matters into their own hands by spray painting a 'runners lane' onto the road surface in an attempt to help maintain social distancing.

Opportunities for all
As the weather improves, more people are using parks and pavements – so why not give them the space they need by closing roads and enhancing cycling infrastructure? Doing so would reduce the likelihood of contamination, improve people's mental and physical wellbeing, and help citizens feel more connected to and positive about the places they live.

As people everywhere look for reasons to leave the sofa and breath some fresh air, perhaps now is the time for towns and cities to take a bold stance against cars by making room for pedestrians and expanding green spaces. Not only would this help to keep people safer during the current pandemic, but it would also pave the way to cleaner and healthier cities where at the moment roughly 40,000 people die each year because of air pollution – often in the country's most deprived neighbourhoods.

With the trend of low emission zones and car-free city centres present in city plans even before the lockdown took hold, this could be an opportunity to accelerate that change and not only reduce the immediate risk of Coronavirus but create healthier, happier and more just cities for years to come. Perhaps a small silver lining might be gained from this crisis, as what appeared impossible might actually be possible on the journey to sustainable transport.

THE CO-BENEFITS OF CLIMATE ACTION

Neil Jennings
(6 May 2021)

> **From the perspective of encouraging more action on climate change, this data indicates that communicating climate action in the context of the other benefits it brings to health, the economy, poverty alleviation or job creation may help to maintain and enhance public support.**

Optimising the co-benefits of climate action – a key theme to emerge from the UK Climate Assembly – can play an important role in engaging the public on the path to net-zero, especially when these benefits are experienced at the local level. The declaration of climate emergencies by local authorities (almost 75% of UK councils at time of writing) and the setting of ambitious carbon reduction targets means that city- and regional-level governments are in a good position to act on the opportunities provided by the co-benefits of climate action.

Co-benefits relate to "the positive effects that a policy or measure aimed at one objective might have on other objectives". So, for example, how a policy aimed at reducing greenhouse gas emissions from the transport sector can simultaneously help to improve public health and increase life expectancy, or how improving the energy efficiency of domestic properties can help to reduce fuel poverty and cold-related illness by making it easier for people to heat their homes.

Such co-benefits are important because they can help to connect climate action to the other issues that are of more immediate concern to the public. Ipsos MORI provide useful data in this respect via their Issues Index, a monthly survey with a representative sample of the UK public that asks what people think are the important issues facing Britain today. Concern with pollution and the environment has figured relatively low down the list of priorities for most of the last 14 years, though it was the third highest issue of concern in the January and February 2020 polls.

From the perspective of encouraging more action on climate change, this data indicates that communicating climate action in the context of the other benefits it brings to health, the economy, poverty alleviation or job creation may help to maintain and enhance public support. Fortunately, there are a considerable range of such co-benefits of climate action particularly those that relate to improving our health, from moving towards a more plant-based diet that can improve our cardiovascular health and reduce our risk of certain types of cancer, to improving air quality by shifting to active travel (walking and cycling), public transport and away from petrol and diesel vehicles. The tragic case of nine-year-old Ella Kissi-Debrah, whose death was partly caused by air pollution, serves as a timely reminder of just how much things such as clean air matters to our health and wellbeing.

The animation in the link (use QR code to view) provides a summary of many of the other co-benefits of climate action, including the benefits that renewable energy provides in improving the energy security of the UK and the way that improving the energy efficiency of our properties can help to reduce poverty and inequality by giving people a home they can afford to heat. For many people, these are things that resonate much more than climate change action per se.

How can taking action on climate change make all our lives better? (Animation by Grantham Institute)

Aligning costs and benefits

It is at the local and regional scale that co-benefits are most clearly manifest and where council officials are well placed to understand the synergies and trade-offs between local priorities and climate interventions in order to have the most immediate impact. However, while this sounds positive in principle, a key challenge remains regarding how such co-benefits of climate action are acted upon in practice by governments across all scales.

This is a particular challenge because those that pay for climate-related interventions are often not those that accrue the associated co-benefits. The transport department of a local authority, for example, hold the budget for installing cycle lanes but the health benefits (including the financial benefits) of more active travel and cleaner air (e.g. reduced rates of respiratory illnesses) are typically accrued by the local NHS Trust.

Such split-incentives point towards the need for greater collaboration between organisations at the local level. A nice recent example of such collaboration comes from Guy's and St Thomas' Hospital Trust in London, which contributed £250,000 to Southwark Council to fund the installation of a Low Traffic Neighbourhood (LTN). The LTN is planned for an area with high levels of air pollution and child obesity as a way to encourage people to walk and cycle more, to improve people's health and to reduce NHS costs associated with respiratory related illnesses and physical inactivity. Such collaboration and cost sharing between a health trust and their local authority could provide a template for replication elsewhere, by bridging the gap between who pays and who benefits, and by focusing climate action in a way that tackles other local issues that are of direct concern to citizens.

The devolution of more powers (e.g. health and social care, transport, housing) to local and combined authorities can also play a role in overcoming the challenge of who pays/who benefits from climate action. The Mayor of Greater Manchester now oversees a £6bn health and social care budget, so should be able to see a saving in health expenditure from investing in a transport infrastructure that improves air quality.

The devolution of such powers is called for in 'A blueprint for accelerating climate action and a green recovery at the local level', led by the Association of Directors of Environment, Economy, Transport and Planning (ADEPT) and co-signed by PCAN and the Grantham Institute – Climate Change and the Environment at Imperial College London. Such devolution can enable local and regional authorities to take a long-term view over various policy areas and budgets, and to harness the financial reward and benefit to citizens of adequately considering co-benefits.

Taking the public with us

To maintain public support for climate action it is essential that we keep two key questions at the front of our minds: what keeps people awake at night, and what gets them out of bed in the morning? The co-benefits of climate action have a role to play in answering both these questions by linking climate action in with the day-to-day concerns of the public while helping to provide a positive vision of the future that goes well beyond reducing greenhouse gas emissions and tackling climate change.

2.0

GOVERNANCE AND DEMOCRACY

IN THIS SECTION

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- Going Digital for Local Democracy
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- Covid, Climate Change & Citizens' Assemblies: The Critical Role of Deliberation for Planned Transitions
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CLIMATE GOVERNANCE: THE CASE OF SURREY

Erica Russell and Ian Christie
(25 October 2023)

19+

million people lived in predominantly rural places, or urban authorities with significant rural areas in England in 2020

How climate change strategy fits into the UK's governance systems might seem a technical and tedious question to consider, in the face of the urgency of cutting emissions and adapting to global heating. But governance – the web of relationships between the national and local public authorities, other sectors and the citizen in devising and implementing policy – matters hugely.

Who is in charge, and what's the division of labour in the complex task of remaking our economy and institutions for net zero transitions? In the wake of the UK Government's recent shifts in its net zero strategy, the governance of our climate policy is the subject of heated, even angry, fresh debate.

Much work has been undertaken at large-city scale to both understand and organise effective climate governance, with networks such as C40 Cities continuing to develop and exchange best practice. But of course there is a world of local governance and policymaking beyond major urban centres. In 2020 in England, just over 19 million people lived in predominantly rural places, or urban authorities with significant rural areas, with a further 14.2 million people living in small cities and towns. Most English citizens live within county or unitary local authority areas.

In these rural and semi-urban areas climate governance is being led and developed by multiple elected councils, diverse stakeholders and complex partnerships. And all of them must operate across a rich variety of geographies, as well as across multiple scales of policy and governance.

How is climate policy governed in this complex set of local environments? In our new report for the Place-based Climate Action Network, we explore this under-considered issue by focusing on one UK county and local governance area: Surrey. This provides a valuable case study of multi-level governance in an area of relative affluence and where the county council and partners are increasingly focused on climate action. The research reveals a lot of pioneering and highly motivated work across levels and sectors – but also huge frustration at the barriers to effective and joined-up local action and leadership on climate, with messages for the UK Government and the whole English system of local governance.

Insights from Surrey's climate community

In 2020-22 we carried out over 40 interviews with policymakers at all levels of governance in the county, from parishes to regional bodies, with other local stakeholders, and with some climate policy experts at national level; and we mapped the climate policy structures and networks in the county. Our findings reinforce the widespread perception of a serious disconnection between climate strategy and place-based governance. As many others have reported – most recently Chris Skidmore MP in his Mission Zero reports – a reluctance by central government to set out a framework of roles and responsibilities for local authorities has meant that councils and their partners are operating in conditions of uncertainty and lack of clear direction.

We also found evidence of these problems at the 'micro-local' governance levels too, in parish and town council networks. Just as sub-regional local authorities can struggle to obtain funds, strategic direction and information from government, actors at borough and parish levels feel they are not getting the support they need from county and other sub-regional bodies. We found local organisations expressing frustration as they struggled to understand the institutional division of labour in climate policy and action, not just across the county, but increasingly also at regional scale.

What kind of a local 'climate mandate' for action do we need? The issues and options are contested within local government as well as between national government and local actors. Four major strands of debate and advocacy emerge from our fieldwork in Surrey and research elsewhere. Interviewees offered variations on all the following positions concerning the 'mandate' for climate action at local level:

- Sub-national bodies need statutory net zero powers to underpin and boost local mandate and capacity to pursue net zero.
- Statutory powers are needed to fill gaps not covered by voluntary or existing powers.
- Local mandates for action have been established already through climate emergency declarations by councils and through other local responses to the national net zero strategy and the rise of climate concern among citizens; what is missing is the capacity for effective action.
- Sub-national bodies already have the powers and legitimacy needed to pursue policies for net zero emissions, but lack the resources and strategic direction from the national level to make the most of these.

Underlying all these positions, there was a strong sense from all of our respondents that multi-level climate governance in the UK is broken, or at best only partial and incoherent. The view also came through that central government is focused on national-scale policy on climate, and with a technologically driven view of what changes are needed. National policy has so far neglected the need for civic engagement and lifestyle change, and above all has failed to recognise the vital role to be played by local government and its partners.

How have local actors responded to this state of affairs? Based on our review of the literature and on our fieldwork in Surrey, we found a new form of local governance, that of Improvisatory and Compensatory governance, emerging. In this form of governance, local councils and their partners – such as the Surrey Climate Commission, a voluntary organisation set up in 2019 – make progress piecemeal, attempting to make the most of limited powers and using their convening capacity. This opportunistic and piecemeal approach is 'compensating' for the lack of coherent multi-level guidance and division of labour on climate action, and inevitably is sub-optimal.

Many place-based approaches were being invented in Surrey and tested in this spirit of improvisation and compensation in the absence of a clear national-local framework. This has given rise at a local level to governance that is "really wavy and sort of moving" , as one interviewee said. For some actors, this offers the potential for truly local interventions, allowing a more holistic place-based approach, but for others there is a sense of wasted time and lack of direction.

There was a wide and strong consensus on the barriers to effective multi-level governance of climate policy. These were seen as:

- A lack of recognition from central Government on the role of local government in climate action;
- The lack of mechanisms and political will for strategic partnership with local government and its stakeholders;
- The emphasis in net zero policy on top-down 'techno-centric' strategy and processes;
- The piecemeal and short-term nature of funding available to local government.
- This set of findings from expert respondents across Surrey reflects and reinforces the results from the Skidmore Review of Net Zero and many other recent reports. Outside central government, the consensus on the dysfunction in UK climate policy is rock-solid.

'Alphabet soup poured over a spaghetti junction'

Yet, whilst there is consensus about the issues, there is as yet no clear vision for effective governance of climate policy across multiple scales. Many working at local and micro-local level felt their work was 'invisible' to those at higher governance positions, and knowledge of county or even district level action was

rarely understood without the intervention of 'boundary-spanning' individuals or projects. In the absence of a clear and formalised framework for climate governance linking national to local scales, successful action was frequently identified as the work of 'wilful actors' or passionate individuals rather than a direct result of embedded governance structures. This gives rise to risks of transience of impact and lack of continuity, as roles change, and initiatives lapse.

Regional climate bodies - such as the government-funded Net Zero Energy Hubs - have offered positive support, but the potential short-term nature of such bodies (as seen with the demise of Local Enterprise Partnerships), and their lack of connection to local democracy, make long-term policymaking and implementation more difficult. Such bodies also add further complexity to governance structures, with non-standardised overlapping scales of place-based delivery. The complaint was clear, that the English governance map is an alphabet soup poured over a spaghetti junction of linkages. Clarity is urgently needed to help make progress with net zero, which affects every level, area and sector.

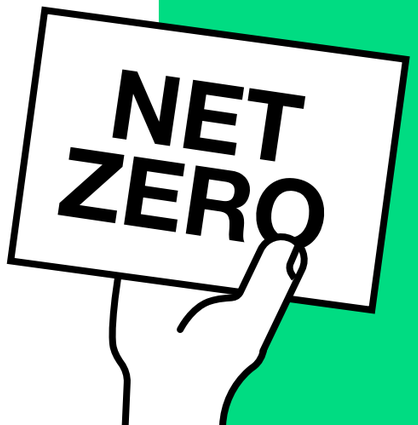
Making multi-level governance work for net zero

Our new report offers recommendations, based on our findings and the wider recent policy literature, for UK climate policy, the development of new governance models and also for climate action in Surrey. For reform at national level, we back the recommendations of the Skidmore Review, which chime with the views from our respondents in Surrey. Local government needs clarity from the centre about the climate policy division of labour, the resources to implement net zero policies and report on progress, and reform in the planning system to ensure that new developments help deliver emission reductions and other gains for climate policy and local wellbeing. Local government needs a duty to pursue net zero across policy areas and to report on progress – and it needs the resources and revenue-raising powers to be able to deliver results.

For further progress in Surrey, regardless of what happens at national level, we recommend that Surrey County Council support the development of a 'mesh' (Mulgan, 2020) of vertical and horizontal relationships and governance arrangements for the county, with an aim to develop a local 'climate constitution', a map of roles, responsibilities, reporting and resources. This would include parish and town councils, which have great potential to be important actors in connecting neighbourhoods and citizen-led projects to wider climate strategy at county and district/borough levels.

Surrey should aim to become an exemplar of local climate governance in public communication, capacity- and confidence-building at community level via parish and town councils, and debating and reporting of challenges and progress. To that end we recommend that the County Council and its partners hold an annual local climate assembly, and we would suggest that in delivering climate action, actors within the county must consider the effectiveness of scale, perhaps as part of boundary-spanning projects. If we want successful climate action in Surrey, we must build in flexibility of delivery into a county-wide climate framework and harness the strengths of the county's rural base.

There is a powerful consensus that local governance is crucial to the net zero transitions we need. There is an equally strong consensus that local councils and their partners are being held back by dysfunctional governance – a lack of coherence in national strategy and planning system, and lack of resources and clear roles for local actors. Our study of Surrey reinforces this analysis, and points to ways ahead for national policy and for local actors alike.



> **"Local government needs a duty to pursue net zero across policy areas and to report on progress"**

GOING DIGITAL FOR LOCAL DEMOCRACY

Ian Sullivan and Lina Brand Correa
(17 May 2022)

How often do you seek the participation of those whose lives your decisions affect? When you seek their participation, how meaningful is this process? People only get to vote once every several years and, if they are lucky, they might participate in a consultation. Overall, there are not that many opportunities for the average person to engage with democratic processes – we do not get many chances to "practise" democracy.

It is up to the institutions to decide in what form and how often people get to participate to enable more opportunities for meaningful democratic involvement. If you are one of these institutions, digital democracy tools might be one of the ways forward. You may have already used some, or you may be thinking that they are something you need to use but are confused about how to pick the right one. This Commentary runs through a few key areas to think through to enable you to take advantage of what the latest e-democracy tools offer. Of course, there are many more digital democracy tools out there so do your own research too!

How to pick the right digital democracy tool for you

Once you have made the decision that you want greater participation in decision-making, whether to understand the views of your constituents or to get ideas from the people who your decisions affect, you then need to find the right tool for your needs. There is a whole array of digital democracy tools that can help you to generate new ideas, get feedback on proposals, build consensus around changes, or run participatory budgeting. These tools could play a valuable role in helping organisations and local governments to make transformative changes to communities to meet the challenges of the climate emergency. However, before you jump in, there are lots of things to consider to ensure that you make the right choice for you and for those you want to take part in your project. The technology will not make your engagement a success on its own.

We have produced a table (click the download link at the bottom of the page) to collate some of the features of the tools we have reviewed. Reviewing the tools can be tricky and make your head spin - it's a bit like watching lots of James Bond films, they all merge into one after a while. And, while sharing many similarities, each does have a slightly different focus, meaning you get a slightly different process and potentially different outcomes depending on the choices you make.

What do you want it for?

It may seem obvious at first - you want to understand people's views on avenues for lowering carbon, or low-traffic neighbourhoods, etc. - but you need to dig deeper than that to get clarity within your team as to the purpose of online participation. For instance, how collaborative are you willing to be? You may want to get views about ideas, strategies and plans that you and your team have generated. If this is the case, a simple polling tool like Polco, Polis or All Our Ideas may suffice.

You can get these for free and pay for any support costs. Polco aims at building consensus based on user input as people vote on ideas generated and then ideas are refined through the process. Polis is about generating conversations between users through them submitting short statements that get sent to others. Polis then groups statements together, showing which are popular so you can understand how your audience is thinking about a topic. All Our Ideas is an easy-to-use wiki survey with open voting.

Alternatively, you may be looking to co-produce ideas to answer broader questions, or even to learn from your communities to generate knowledge and ideas from new perspectives. For this there are tools that allow proposals, consultation, surveys, participatory budgeting and more. Deciding on which of these tools to use is linked to a more fundamental question about how much decision-making power you are prepared to share with those outside of your organisation. For instance, Consul allows you to share legislative text with your community and for your community to propose legislative text.

If people make proposals that are expensive or outside of what you would consider doable, are you prepared to go down paths that were not thought up by your team or experts that you have consulted? Ethelo centres the user in the decision-making, asking how they would allocate and balance a budget, and showing them the cost of their ideas to give them real-time feedback whilst taking part.

Finally, before you begin, think about outcomes and what you will do with the ideas, comments, and thoughts that you have generated through the process. Do you want to create a conversation with your audience, are you prepared to be challenged, change your approaches, and follow through with ideas that are generated?

What are the practical considerations?

Once you are clear on the answers to the above questions, there are a few practicalities to consider. First there is the obvious one: your budget. The online tools that we reviewed range markedly in price. There are the free survey tools mentioned above and we also reviewed Decidim, a free, open-source tool, but they don't offer support on implementation, so you would have to build capacity within your team or hire an external technician to set up and run it.

Some offer packages per project (costs are correct for 2021). For instance Ethelo is around £11,500 per project, Your Priorities is £2,300 + VAT per month, and Citizens Lab offers a range of packages from "Essential" to "Premium". The cost varies depending on the size of the location that you represent: a "Standard" package for a locality of under 500,000 people is £17,500 per year and includes a kick-off meeting, strategy workshop, training session, project design workshop and evaluation session.

The next practical question is about the skills you have in your team for managing the platform. Paid-for tools offer various support packages to design and implement your project, ranging from workshops, training, and even reviewing content. Civocracy will give you this type of support from inception to evaluation for around £20,000. Different tools are marketed as "easy to use", meaning very little technical knowledge is required within your team, and anyone familiar with using a Content Management System should be able to run the project day to day. You may feel that you do not want to pay for extra support, but getting the set-up, strategy and implementation right could be key to creating an engaging user experience, and make the difference between high levels of engagement or not.

The final practical question to consider is time. How long have you got before you want to launch the consultation? Secondly (and this links to cost), how long do you want to run the consultation for, and how broad is the consultation? Are you seeking to engage across a range of issues, or is there something specific you want to engage people on?

How to reach target audiences?

Personal experience of a working in digital campaigning has shown that one of the key mistakes made repeatedly was an "if you build it, they will come" mentality. You can design the perfect engagement tool but if you are not clear on who your audience is, or how you will reach them, then you won't maximise the engagement or get the results that you're after. Helpfully, most of these tools offer support in this area, both to help you get clarity on the demographics that you want to reach and with advice on how to reach them.

Outcomes

Most of these tools enable you to see real-time results within the tool itself. If you have collected demographic data, then you can generally analyse along these lines. Ethelo allows you to re-weight results from non-representative samples; Citizens Lab offers fine-grain reporting down to location information from the users; and Your Priorities has AI-driven analytics. Within the survey tools, Polco enables you to sort results by various characteristics and Polis allows you to group responders by what they said and how they voted on different ideas.

After all this it is up to you to decide what you will do with the results, how you will continue to engage those that have (and have not) taken part, and whether you want to go through the process again in the future.

Empowering citizens

Ultimately, digital democracy tools have the potential to help decision makers reach a wider range of citizens on a more regular basis, so that you can more closely understand the views of your constituents. But the key questions are the same as for any participatory process – to what extent do you want to encourage participation, and how much power are you willing to hand over to the public? Arguably, the more you climb up the participation ladder (from public relations campaigns on the bottom rungs to greater citizen control on the top rungs), the better a chance of "practising" democracy, for both citizens and organisations.

PARTICIPATION AND CHANGE: LESSONS FROM THE FUTURE

Lina Brand Correa
(8 March 2021)

Lina Brand Correa studied participatory and place-based democratic processes on climate action for her PCAN Fellowship. In this Commentary, she combines her research with a fictional scenario to illustrate what could happen if citizens' assemblies are not well served and supported to undertake their role.

It's 2025. The pressure on governments around the world to act on climate change has been mounting for years and from many sectors of society. As a result, many actors have committed to net-zero targets and more ambitious Nationally Determined Contributions (NDCs) in the framework of the Paris Agreement. However, the commitments have not translated into action at the scale and speed required to stay "well below 2 degrees Celsius above pre-industrial levels".

Frustrations with a political system that seems unable to plan and act beyond electoral cycles and lobbying influences are mounting. With more people feeling the impacts of climate change, the pressure is still very much on. As a result, the UK government has embarked on a national net-zero citizens' assembly, whose outcomes will become government policy. The government of the day has a clear majority in parliament, which will allow them to legislate on the policy swiftly and effectively.

Previous climate juries and assemblies that have taken place at the local and national level in the UK and elsewhere have resulted in very reasonable recommendations for climate action. However, these were not fully implemented, which led to the push for direct legislation of the outcomes of this net-zero citizens assembly. The excitement in the climate movement is palpable. This could finally be the process that leads to decisive and impactful climate action. What could possibly go wrong?

Assessing the past

The scenario above is deliberately provocative participatory processes are giving us glimpses of how we can mainline public opinion into decision-making and regulate for the type of climate action that would match public concern. I am certainly excited by the developments and momentum in participatory and deliberative democratic processes. But how confident are we that these types of process will always truly reflect a public mandate?

As I embark on this research, I have distilled four main attributes to consider in relation to participatory processes from the literature on democracy and deliberation. These elements equally apply to processes around climate action, especially if we want these processes to be as democratic and legitimate as possible.

These attributes are:

- Representation: Who is included/excluded? How diverse are the voices present in the process?
- Level of participation: What proportion of the population has been involved in the process? Are the doors for participation open?
- Efficacy: What are the mechanisms through which change is achieved?
- Quality of the process: are there opportunities to discuss and deliberate?

Climate juries/assemblies (from now on, let's call them "mini publics") that have already taken place in the UK rate well in terms of representation. Organisers and facilitators put a lot of effort in participant selection. Thorough work is done to make sure the sample of participants is random, and reflects the socio-demographic, and sometimes political views, of the population in question. Issues of representation sometimes are (and always should be) be addressed in relation to the framing of the question, the range of allowed answers, the structure and format of the session, and the selection of speakers to provide evidence.

However, in terms of levels of participation, mini publics fall short. Mini publics are generally comprised of 20-150 participants, representing far, far less than 1% of the population. For example, the Leeds Climate Change Citizens' Jury, with 21 participants in all its sessions, had a level of participation of 0.006% of the voting population of Leeds (or 0.009% of the population that voted in the 2019 General Election); the national Climate Assembly UK with 108 participants had a level of participation of 0.0002% of the voting population of UK (or 0.0003% of the population that voted in the 2019 GE).

This necessarily limits their representation. A representative sample in statistical terms (for example for an opinion poll), would require much larger numbers to come close to accurately representing the full spectrum of society.

Additionally, mini publics "close the door" for participation to all those who are not selected. Some mini publics encourage the "general public" to engage in the conversation, and have dedicated budgets for promotion and awareness raising (e.g. the Irish Citizens Assembly and the French Climate Assembly). But being "part of the conversation" doesn't allow you to directly input in the process.

In terms of efficacy, most of the outcomes of mini publics become recommendations, which elected politicians then decide to take up or not. But this is not the only mechanism that mini publics have to effect change. Mini publics have been effective in making space for politicians to feel comfortable suggesting bolder climate action, in giving them a "mandate" to act upon. Mini publics also help balance the influence that powerful actors can have on politicians, giving ordinary citizens a voice. However indirect, these mechanisms can still be instrumental.

Mini publics also effect change in other ways, which are perhaps less visible but not less important. Participants generally report that being involved in these types of processes leads to changes in their own attitudes and even their behaviours towards climate change, and may create reverberations within communities through changed social norms and partnership building. Furthermore, mini publics generally offer a high quality process, with plenty of opportunities for meaningful debate, exposing people involved in them to a wide range of views and move beyond a confrontational style of politics and political discourse, which can have positive effects in our increasingly polarised societies.

Back to the future

Through vast media coverage, word is spreading of the importance and impact that the 2025 UK's national net zero citizens' assembly will have. Vested interest groups (e.g. fossil fuel companies, the aviation and car industries) have realised this and recognised an opportunity to influence the outcomes. They start a widespread lobbying campaign, contacting many of the participants to provide them "impartial" information, from "independent" scientific studies. In some cases, they even go as far as offering bribes to participants if they vote against certain (more transformative) proposals. The outcomes of the citizens' assembly end up strongly supporting the status quo. Despite huge public outrage, the government committed to enact the outcomes of the assembly. The outcomes are passed into legislation, locking the country into years of further climate delay.

Key lessons

The benefits of mini publics are undeniable. Participants get an opportunity to engage in informed and calm debate, and policymakers get to hear the considered opinions of an inclusive sample of society, balancing the loud voice of other powerful actors. As more and more mini publics keep pushing the terms of debate on climate action at the local and national level, it could be tempting to push to increase their effectiveness. However, if we are to increase the effectiveness of mini publics, we need to make sure that the other three attributes (representation, levels of participation and quality of the process) are also improved.

The key issue with this "dystopian" net-zero assembly of the future is that important decisions are laid in the hands of very few people. In a way, that is what happens with our current system of representative democracy, but at least we all have a say in the selection of those representatives.

So how can we move towards a more participatory democracy while improving all of the four attributes I've described here? This won't be achieved by designing a single perfect participatory process. Instead, it's about broadening and deepening the opportunities for people to participate and opening our understanding of what participation looks like.

If the UK government is truly committed to increasing public participation as it makes its way towards net zero (as recommended by The CCC and the UN), then it has to back it up with the required resources and view of what participation looks like. This does not mean getting rid of processes like mini publics, but rather supporting local authorities to ride the "deliberative wave" and increase its reach. It can also establish mechanisms to take into account the vast "ecologies of participation" through which people already engage with climate issues.

Both of the above would be rooted in local realities, empowering people and creating a much needed sense of belonging and place. And, as a result, we'd have a much better chance of avoiding the fictional scenario described here.

COVID, CLIMATE CHANGE & CITIZENS' ASSEMBLIES: THE CRITICAL ROLE OF DELIBERATION FOR PLANNED TRANSITIONS

Adam Corner
(6 May 2020)

It now seems like a long time ago, but as 2019 drew to a close, there was a palpable sense of anticipation building amongst the UK climate community.

Following an injection of energy into the public discourse from the IPCC's 1.5C report and by global campaign efforts like the Friday's For Future school strikes and the Extinction Rebellion movement, the UK government became the latest in a growing list of countries to announce a 'net zero' policy.

The surge in interest in engaging citizens on the coming transformations towards net zero was a welcome development, as a broad social mandate is critical to underpin the transition to net zero.

Should citizens' juries and assemblies be a "one off" – or should deliberation be included at every stage of climate policy design and implementation? This was a question participants explored at a workshop co-run by the Place-based Climate Action Network (PCAN) and Centre for Climate and Social Transformations (CAST).

Following some pioneering local authority examples, and taking inspiration from similar exercises in Ireland and France, 110 representative citizens were convened for three of the four planned weekends, at a venue in Birmingham.

The UK Citizens' Assembly continues - in a new global context

Like almost everything else, the UK citizens' assembly ground to a halt as the Covid-19 outbreak spread rapidly around the world. Adapting quickly to the impossibility of bringing a group of over 100 people together 'in person' for the foreseeable future, the final 'weekend' of the assembly was conducted instead over a series of virtual group meetings.

Participants now had the chance to not only continue the conversations they were already having on climate change and net zero, but to engage with what - if anything - can be learned from the way we have responded to Covid-19, a different type of societal emergency.

> **"The optimism that defined the end of 2019 on climate change was always tempered, for most, with an acute sense that we were reaching the 'starting line' on climate change many years too late"**

Unplanned transitions

Many lives have been lost to the Covid-19 virus, and many more have been seriously impacted (emotionally, educationally, or economically) by the response to the virus.

Whilst support for the lockdown has been almost universal among the UK public, the emergency measures brought in to freeze almost all 'in person' social and economic activity were driven by necessity, and not 'planned' in the way that our response to climate change still can (and should) be.

The optimism that defined the end of 2019 on climate change was always tempered, for most, with an acute sense that we were reaching the 'starting line' on climate change many years too late. As welcome as climate emergency declarations, net zero policies, and a pivot towards public engagement were, they were pieces of a fearsomely complicated jigsaw puzzle that should have been firmly in place many years ago.

And as we watch the necessary (but unplanned) policies to contain one emergency unfold before our eyes, it is clear that the window of opportunity for managing a planned transition to address the climate emergency is rapidly starting to close. Indeed, resources aimed at addressing the climate emergency declarations that had been building up over the past 18 months have been deployed in favour of addressing the Covid-19 emergency.

But there is still a huge amount that we can do to avoid a world in which responses to climate change are driven by necessity rather than based on considered societal choices. Because while unplanned transitions like the Covid-19 response are workable in the short term, they would be impossible to maintain on an ongoing basis, in large part because the social consent for them would crumble fast.

Deliberation around climate policies is more critical than ever

Credit is due to the UK's climate assembly team for finding a way to persevere with the final stage of the deliberations, although perhaps even more credit is due to the participants who are committing to conclude their discussions on one societal emergency, in the midst of another.

There has been no shortage of commentary on if, and how, we can 'learn from' the pandemic for climate change. There are clearly opportunities to bed-in and maintain certain types of behavioural changes that would be positive low-carbon steps, and a recognition in early polling that cleaner air, less traffic, and a less frantic/wasteful relationship with food are positive side-effects of the lockdown policies.

There are even some signs - although it is very early to conclude anything confidently - that the UK public recognises the need for a response to climate change that mirrors the ambition of our response to the pandemic.

But there are also serious risks that having had a 'taste' of restrictions on travel and consumption choices, many will recoil from the idea that (even on a lesser scale) some of these restrictions or adjustments should continue. With a global recession looming that will dwarf the 2008 financial crash and aftermath, countries and citizens alike may find it harder to justify investing financially in low-carbon choices (although the economic logic of making the right low-carbon choices remains unaltered).

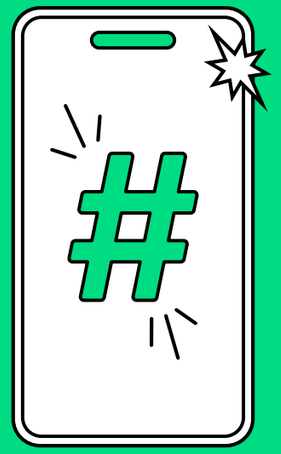
So while bold ideas and visions are needed in the aftermath of Covid-19 to rebuild in a cleaner, greener way, these visions need buy-in from the broad range of communities and constituencies who were arguably just starting to be brought into the climate conversation as 2019 drew to a close.

Climate policies - whether focused on decarbonising or on building resilience to climate impacts - must have deep-rooted and broad based public consent, so that they are implemented without a backlash, and stay in place once they are implemented. We can look to existing research on public engagement with climate change to help guide us, but new data on how members of the public are understanding and drawing parallels (or differences) between Covid-19 and climate change is going to be critical for getting communication strategies right.

LINCOLN BEGINS CLIMATE ASSEMBLY PROCESS

#CLIMATEHOPELINCOLN

Andrew Kythreotis, Kate Bell and Charlotte Brooks
(3 May 2023)



It's been a whirlwind last year for Lincoln Climate Commission as it goes from strength to strength. In 2022, Commission members won some vital Strategic Priority funding to help publish its Climate Action Plan 2030 and to produce some bespoke community climate engagement tools, like this Lincoln2030 animated video.

Having been hampered by the Covid-19 pandemic during 2020 and 2021, Lincoln Climate Commission was finally setting its stall out in being a truly active, place-based commission that serves its local community, businesses and residents.

Planning an assembly
In 2023 we have set off where we left off in 2022, winning strategic priority funding again to start the Lincoln Climate Assembly process – #ClimateHopeLincoln. Whilst we had no prescriptive formula plans in how to plan the assembly process, we decided that this process should be as organic and community led as possible. We had a lot of questions.

How are we going to work together? What are our agreed aims and separate objectives? What resource, experience, innovation, or support could each group bring? What events are planned, or being planned, locally so we could avoid duplication or connect to collaborate? How are we going to be inclusive (languages, accessibility, marketing)? Who else needs to be involved at this stage? What would our participants like to see covered in the assembly process campaign?

So many questions, and this is why the Commission has garnered the support of LocalMotion, the City of Lincoln Council and the University of Lincoln, to help facilitate the assembly process and bring disparate local climate networks together across the city to help us answer these questions and share all our hopes for climate action in Lincoln.

Vibrant first session
The University of Lincoln hosted the first assembly workshop on 1st February 2023. A vibrant session was held with our city climate changemakers, facilitated brilliantly by Charlotte Brooks (shown in header image), LocalMotion Lincoln's Director of Change. After the session we drafted some shared aims in simple language:
Together, #ClimateHopeLincoln will provide space to help communities:

- Realise their impact on the environment (locally and globally)
- Understand the difference small changes can make, either now or in the future
- Share ideas with leaders and policymakers
- Connect local campaigners for better long-term collaboration
- Support the coordination of our resources to help us unite and act on climate change

Plans for the future
The commission realises that these aims will take a while to achieve. Even though our funding runs out at the end of July 2023, we firmly believe that the climate assembly process is an iterative process that is likely to never end, but rather evolve, much like climate change does. However, these are some of our plans over the next five months.

We will be working with our partners to deliver a number of events as part of Lincoln's climate assembly process over the next six months, including:

- Project Fashion Fixed – a student led project that is a creative and imaginative approach to raising awareness about the environmental impacts of our clothing and fashion choices. The project and event are intended to appeal to the interests of a wide community audience but they will particularly appeal to a younger audience.
- Business Summit – in collaboration with Social Change UK and the local newspaper, The Lincolnite, as part of their business week, creating a space for businesses to meet to share sustainable and achievable ideas and solutions to the climate crisis.
- Spark Festival 2023 – This event is scheduled to take place on the weekend of the 8th and 9th of July at Lincoln Cathedral and is a celebration of Lincolnshire's engineering past, present and future. The Lincoln Climate Commission will have a presence at this event which attracts many visitors and particularly families. We will be working with students from the University of Lincoln to organise interactive climate games, which have been designed by the students to raise awareness about place-based climate change.
- Doughnut economics – an event being planned for June 2023 with the Doughnut Economics Action Lab (DEAL) to engage with individuals and organisations (including policy makers) around human prosperity fit for the 21st century, meeting the needs of all people, whilst living within the means of the planet.
- Citizens' assembly – launching in July and running over a period of six months, a series of community-led events with a core group of individuals, representative of the local demographic, to collectively look at ways to tackle our impact on our environment.
- Online consultation – following the BIG Lincoln Conversation led by LocalMotion Lincoln, which closed in March 2023, it is proposed that an expansion of the conversation survey will have a sustainability focus for everyone to participate.
- Building a network – under the banner #ClimateHopeLincoln, the desire to grow an open network of local changemakers finding new ways to collaborate working towards a common goal around inclusive and equitable place-based climate governance.

> **"We firmly believe that the climate assembly process is an iterative process that is likely to never end, but rather evolve, much like climate change does."**

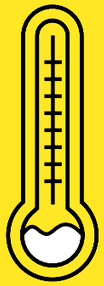
3.0

ADAPTATION AND RESILIENCE

IN THIS SECTION

ONE YEAR ON FROM RECORD-BREAKING 40 DEGREES HEAT IN THE UK AND WE'RE STILL NOT PREPARED

Candice Howarth
(19 July 2023)



Is the UK prepared for extreme heat?

The simple answer is no.

A year ago today, on 19 July 2022, the UK experienced record-breaking temperatures that reached over 40°C and the Government declared a national emergency following the Met Office's first ever issuance of a red 'extreme heat' warning. What needs to change so we are better prepared for these conditions, asks Candice Howarth?

In total, the UK experienced five heat periods last summer, leading to 2,839 excess deaths among those aged 65 years and over and 2,985 excess deaths among all, excluding Covid deaths. In Europe there were over 60,000 heat-related deaths. Heatwaves are silent killers, and older people, people with underlying health conditions, the young, and people directly exposed to heat are most at risk.

The 2022 heatwaves would not have been possible without climate change. We know that the July heatwave was extremely rare, a 1-in-1,000 year event, and was made 10 times more likely due to anthropogenic climate change.

And the heat has followed us into this year. Last month, June 2023, was the hottest June on record and the period 3–10 July the hottest week on record for the world as a whole. The heatwaves happening now across Europe and North Africa, North America and parts of Asia are a frightening preview of the UK's future under a changing climate.

Is the UK prepared for extreme heat?
The simple answer is no.

Extreme heat is a relatively new challenge for the UK and the response is currently piecemeal, lacks a multi-sectoral approach that encompasses, for example, the health service, farming and construction, and does not sufficiently incorporate solutions that reflect local opportunities or challenges. Overall, there is insufficient research, policy or action to ensure communities, businesses and infrastructure are prepared for, and can adequately respond to this issue.

The impacts of heat are most felt by those aged over 65, where heat effects are felt once mean temperatures reach 17–18°C and heat-related deaths can become apparent from 24.5°C. A large proportion (76%) of heat-related deaths under a 1.5°C changing climate is not attributed to heat extremes but, instead, can be attributed to moderate increases in temperature, such as a between 1 and 5 degrees above regional thresholds. Adaptation to high temperatures therefore should not be considered as purely seasonal, and instead a year-round priority.

Building resilience to extreme heat in the UK is one of the key priorities identified in the Climate Change Committee's advisory report to government for the third Climate Change Risk Assessment. The CCC shows how the UK is not prepared to deal with a variety of impacts of climate change, including extreme heat. Its assessment of the UK's progress in adapting to climate change concludes that there is "very limited evidence of the implementation of adaptation at the scale needed to fully prepare for climate risks facing the UK across cities, communities, infrastructure, economy and ecosystems".

The Government's National Adaptation Programme, the third edition of which was published earlier this week, addresses overheating but this is too narrowly focused on overheating in buildings and plans for more research. Back in 2018, the Environmental Audit Committee published its report on adapting to extreme heat. The country has had six years to address some of concerns raised by the Committee, such as the need to work more with local authorities to prioritise and incorporate resilience to risks of overheating in their local climate plans, but this has not been a priority.

To date, national policy and action have predominately focused on reducing heat-related deaths and preparing the health and social sector for more extreme heat. There has been limited work on addressing broader risks to government, businesses, the third sector and communities from extreme heat – such as impacts on agriculture and food security, productivity, infrastructure and buildings, and transport.

Furthermore, UK policy is only at the early stages of exploring how extreme heat will interact with other climate-related hazards, such as flooding, drought and wildfires, and how these compounding climate risks may further threaten communities, businesses and the built and natural environments.

What next for the UK?
A range of measures can be activated now to help keep places across the UK cool. These include 'cool pavements' that are more reflective of sunlight, increased shading, heat-sensitive urban planning (e.g. linear parks to enhance ventilation), and introducing more green and blue infrastructure such as planting more trees and bushes by the roadside and creating ponds. In addition, there are straightforward protective and preparative actions to reduce the negative heat impacts on people, such as applying sunscreen, using a fan, adapting clothing or evacuating people to cool spaces.

But more needs to be done. Climate projections show that extreme heat events will become more frequent and severe in the UK and climate change may increase the chance of reaching 40°C here to every 3.5 years by 2100.

How people perceive and react to these events will be important. While research has shown an increase in concern about hot weather linked to climate change in the UK across the last decade, people in the UK typically have positive associations with hot weather. This has in the past been compounded by persistent media representations of heatwaves and hot days as positive events. In this context it is particularly important that the public are made well aware of the risks they are exposed to and behaviours that need to be adopted. The UK needs to establish a more sensible 'culture of heat', learning from experiences of dealing with extreme heat across Europe and the globe, with effective communication, education and engagement on extreme heat and how people can prepare and respond.

We know that local authorities, emergency services and utility companies across the UK only just managed to respond to the heatwaves in 2022 and they did so with stretched resources. They are grappling with how to prepare for more severe and frequent extreme heat. Many others are unaware of the increasing risks associated with this. While it is encouraging to see investment in specific initiatives such as specialist training for the London Fire Brigade to tackle wildfires, a National Heat Resilience strategy is now needed, as called for by our Policy and Communications Director Bob Ward, to coordinate a strategic, joined-up approach to prepare for extreme heat to support and drive such efforts.

If the Government fails to show more leadership on preparing for these extreme heat events, then we are likely to see a rise in heat-related deaths, wider impacts on workers' health and productivity, and increasing rates of overheating in UK homes and buildings that are ill-equipped to stay cool in the summer.

VALUING WATER AND CLIMATE ADAPTATION

Alice Owen and Toni Scarr
(7 December 2021)

Given that more than 50% of the world's population live in cities, much of the focus of climate action is at the city level. Yet rural areas are taking action in different ways – and have different challenges.

Continuing PCAN's exploration of how different forms of engagement and decision making can help effective local climate action, this commentary describes some of the insights generated by the Environment Agency piloting citizen's juries to develop local water management ideas and priorities.

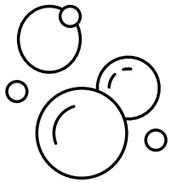
Between January and March 2021, three juries of around 20 people were convened. Each jury was asked to consider the question, "How do you connect with water in your local environment, and what needs to be changed in the future to benefit people and wildlife?" Jurors were also requested to address about other questions regarding the role of the Environment Agency, local people, businesses and visitors.

The aim of the process was to gather a diverse and representative set of views and understand communities' priorities. The juries deliberated online over six sessions for each area. Jurors lived within the relevant river catchment and were selected to reflect the diversity of local demography including Index of Multiple Deprivation, age, gender, ethnicity, urban/rural split and level of climate concern. Jurors proved to be very knowledgeable and engaged participants, and they enjoyed the jury process, scoring the events highly (awarding 4.6 out of 5 on average) in the final evaluation.

Place matters
These three juries, in three very different locations in the north east, south east and in Yorkshire, show that, where climate adaptation is concerned, one size can't fit all. Plans to deal with changes in rainfall and population density, which brings changes in the quality of a local environment, with implications for water supply and water quality, will have to be adjusted in every location so that they match local needs and capacity.

Themes of both environment and community emerged across all three Juries. On environment, people want access to clean, clear water environments with more of the right wildlife in the right place. People felt that they have had to engage more with their local environment, because restrictions on travel during the lockdowns limited visits to higher quality environments further away. The health and well-being benefits of access to a good water environment were well understood. Jurors were also particularly concerned that developers should be put under pressure to put biodiversity and environmental improvement at the heart of proposals.

On community involvement, people want to be given the opportunity to propose schemes, have greater access to information about existing schemes and would like the opportunity to volunteer to help make decisions and deliver improvements in their area. Opening up such opportunities could provide a resource of volunteers, and give the volunteers themselves build a sense of ownership of their water environment, and belonging within their community. This is, however, no panacea; not all communities have the resources and capability to volunteer effectively, and without considerable support simply opening up opportunities could lead to greater inequalities between places and communities.

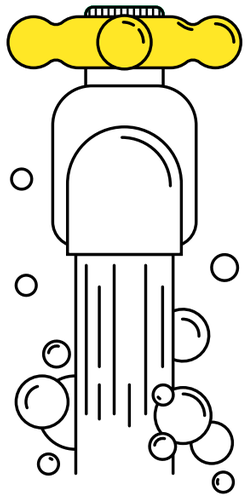


An additional concern raised by research participants was about the impact of young people moving away from the north-east, and taking their climate-solution-focused ideas and energy with them.

Holistic approach
There was an appetite for integration, or a holistic approach, to managing water. The current approach appears to be disjointed, and combined effort is needed from all stakeholders, with clarity of roles. Jurors appreciated that managing water in the environment is not the responsibility of one organisation. They wanted to see more transparency and reporting on the measures that mattered to them. They expect landowners, builders and developers to show understanding of how their activities affect the water environment, with a responsibility to reduce any negative impacts supported by clear legislation and accountability. Rather than seeing regulation as negative 'red tape', the Juries supported appropriate and fair legislation, with incentives which would help secure funding as well as driving behavioural change in all those who need, use and enjoy a place's rivers and water.

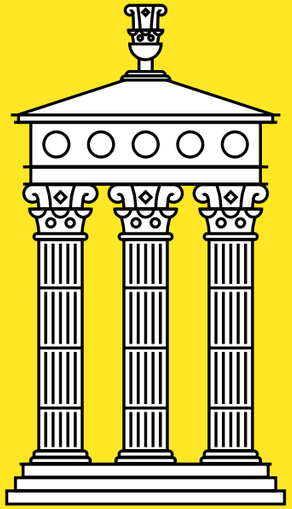
While there was the perennial call for greater awareness, and for education about the full water cycle, including treatment, waste and the environment, what was particularly interesting was the desire for more emphasis on preventing problems that damage the water environment, and a request that the focus should not just be on young people and schools for education; all people at all stages of life need to learn about water, the factors affecting the quality and quantity of water available to us, and their own personal impacts. Information needs to be readily available, accessible, clear and locally relevant. Consistent with other citizen juries' experience on other topics, when given the time to explore a topic in detail, people appear to have a greater appetite for change, and a greater sense of their own responsibility to be part of that change, than mass media narratives, or politics, often assume. There was a desire to see longer term planning and involvement, reflecting an integrated approach. Funding should be long term, rather than project-based and short term, and maintenance should be factored in so that projects that affect water will continue to offer communities value well into the future. Perhaps, when we get down to the truly local level, it is easier to create and implement long terms plans, because those plans mean something to places and the people who live in them.

Conclusion
Climate change adaptation action must be place based. What we can do to deal with climate change impacts will be defined by physical geography, location, how communities are using water, the history and experience of the impact that water has on that place. The Environment Agency's pilot Citizens Juries give us much food for thought on how to meet the demands that climate change places upon the places we love, and they also suggest that there is fantastic scope for place-based action and involvement.



CULTURAL HERITAGE AND CLIMATE CHANGE ADAPTATION

Dr Kate Crowley
(24 May 2021)



Recently I walked across the Braid Hills in Edinburgh. The view is spectacular with the city laid out below in all its historic glory. From the Castle to Arthur's Seat, this city is a gem in our cultural heritage. The Old and New Towns of the city have global recognition as UNESCO World Heritage Sites and it was the first UNESCO City of Literature.

What does this mean in terms of how we value the city? Do we care if sea level rise erodes the coastline and floodwaters destroy or damage historic buildings? Does it matter if heatwaves mean that the festivals are impossible to run? I hope the answers are yes. The city is not only a home and a source of our livelihoods but also represents the history of those who, over the centuries, lived here and spread their expertise and experience around the world.

Yet, despite our heritage being a source of inspiration, livelihoods and significance, it is often missing in discussions on climate change, risk assessment and adaptation decisions. Globally, the value and significance of heritage, both tangible (e.g. structures and physical sites) and intangible (e.g. customs, languages and beliefs) are rarely considered in risk assessments that are required for effective decision-making.

Fortunately, for Edinburgh, the Place-based Climate Action Network (PCAN) is part-funding Edinburgh World Heritage to implement a community based climate risk assessment that is specifically engaging with those who live across the city. This novel project aims to understand how people value heritage and incorporate this understanding into risk assessments to support new adaptation plans.

Why consider heritage for adaptation?
Heritage encapsulates our history, our customs and our beliefs and therefore shapes our future. Heritage is so fundamental to how we behave that it is a crucial consideration for effective adaptation and disaster management.

Cultural heritage influences who is impacted by hazards and why. For example, here in the UK and elsewhere, people buy houses on exposed coastal cliff edges because as a society we value a view of the ocean and access to beaches. In Bangladesh, traditional customs mean that women are not allowed to leave their homes without permission from a male head of household, putting them in significant danger during cyclones as they cannot evacuate easily.

As climate change brings increasingly severe hazards, such as floods and droughts, our ability and willingness to adapt is fundamentally framed within our experiences and our culture. Therefore, our heritage is also a source of resilience. Cultural beliefs bring communities together and strengthen their cohesion and communication, a core characteristic of a resilient community. Traditional adaptation mechanisms are forged by evolving cultural heritage.

However, the discourse on heritage and climate change, that do exist, focus on preservation. Yet some academics argue that heritage is dynamic, and our attempts to preserve heritage are flawed. This debate highlights the need to not only focus on risk assessment for one site or structure for its preservation but rather understand heritage for the adaptation of the local community.

The variety of heritage means that it is both essential, yet problematic, to incorporate within conventional risk assessments for adaptation. For example, how can you capture the vulnerability and influence of both tangible and intangible heritage?

Incorporating heritage within risk assessment
Given these complexities, it is important to learn the lessons of the past.

A systematic literature review of academic papers exploring heritage and risk assessment has found a significant lack of community involvement in the inclusion of heritage within risk assessment. Those studies that specifically carry out risk assessments for heritage sites are generally focussed on the exposure of physical structures from hazards. They rarely attempt to understand the value or significance of that site and none of the papers reviewed include perspectives or engagement by local communities.

Where a consultation on value has taken place, it has been with experts such as academics or professionals working in the heritage sector. This means that the resulting assessments are limited. And, although many papers mention the importance of intangible heritage such as language, customs and belief, none of the selected papers attempt to capture this in any way.

Another interesting aspect of the papers reviewed show a considerable geographical skew. The majority of studies explore impacts or exposure to hazards on physical structures in Europe or the United States of America and very few attempt to apply methods elsewhere.

Understanding the value of heritage in context
The literature review is part of a new research project that will attempt to address these gaps by working across Sri Lanka, South Africa and Indonesia to better understand the value and significance of heritage in context. This place-based study emphasises the need for sharing the diversity of experiences and methods for understanding the impacts of natural hazards, including climate change on heritage and the influence of heritage on our ability to adapt.

Back in Scotland, the Edinburgh World Heritage team have started to address these global challenges by engaging local communities to better understand their values for improved climate risk assessment. They are breaking new ground by facilitating a series of virtual workshops that provide space for local communities to share their views on heritage as well as past and future climate risk so that, together, we can create a resilient city.

BUILDING CLIMATE RESILIENCE KNOWLEDGE FROM THE GROUND UP

Candice Howarth and Matt Lane
(2 October 2020)

Including local communities is paramount to promoting more robust, evidence-based local climate adaptation strategies where a variety of approaches are needed for identifying risks.

In 2022 the UK's Committee on Climate Change will publish its next Climate Change Risk Assessment, or CCRA (following the evidence report due 2021), setting out the climate risks and opportunities facing the country. Of utmost importance is that it is produced in a way that makes it accessible and usable at the local level.

Historically, evidence assessments of this kind – including reports from the Intergovernmental Panel on Climate Change – have not been clearly aligned with local decision-making needs. This has resulted in adaptation strategies being slow to adjust to: i) the increasing emphasis being placed on cities and the local scale to take leadership in responding to the challenge of climate change; ii) the growing risks to densely populated, economically vital urban environments; and iii) the increasing opportunity to forge more resilient governance strategies through collaboration across multiple levels and scales.

In the UK past CCRAs have contained a level of granularity insufficient to inform the governance of resilience risks at the local level. Previous research has highlighted how the 2017 UK CCRA Evidence Report, for example, needed to be more operational in how it guides local adaptation policy by extending its reach beyond governmental agencies and institutions and working with local communities.

A recent report by Sustainability West Midlands to the Committee on Climate Change called for the Committee to improve the accessibility of its CCRA outputs. Our recently published research reinforces their findings. It also highlights the need to rethink how we come to understand what counts as evidence as we seek to amplify the tools at the disposal of local practitioners in responding to the urgency of the climate challenge.

What evidence is available in the UK and what are the barriers at the local level?
When it comes to decision-making related to UK climate risks, there is a significant amount of evidence available and it is improving in its adequacy and usefulness, supporting decision-making from the local to regional and national scales. Sources include climate and meteorological, social and economic, natural science, GIS and satellite data, as well as infrastructure and utilities-relevant data and risks assessments. Managing and responding to climate risks such as heatwaves or flooding requires collaboration and a significant proportion of information is shared between partner organisations, other agencies or bodies.

However, there are many barriers to the effective gathering and utilisation of evidence at the local level for more robust assessment of current and future climate risks. These barriers include inaccessibility and data-sharing issues, lack of technical capacity to utilise existing data, a lack of clear communication channels between evidence producers and users, and difficulties in knowing how to translate evidence into tangible decisions on future courses of action. Further challenges include uncertainty in climate science and a lack of understanding in how to translate this into risk assessment on the ground, where political and economic uncertainty further complicates the challenge. Producing evidence on impacts is also difficult due to missing information, and because climate impacts change and evolve over time. As a result, flexible mechanisms are needed to adapt to the evolving context and continue to inform decision-making processes for climate resilience.

Improving the local evidence base and local use of climate risk information
Our research suggests that efforts to address these evidence gaps should focus on capturing, collecting and sharing:

- Social and economic data, including data on vulnerable people, their exposure to risks and behavioural responses
- Assessments of policy mechanisms and other interventions that utilise evidence and inform decision-making
- Scientific and modelling evidence aligned with decision-maker needs
- Geographic or spatial data to better capture evolving meteorological and climatological risks
- Local and real time evidence capturing climate processes and impacts on the ground
- More effective communication of evidence that is translatable and transferable across scales and types of decision-maker
- Empathy with the political and economic contexts within which local decision-making operates and the need for personal judgements that results from this.

Including local communities is paramount to promoting more robust, evidence-based local climate adaptation strategies where a variety of approaches are needed for identifying risks. Recognition is needed of how these various risks affect different decision-makers in different temporal and spatially nuanced ways. An example is in a heatwave scenario that sees elevated temperatures both during the day and at night and might require fast decision-making on a number of associated impacts. This August the UK saw temperatures rise above 34°C for six consecutive days in some areas and remaining above 20°C at night for five nights, followed by thunderstorms. Dorset and Sussex local authorities had to deal with beaches becoming quickly overcrowded, in Surrey fire and emergency services had to tackle a heathland fire, flash flooding caused parts of the M25 to be closed and a train was evacuated following a landslide in Kent.

Importance of context
The gathering and communication of evidence on climate change needs to move beyond a simplistic framing of risk from the top down – an approach that fails to account for the specific challenges facing local places – and instead to account for the nuanced nature of local decision-making contexts. We must recognise that just as the challenge of climate-resilient places and communities requires us to overcome siloed organisational roles, it also requires a broadening of our understanding of what 'counts' as a viable basis for taking a particular course of action. It is vital that local decision-making is able to respond to the evolving nature of the climate challenge and the fact that climate-related risks are context-dependent.

Climate resilience can then be truly robust and align with scales of policy governance that include all decision-makers working in the scientific, practitioner, public and community sectors, and most crucially at the local level, where the impacts of climate change are always felt.

there are many barriers to the effective gathering and utilisation of evidence at the local level for more robust assessment of current and future climate risks.

THINKING ABOUT CLIMATE ADAPTATION IN RURAL AREAS

Alice Hague
(16 December 2021)

Given that more than 50% of the world's population live in cities, much of the focus of climate action is at the city level. Yet rural areas are taking action in different ways – and have different challenges.

One aspect of the recent COP26 climate conference in Glasgow that didn't make many headlines was how action on climate adaptation has risen up the international agenda. This recognises that action is needed to respond to the impacts of climate change, alongside action to reduce emissions.

Much of the discussion at COP26 focused around global financial commitments to support adaptation measures for the people most vulnerable to the impacts of a changing climate, such as building more resilient infrastructure, improving flood defences and early warning systems, and protecting and restoring habitats to build natural defences and support more sustainable ways of using land. But COP26 also emphasised that adaptation is a place-based issue, an issue that impacts communities at the local level, and needs locally led responses.

My PCAN Fellowship involves working with Climate Ready Aberdeenshire, a place-based initiative for climate action in the north-east of Scotland. Working with local government, public and private sector organisations and representatives, I have been asking questions of how organisations work together to take action for climate adaptation at the local level.

What is climate adaptation?
We surveyed a nationally representative sample of the UK population (on the basis of age, gender and ethnicity) in May 2022 to understand how important they perceived eight different co-benefits of climate action to be (see box below for these co-benefits). We then conducted eight focus groups (Dec 2022 - Apr 2023) to further explore why particular co-benefits were perceived as being more important than others and why opinions varied between different groups of people.

One of the first challenges when discussing climate adaptation is to understand what we mean by adaptation, and to understand what actions an organisation or company can take for adaptation. In talking with organisations in the north-east of Scotland, it's clear that the push for 'net zero' carbon emissions has been a great motivator to reduce emissions. Public bodies in Scotland are required to report annually on actions taken to reduce emissions, and private sector investors are increasingly seeing emissions reductions as a core part of their ESG (environment, social, governance) responsibilities. With the clear need to reduce emissions, conversations around climate change often focus on measures taken at all levels to reduce the climate impact of operations, whether that's reducing energy demand, reducing business travel, or switching to alternative sources of heat.

Yet alongside emissions reductions, the need for adaptation is also important. Research tells us the likely impacts of a changing climate: the north-east of Scotland will likely experience warmer, drier summers, and wetter, stormier winters, with excessive rainfall and changing snowmelt patterns (Aberdeenshire Council, Local Climate Impact Profile, 2019). The north-east of Scotland has already experienced the impacts of adverse weather conditions: Storm Frank (December 2015) caused severe flooding, destroying roads and bridges and impacting communities; the warm, dry summer of 2018 resulted in water shortages for people relying on private (non-mains) water supplies; and a landslide caused by heavy rainfall resulted in a train derailment and a tragic loss of life at Carmont, near Stonehaven (August 2020).

An additional concern raised by research participants was about the impact of young people moving away from the north-east, and taking their climate-solution-focused ideas and energy with them.

Adaptation in rural areas
Given that more than 50% of the world's population live in cities, much of the focus of climate action is at the city level. Yet rural areas are taking action in different ways – and have different challenges.

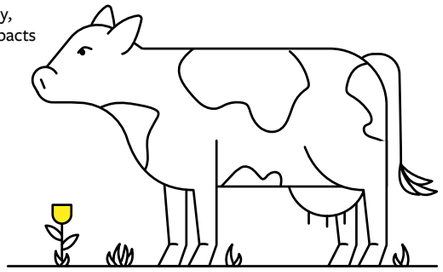
My research highlights the importance of connectivity for rural areas when thinking about climate adaptation: infrastructure, supply routes, and the large number of bridges are at great risk from extreme weather caused by climate change. Learning from the experience of Storm Frank, one damaged bridge can impact a much wider area in terms of access (including e.g. for emergency services) and supplies beyond the immediate area of flooding. Indeed research also tells us the importance of a 'focusing event' – such as Storm Frank – for stimulating further adaptation actions, with organisations suddenly required to both respond to short-term needs, and consider where longer term investment is required.

The hyper-local aspect of climate adaptation is also important. Cash-strapped local councils face challenges about where to spend limited resources of time and money, especially when considering that some impacts of climate change might only affect a very small number of people or properties, but affect them significantly.

An additional concern raised by research participants was about the impact of young people moving away from the north-east, and taking their climate-solution-focused ideas and energy with them. The vast diversity of rural areas – large coastlines, substantial areas of agricultural land, dispersed populations – mean that climate adaptation measures in one area can be vastly different than in another. And while local councils have responsibilities for some issues relating to climate adaptation, partnership working with other public bodies, businesses and communities is an important part of making progress on adaptation.

Conclusion
So, while some of the topics addressed at COP26 can seem very high level, and very distant from the situation on the ground, the reality is that discussions and decisions taken by countries at COP26 impact policy decisions at the national level, which influences, and needs, local-level action to be implemented.

Local-level action, and leadership from local councils, as well as public and private sector organisations, is important in engaging people and communities to understand the likely future impacts of climate change, and to help point them towards resources at a local and community level, to help adapt to the already inevitable impacts of the climate crisis.



4.0

JUST TRANSITION AND ECONOMY

IN THIS SECTION

BRINGING GREEN SKILLS IN FROM THE PERIPHERY

Emma Dore
(11 May 2023)

> **Collaboration beyond local authority boundaries can lead to the impactful pooling of resources and more accurate workforce mobility forecasting.”**

Despite a flurry of research and activity at the national level, skills and jobs for a green economy continue to float around the edge of most agendas. Local authorities need to lead the development of local ‘green’ employment pipelines, but collaboration is essential for place-based success.

Collaboration as a characteristic of success will not be a surprise to anyone who has previously been involved in public sector delivery. Overused in policy papers on any given topic, it is one of those words that our eyes can skim past. Stick with me.

With an urgency cast by one of the most ambitious climate targets in the UK, Edinburgh Climate Commission have been investigating how skills and jobs are lining up in our city. We have been learning about the different modes and moments of collaboration that are necessary to deliver net zero.

Cross-sectoral collaboration
Getting the right skills and jobs, in the right place, at the right time involves a complex dance involving a triangle of:

- Public climate policy
- Private sector employer demand
- Training supply by education providers

Actors from every sector need to work together across cultures, lexicons, and constraints. To embed this in Edinburgh, utility companies, training bodies and anchor institutions have been given roles in the city council’s net zero governance structures.

Of course, local authorities do not stand alone in the public sector: their leadership should be supported by other relevant public bodies. In each context, it will be necessary to decide how best to build into or alongside existing partnership structures to ensure that developing skills for a green economy is firmly on the agenda across the sector.

Construction, energy and transport will be at the top of most lists when thinking about cross-sectoral collaboration. However, there is benefit in looking beyond these usual suspects. As the entire economy makes the green shift, we found that listening to other sectors, such as culture, can shed light on assets, needs and solutions.

Cross-scale collaboration: big and small
Multiple existing institutions mean that the local authority area represents a natural boundary for governing the transition to net zero. However, other scales are also helpful in promoting the development of a green skills and jobs pipeline, as recognised in the development of Local Skills Improvement Plans and Employer Representative Bodies in England last year.

Collaboration beyond local authority boundaries can lead to the impactful pooling of resources and more accurate workforce mobility forecasting. For Edinburgh’s skills development, the City Region Deal is a key force in driving fruitful initiatives and partnership working.

> **Collaboration as a characteristic of success will not be a surprise to anyone who has previously been involved in public sector delivery.”**

As well as thinking big, to effectively lead on green skills development local authorities also need to collaborate at the smaller, neighbourhood scale. Community groups, locally trusted employability charities and SMEs are important partners. Public engagement is crucial to the success of net zero, and aligning with local employment opportunities is especially important to ensure a just transition for disadvantaged groups. We are exploring the Community Wealth Building approach as a natural point of synergy between net zero and economic development priorities.

Collaboration across time scales
It is understandable that policy documents, maps, and budget spreadsheets can be the focus as localities plan for the transition to net zero. However, we have found that a (metaphorical) shared calendar also needs to be studied from the outset. Without a clear understanding across all actors of timescales, uncertainty - therefore risk - becomes a major barrier.

When is the local college’s recruitment cycle? How long will the planning department need? What are the timescales for training enough people, given the local training centre capacity? All of these factors, and many others, must be integrated into planning.

Driving innovation
Beyond creating better plans, clear timelines and early policy communication create confidence for the market to respond and invest. Much of the uncertainty that hampers market activity sits at the national level, but local government has control over significant areas that can be harnessed for local benefit. There are real opportunities for third sector, training bodies and erstwhile private sector rivals to think creatively and collaboratively, to share the risks of developing a workforce fit for a green economy. This is, after all, a climate emergency.

Since 2020, Scotland has had the advantage of the Climate Emergency Skills Action Plan (CESAP). However, without clear guidance for local ownership, progress at the local level has been uneven and remained peripheral in many strategic plans. The current ‘refresh’ of CESAP needs to recognise and resource the important role of place-based approaches and ownership, and other UK plans should follow suit.
Local authority leadership of place-based green skills development would bring necessary focus to the development of local green skills pipelines. This will be most effective if close, creative collaboration - across scales and sectors - is at its core.

TRACKING LOCAL EMPLOYMENT IN THE GREEN ECONOMY: THE PCAN JUST TRANSITION JOBS TRACKER

Andrew Sudmant, Nick Robins and Andy Gouldson
(5 March 2021)

80%

of existing jobs will not be significantly affected by the transition to net-zero.

Building the infrastructure and skills for the transition to net-zero in the UK requires significant public and private investment to kick-start the economy in the wake of Covid-19. But how do we ensure jobs are protected, as industries move away from relying on fossil fuels? And where, both geographically and by sector, are these investments most needed?

To help policymakers at both the national and local level target their efforts, our team at the Place-based Climate Action Network (PCAN) has launched the Just Transition Jobs Tracker. This tool, developed as part of recent work on how to mobilise finance for a just transition, estimates how employment will be affected by the transition to a green economy.

The tool provides data for jobs based in a large number of UK geographies (including local authority, parliamentary constituency, local enterprise partnership and combined authority areas). In particular, it highlights:

- Jobs requiring upskilling: These are existing jobs that require significant changes in skills and knowledge. These include specialised jobs in the manufacturing and extractive sectors, such as petroleum engineers and heavy equipment operators, whose skills need to be adapted to a net-zero economy.
- Jobs in demand: These are existing jobs that are expected to be in high demand due to their important role in the net-zero economy. These include specialised positions in the green economy, such as wind turbine installers, but also the skills and expertise of welders, builders and engineers already working to build the infrastructure of a green economy.

The results, based on the UK jobs market in 2019, provide insights on the priority sectors for just-transition planning, as well as the importance of taking proactive action locally. It is vital that we urgently prepare for the changes in jobs and skills the climate crisis demands. This will help us to ensure that nobody is left behind, and that as many people as possible are ready to get to work in the high demand jobs created by a green economy. If handled effectively, transitioning to a green economy has the potential to lead to more jobs being available for workers.

Focusing on key sectors

Across the UK, our research has found that one in five workers, and 6.3 million jobs in total, will be affected by the transition to a net-zero carbon economy, with around 3 million workers requiring upskilling and around 3 million in high demand.

Around 80% of existing jobs will not be significantly affected by the transition, according to our data. However, few businesses are likely to be unaffected by it. Industries as diverse as manufacturing, agriculture, real estate, and scientific and technical services will all need to upskill workers in some parts of their business and hire new employees in others.

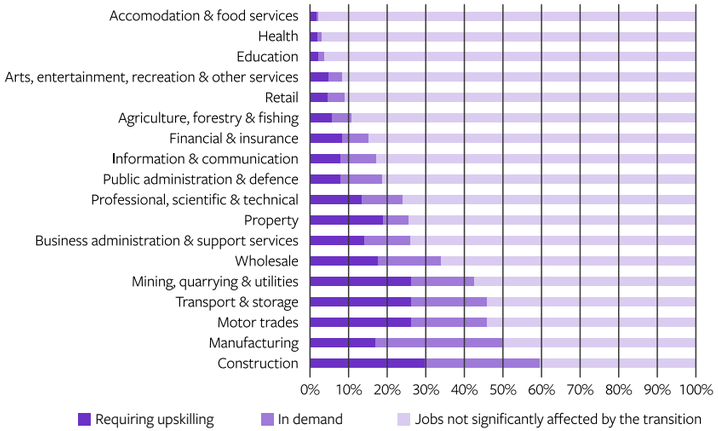


Figure 1: Jobs requiring upskilling, jobs in demand, and jobs not significantly affected by the transition, by sector

While demand for skills associated with high-carbon energy sources are declining, demand for skills in net-zero energy are increasing fast. For example, to retrofit all of the UK's building stock to become net-zero and resilient will require new skill sets, as well as a substantial expansion of the workforce.

Our tool identifies the construction industry, followed by manufacturing and transport, as the sectors where most focus is needed both to seize the employment boost of the green economy and in terms of skills and retraining. In these sectors, as many as 25% of workers are likely to require upskilling, but a similar proportion will be in high demand. So, whilst some sectors face more of a challenge than others, that comes hand in hand with a greater opportunity for sustainable jobs.

In response to this challenge, it is critical that we design industrial policy to support the sectors and regions of the UK economy most likely to be affected by the transition. Providing frameworks and links for academic, business and civil society partnerships could play a valuable role in advancing the skills transition. Without a committed effort to upskill workers to help them adapt to a net-zero economy, many jobs could be at risk of disappearing.

Taking a place-based approach

Levelling up the UK economy was recognised as critical before Covid-19. As the pandemic continues, the gap between communities whose workers could transition to working from home, and communities whose factories and businesses were forced to close, has made the gap between haves and have-nots even more stark. A place-based focus, however, can help to bridge existing needs for levelling up in the context of transitioning to a net-zero economy.

It is crucial that we assess and respond quickly to the impact of the net-zero transition on jobs in the most deprived parts of the UK. Table 1 shows the parliamentary constituencies in the top ten percent for multiple deprivation (i.e. are the most deprived), and ranks them by the proportion of their workforce affected by the transition. The West Midlands, Scotland, and Yorkshire and the Humber account for nine of these, but there is also one constituency in London.

Parlimentary constituencies in top 10% for deprivation	Region	No. of new and in-demand jobs generated by transition*	No. of jobs requiring upskilling	New and in-demand jobs as % of current employment	Jobs requiring upskilling as % of current employment
Bradford South	Yorkshire and the Humber	6,024	5,431	16%	15%
Kingston upon Hull East	Yorkshire and the Humber	7,265	5,761	18%	14%
West Bromwich West	West Midlands	7,414	7,001	15%	14%
Airdrie and Shotts	Scotland	3,874	4,125	13%	14%
Wolverhampton South East	West Midlands	4,641	4,085	15%	14%
Glasgow North East	Scotland	4,754	4,993	12%	13%
Birmingham, Erdington	West Midlands	4,820	4,429	14%	13%
Birmingham, Yardley	West Midlands	4,820	4,452	13%	13%
Barking	London	4,081	4,484	12%	13%
Glasgow East	Scotland	4,380	4,418	13%	13%

Table 1: Parliamentary constituencies with the largest proportion of new/in demand jobs and jobs requiring upskilling. Note: The underlying methodology for the jobs assessment is drawn from Robins et al. (2019). Source: Authors used data on deprivation by local authority from Abel et al. (2016) to account for differences between national Indexes of Multiple Deprivation.

On average, we estimate that around 14.2% of the jobs in these ten constituencies will be in higher demand in the transition; substantially above the national average of 10.3%. Alongside this, an average of 13.5% of jobs in these areas will require upskilling, which is likewise higher than the national average at 10.5%.

The tool provides similar data by combined authority, country, local authority (county and district), local enterprise partnership, town/city, metropolitan county, parliamentary constituency and Scottish parliamentary constituency.

As we move from reacting to responding to Covid-19, and from planning to implementing the just transition, these findings suggest that some of the places that most need upskilling could benefit the most from ambitious transition policies and investments.

Informing action on the ground

The Place-based Climate Action Network is offering insights into the ways in which net-zero and climate resilience can be delivered "from the community up". Climate commissions have been established in Belfast, Edinburgh and Leeds (and, increasingly, other places across the UK) to bring together people from the public, private and civic sectors to work collaboratively with local government and drive climate action.

Roadmaps with science-based targets have been developed to understand the options for the future and to guide discussions around the scale and the nature of change that is anticipated. Across the network of these cities and the wider community of local climate action, the linkages between net-zero, resilience and inclusion are becoming ever more important.

The Just Transition Jobs Tracker is designed to inform local decision-makers so that the principles and practices of the just transition can become a reality. This will not only deliver social benefits in terms of jobs and community renewal, but will also smooth the process of change by reinforcing the social licence for ambitious climate action.

The insights contained in the Tracker have already used by the UK100's Resilient Recovery Task Force, and we hope others will use this open-access resource to inform decisions to build the green economy of the future.

Download the PCAN Jobs Tracker from our website

6.3m

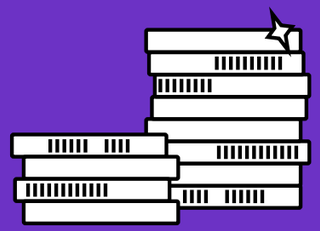
jobs in total will be affected by the transition to net zero

25%

of workers in the construction, manufacturing and transport industries will require upskilling

ENSURING THE PLACE-BASED IMPACT OF CARBON TAX POLICY IS DISTRIBUTIONALLY FAIR

Josh Burke
(27 April 2020)



The UK is beginning to experience the societal and economic impacts of climate change. Poor people and communities are the most vulnerable to these impacts and this is being amplified by Covid-19.

It is widely recognised that it is unfair for the costs of climate change to be borne entirely by those who are affected by the impacts, rather than those who are causing the impacts through greenhouse gas emissions. Economists therefore advocate putting a price on emissions through a tax or emissions trading. This is consistent with the 'polluter pays' principle and ensures that low-emissions goods and services (such as offshore wind in the Humber and electric vehicle manufacturing in Birmingham) can compete on a level playing field without their high-carbon rivals enjoying the advantage of an implicit subsidy.

Under a net-zero target, a more emphatic use of carbon pricing is necessary to induce emissions reductions in an efficient way. However, carbon pricing is often hard to implement as it is more transparent than other policies about its economic winners and losers. Consumers are extremely sensitive to changes in the prices of vital provisions such as energy, transport and food, as recent protests in Chile, France and Ecuador demonstrate. Thus, carbon prices are often too low to be truly effective, many sectors are not covered, and in those that are, significant exemptions dilute policy efficacy.

While many climate policies, including carbon pricing, have the potential to be regressive – that is, their costs are borne disproportionately by poorer people – it is possible to mitigate such impacts on households, to ensure fairness and political acceptability. Her Majesty's Treasury is currently undertaking a review of how the transition to net-zero will be funded and where the costs will fall. That review presents an opportunity to ensure that UK carbon policy, and policy more generally, is underpinned by principles of equity and fairness. Doing so will help to avoid resistance and backlash from those who might otherwise lose out.

Variations by geographical location

The distributional impact of carbon tax policy has a place-based element. Below we examine how income groups are distributed across the UK and how the impact of the carbon tax varies geographically under a carbon tax of £50 per tonne of carbon dioxide in 2020, rising to £75 in 2030.

Figure 1 illustrates that London and the South East are the regions with the largest proportions of income deciles 9 and 10 households – the wealthiest. Wales has the smallest proportion of decile 10 households, followed by Northern Ireland and Yorkshire and the Humber. In terms of low-income households, Scotland has the largest proportion of decile 1 households, followed by Northern Ireland.

Figure 2 shows which regions experience the greatest impact of the carbon tax, both in absolute and relative terms, and compares this with the location of income deciles. It shows some interesting results, with the difference between the area with the biggest impact (London) and the smallest impact (Northern Ireland) being £220 per household per year.

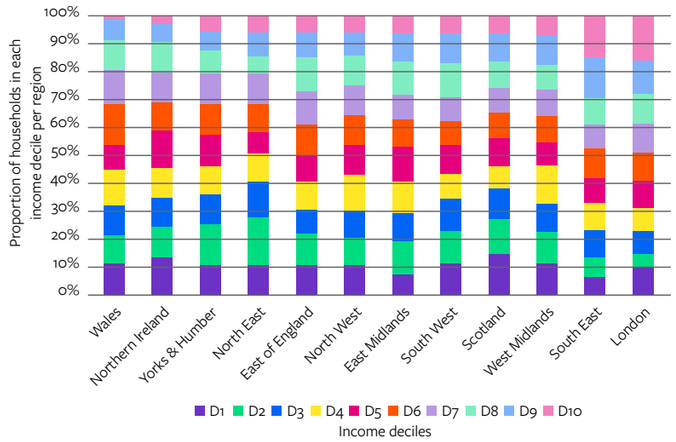


Figure 1: Distribution of income within UK regions

"The UK's transition to net-zero greenhouse gas emissions must be distributionally fair, and policies must be designed to mitigate undesirable distributional impacts."

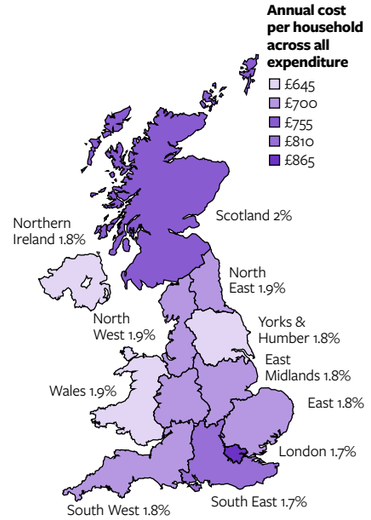


Figure 2: Impacts of scenario 2 carbon tax policy across UK regions in 2030: £ per household per year across all expenditure and% increase as a proportion of income

The greatest impact of the tax, in absolute terms, per household is on households in London, followed by the South East and then Scotland. For the first two regions this is expected, as they have the largest proportion of high-income decile households, which leads to more consumption and thus a higher tax. In contrast, Scotland has the largest proportion of low-income households. This should mean a low tax on an income basis but because the climate in Scotland is colder and the country is more rural overall than other parts of the UK, more heating and transport is used and so the tax is high.

Distributional analysis is the term used to describe the process by which the effect of a policy or event may have on the different demographics within society. Where the analysis focuses on the effect on low and high-income households, this is known as vertical effects. In contrast, the ways in which households that are similar in income otherwise differ can be described as 'horizontal inequities' – they include number of occupants, location and building characteristics. When assessing the impact of any policy, government must also consider these 'horizontal' effects, which hitherto have been largely neglected.

Examining the impacts in absolute terms highlights that horizontal factors other than income distribution, such as household type (e.g. off- grid rural households, fuel-poor terraced houses) and geography, are important in determining the tax impacts. The vertical impacts of the carbon tax are illustrated by the percentage of income impact, which ranges from 1.7% to 2%. Although in absolute terms the carbon tax has the biggest impact in London and the South East, as a percentage of income it has the smallest impact in those regions relative to other regions. In relative terms the impact of the carbon tax is greatest in Scotland; given that Scotland has the highest proportion of lowest income households, this is an expected outcome.

The UK's transition to net-zero greenhouse gas emissions must be distributionally fair

The UK's transition to net-zero greenhouse gas emissions must be distributionally fair, and policies must be designed to mitigate undesirable distributional impacts. Understanding the geographic spread of carbon tax impacts is vitally important to identify where any adverse impacts might occur. To mitigate this impact, conventional fiscal thinking that sees all revenue treated as general tax must change to ensure that the impacts of carbon pricing are distributed fairly and that the policy becomes more politically and socially acceptable. Carbon tax revenues should be explicitly used to correct undesirable distributional outcomes.

The Government response to Covid 19 has ripped up long held economic orthodoxies. Ideas that were anathema to Treasury thinking only weeks ago, such as hypothecating tax revenue, should now be seen as a sane policy response to both the Covid emergency and the climate emergency we now face.

"The greatest impact of the tax, in absolute terms, per household is on households in London, followed by the South East and then Scotland."

£220

the difference (per household/per year) in carbon tax between households in the highest impact area (London) and the smallest impact (Northern Ireland).

HOW A JUST TRANSITION CAN SPEED UP THE RACE TO NET-ZERO

Nick Robins
(26 November 2020)

58m

people employed worldwide by the energy sector in 2017.

500k

additional renewable energy jobs in 2019.

If there is one thing that the brutality of the Covid-19 pandemic has taught us, it's the importance of shared endeavour in the face of a disruptive shock. The same is true for the existential threat of climate change, whose physical impacts are already disrupting lives and livelihoods across the world, spurring countries, companies and communities to step up the race to net-zero.

Long championed by the trade union movement, the just transition is now also becoming a shared endeavour. Five years ago, the Paris Agreement recognised the imperative of placing the interests of workers and communities centre-stage so that decarbonisation brings decent work and quality jobs. All the evidence suggests that the creation of the net-zero economy offers huge potential to create both more and better jobs, thereby contributing to ending the poverty and inequality that hold back the global economy.

Jobs from the energy sector
Looking at energy, for example, the sector employed almost 58 million people worldwide in 2017. According to IRENA, this could rise to 100 million under its Transforming Energy Scenario, which would set the energy system on the path needed to keep the rise in global temperatures to well below 2°C and closer to 1.5°C during this century. This generates 15% more jobs than IRENA's conventional Planned Energy scenario, led by renewables, energy efficiency as well as power grids and energy flexibility. This shift is already underway with renewable energy jobs growing by 500,000 to 11.5 million in 2019.

This expansion in employment, achieved in ways that provide fair incomes for workers and better prospects for communities, will not happen automatically, however. Too often, the climate agenda has been socially blind, introducing policy interventions with little regard for the impacts on employment, or indeed on consumers. As one of the gilets jaunes protesters in France memorably remarked, "You care about the end of the world; we care about the end of the month".

That is why the just transition is rising to the top of the agenda as the connective tissue that binds together climate goals with social outcomes.

Right - and needed
First of all, it is simply the right thing to do, making sure that longstanding human rights are realised in the transition, not least the right to participate in decision-making in the workplace. Second, a just transition is essential to build the political support for the changes that are needed, overcoming the understandable anxiety of those who fear that they could lose out. Workers in high-carbon sectors tend to support green policies when they believe that credible alternatives exist. This was confirmed this year in a survey of oil and gas workers in the UK, where over 80% said they would consider moving to a job outside the sector. Given the option of retraining to work elsewhere in the energy sector, more than half said they would be interested in renewables. As one worker put it: "moving into renewables is something to feel good about."

Covid-19 is intensifying the importance of translating the just transition into a practical reality for the global energy system. Global coal production peaked two years before the Paris Agreement and 2019 looks set to be the peak for oil production. This year, oil corporations have made historic writedowns as they realise the looming risk of 'stranded assets' on the road to net-zero. Sharan Burrow, General Secretary of the International Trade Union Confederation (ITUC), has said that it is essential that this economic restructuring does not result in 'stranded workers' and 'stranded communities'.

Key ingredients
The key ingredients of what makes for a just transition are well established: social dialogue in the workplace, along with respect for labour standards and human rights, economy-wide skills development and retraining, buttressed by social protection and safety nets. As many of the core high-carbon sectors are clustered in specific places, community renewal and regional development are crucial, along with macroeconomic strategy to connect the just transition with key climate policy levers (such as carbon pricing). In addition, a special focus needs to be placed on small and medium-sized enterprises, both along supply chains and in regional economies.

Turning the just transition into everyday reality is clearly a tough challenge. Even before Covid-19, the global economy was marked by a set of 'decent work deficits' that confront the 3.7 billion people who are either employed or could be in a job. But there are growing examples of leaders across government, business and society demonstrating how this challenge can be met.

Leaders taking action
In the European Union, Commission President Ursula von der Leyen has placed the just transition at the heart of its Green Deal, introducing a dedicated funding mechanism, stating that "the transformation ahead of us is unprecedented. And it will only work if it is just – and if it works for all".

In South Africa, President Cyril Ramaphosa has committed to draw up a just transition plan backed with a just transition fund so that measures are in place for "workforce reskilling and job absorption, social protection and livelihood creation, incentivising new green sectors, [and] diversifying coal dependent regional economies".

And in the USA, President-Elect Joe Biden has made seizing the opportunity of net-zero emissions central to his Build Back Better plan, with the intention to create "millions of good-paying jobs that provide workers with the choice to join a union and bargain collectively".

In business, energy utilities across Europe are signing up to a just transition pledge and a new guide has been released in the US showing how companies can incorporate the just transition into their renewable energy procurement. Investors too are starting to integrate the just transition into their climate activities. Bringing together more than 500 global investors with over US$47 trillion in assets, Climate Action 100+ has included the just transition as one of the eight areas in its Net Zero Carbon Benchmark. Development finance institutions such as the European Bank for Reconstruction and Development and CDC are also coming forward with new initiatives.

Part of every plan
These efforts of course are only the beginning and will eventually need to cover all parts of the global economy. This includes the agricultural sector – which makes up a quarter of global employment – so that the promise of nature-based solutions also generates inclusive outcomes. As the world heads towards COP26, the just transition will need to be part of every government's COVID recovery plan as well as their nationally-determined contributions and long-term climate strategies. It needs to be part of every business plan and every finance strategy from banks and investors. If net-zero is the 'what', then the just transition is the 'how'.

HOW SCOTLAND CAN MOBILISE FINANCE FOR A JUST TRANSITION

William Irwin, Nick Robins and Jamie Brogan
(25 October 2019)

Currently there's all the money we need but a lot of it is in equities. We need effective policy and innovation such as an industry-wide infrastructure fund to change this.

Kaisie Rayner, Senior Manager in Fund Development and Responsible Investment at Scottish Widows

Scotland is targeting a net-zero transition that is inclusive and fair. The Edinburgh Centre for Carbon Innovation and the Grantham Research Institute recently gathered finance and government stakeholders to explore how finance can be mobilised as part of this just transition.

"Scotland's response to the global climate emergency needs to be a national endeavour", argued Kate Forbes, the country's Minister for Public Finance and Digital Economy, at a recent gathering of banks and investors at the University of Edinburgh. Forbes added, "Investors that take bold action in backing the low-carbon future stand to benefit."

In a number of respects, Scotland is ahead of the pack when it comes to planning for a carbon-free future. In September, the Scottish Parliament passed the Climate Change (Emissions Reduction Targets) (Scotland) Bill, legally committing the country to the 2045 net-zero target, five years ahead of the UK as a whole. Uniquely, the Bill also put into statute that the delivery plans must consider the principles of the just transition, in other words, cutting greenhouse gas emissions in ways that create decent, fair and high value work, address inequality and poverty and maintain social consensus. Here, Scotland is in a good position, having established a Just Transition Commission with the goal of showing how the delivery of climate neutrality could be 'fair for all'.

A new type of finance is needed
Mobilising finance is critical to realising the goals of a just transition. But a new type of finance will be needed – with more upfront capital and more and better consideration of long-term social and environmental factors.

This will involve new blends of public funds, commercial lending and institutional investment along with digital and social finance innovations. Kaisie Rayner, Senior Manager in Fund Development and Responsible Investment at Scottish Widows, told the group, "Currently there's all the money we need but a lot of it is in equities. We need effective policy and innovation such as an industry-wide infrastructure fund to change this."

This is a good time to be thinking about transformational approaches to finance, especially as the Bank of England has been driving banks and other financial institutions to think more strategically. "Over the last two to three years this has gone from a debate largely about the energy sector to one about climate risk and opportunities across everything," explained Sefton Laing, Head of Sustainable Banking Performance and Development at Royal Bank of Scotland.

Local government pension schemes could play an important role, both as investors and as institutions that can have a wider influence on the finance sector. The Lothian Pension Fund, for example, has 80,000 members, with local authorities, employers and trade unions on its board. For David Hickey, Portfolio Manager at the fund, "There is strong demand for long-term green assets." The problem is the lack of incentives and instruments that can match the risk-return characteristics required by investors. Both policy reform and public finance are needed to bridge this gap.

Here, Scotland is establishing the Scottish National Investment Bank (SNIB) and getting to net-zero emissions will be the SNIB's primary mission. The government is capitalising the bank with £2 billion in the first 10 years, but this could be thinly stretched given the demand, pointing to the need for additional finance from other sources or further capitalisation in the future.

Scotland's response to the global climate emergency needs to be a national endeavour

Kate Forbes, Scottish Minister for Public Finance and Digital Economy

Breakthrough ideas for getting the finance to flow
Financiers also highlighted a number of breakthrough ideas for closing the funding gap. Current criteria for Defined Contribution (DC) pension funds can block investments into renewable infrastructure assets; these criteria need to be updated to enable capital flows. In addition, the UK government could issue 'green gilts' (sovereign bonds), the proceeds of which could be ringfenced for public spending on the environmental dimension of the transition and for the social (such as boosting skills and regional revitalisation).

Changes could also be made within banks and investment institutions. For example, remuneration packages at banks, corporates and investors could be more effectively linked to environmental, social and governance performance. Banks could see the just transition as part of a renewed strategic purpose to serve society a decade on from the financial crisis, building on the framework laid out by the new Principles for Responsible Banking. Individual savers and investors want products that help them build a future that is worth living in. Sustainable investment accreditation could provide signposts for consumers looking to direct their savings to places that accord with their values and visions of the future.

Connecting zero carbon and social justice
"One of the biggest risks of what we do is making climate change a luxury problem for the middle classes," pointed out Professor Mike Danson of Heriot-Watt University and a Just Transition Commission member. Avoiding this trap necessitates new mechanisms to involve people in decision-making, whether in the workplace, in communities or at the national level. Scotland's Just Transition Commission is a world-leading effort to make this happen and establishing a similar body for the UK could be a step change for the country as a whole.

More localised efforts are underway, in Edinburgh and elsewhere. As part of the Place-based Climate Action Network (PCAN), the City of Edinburgh Council is establishing a new Climate Commission with the Edinburgh Centre for Carbon Innovation (ECCI) to help deliver the city's net-zero goal for 2030. The drive to zero carbon and reducing inequality must go hand in hand at the city level.

Analysis for the city's carbon roadmap, to be released in November 2019, shows that technically appropriate measures for Edinburgh could cut emissions by 67% in 2030 and generate £586 million in annual energy cost savings. Many of these investments will yield attractive returns, potentially cross-subsidising more financially challenging opportunities.

Key decisions to be made in the months ahead
Delivering a just net-zero transition is a significant challenge for Scotland. But it will be money well spent, for the private as well as the public sector. The research that underpins our new UK investor roadmap for a just transition found that delivering zero-carbon with inclusion is not only the right thing but also the smart thing to do in terms of long-term returns. Banks are also starting to explore what the just transition means for them in terms of core purpose and the products they offer to their customers, whether individuals, entrepreneurs or public authorities.

In the coming months, Scotland has some important policy milestones. The Scottish Government will update its Economic Action Plan and Climate Change Plan, and will be setting out its Infrastructure Investment Plan and Capital Spending Review. The currently embryonic Green Deal will also be fleshed out. These are all important opportunities to deepen the understanding of what the just transition means in practice and to identify how finance can accelerate the shift in Scotland – and will produce valuable lessons for the UK and beyond, too not least as the world gears up for the COP26 climate conference to be held in Glasgow in November 2020.

5.0

POLITICS AND PLACE

IN THIS SECTION

- A Place-Based Lens on Mission Zero
- Investment Zones – What do They Mean for Climate Action?
- Collaboration Key to NI's First Climate Change Act
- Net Zero is the Catalyst for Delivering Levelling Up
- Why Place-Based Climate Action has Never Been More Urgent

A PLACE-BASED LENS ON MISSION ZERO

Andrew Wood
(16 February 2023)

150+

local authorities in England, including some within Yorkshire and the Humber, already have local net zero targets for 2030

There are high hopes that the Rt Hon Chris Skidmore MP's Mission Zero report, published in early January 2023, will help persuade the UK Government to create the conditions for a future economy that is fit for purpose in the climate and nature emergencies we face.

This independent review of Net Zero is timely and welcome, because it reaffirms unequivocally that climate action is an economic imperative. Influential voices endorsing the report include Lord Nicholas Stern, author of the ground-breaking 2006 Stern Review setting out the economic case for climate action, and UK100, which said Mission Zero "would help communities maximise the economic and social benefits of Net Zero while making the most cost-effective use of resources."

Several Climate Commissions in the Place-based Climate Action Network (PCAN) contributed to the call for evidence last October. I'm part of the Yorkshire and the Humber Climate Commission secretariat and our response set out the Commission's position that the major obstacles to climate action are a lack of consistent regulations, policies and resources, all of which need to be in place to enable the economy to thrive.

Different lenses
The report can be viewed through three quite different lenses. In one, it is a straightforward narrative: the review asked, "How can the UK simultaneously deliver net zero carbon and economic growth?" and, following "one of the largest engagement exercises on net zero in the UK", the answer came back loud and clear: "Net zero is the growth opportunity of the 21st century".

In another lens, it is a vehement rebuttal to the Truss/Rees-Mogg vision of an economy freed from the shackles of an imagined 'Anti-Growth Coalition'. Bob Ward, Policy and Communications Director at the Grantham Research Institute, did not pull punches on this point, saying, "This review was set up by Liz Truss to appease a tiny lobby of Conservative MPs who have been spreading misinformation about the UK's net zero climate target. But the report published today has demolished their false claims that climate policies hurt the UK's economy. In fact, the drive for net zero is reducing our dependence on ruinously expensive fossil fuels and instead is generating new jobs and growth across the economy."

Viewed through the third lens, Skidmore's report is a comprehensive pitch for a climate-focused election manifesto: environmentally minded politicians of all parties are acutely aware of how important the issue is becoming for voters, with Labour MPs putting pressure on Keir Starmer and parliamentarians in the Conservative Environment Network pushing the government for a coherent message.

Priority missions
What is missing from the source material is a dose of Kate Raworth's Doughnut Economics, identifying the social foundations and environmental ceiling between which all economic prosperity must arise. There is some reassurance in the mission to "embed nature and habitat restoration...maximising co-benefits for climate and nature wherever possible", although this does imply that carbon reduction is the mission and nature the co-beneficiary. Since the UK is still falling well short against its biodiversity targets, there is a need for a more sure-footed integration of carbon and ecological outcomes across government policy than the report seems to offer.

Two of the priority missions are particularly relevant to the emerging planning system reforms: "pave the way for onshore wind deployment" and "unblocking the planning system". (The latter is something that Yorkshire and the Humber Climate Commission are currently tackling by preparing a response to the government's consultation on revising the National Planning Policy Framework.)

Mission Zero's proposed changes relating to making it easier for communities to initiate and support applications for wind energy appear timid and unlikely to result in significantly more schemes coming forward. We need to continue to challenge the government's tendency to see planning as a barrier to action and deregulation as the solution. There is a need for strong national policies that require developers to act and empower local authorities to pursue ambitious plans. It is, however, heartening that the report calls for a 'net zero test' to be introduced into the planning system.

The missions calling for commitment to carbon capture and storage, hydrogen networks and a new fleet of nuclear energy plants are also likely to attract differences of opinion. The Yorkshire and the Humber region has a long legacy of carbon intensive industries; transforming these for a zero-carbon future is a great economic opportunity. But this not without risks, including a dependence on technologies not yet proven at scale and a shortage of suitably skilled labour.

Net zero cities
An interesting recommendation is to "fully back at least one trailblazer net zero city, local authority and community, with the aim for these places to reach net zero by 2030". At least 150 local authorities in England, including some within Yorkshire and the Humber, already have local net zero targets for 2030, and a key concern has been lack of consistent, cross-sector government backing to implement them. While supporting one trailblazer is clearly welcome, this must be put in perspective by how rapidly so many authorities are wishing to progress and require support.

The report clearly reaffirms the role of local government, a move greatly welcomed by UK100, the network of local authorities who want to go faster on net zero, and there is also an opportunity here for PCAN to demonstrate the extent of collaboration between places that already exists (through its PCAN Plus Network, for example, and of course through individual climate commissions). But voluntary place-based climate commissions can only do so much, as a recent evaluation report illustrated; local authorities will need real injections of resources to be able to do so at the pace and scale required.

The report's recommendations span government departments and industrial sectors and demand joined up thinking and legislative measures. Perhaps most of all, they amount to a programme that – to quote our own Climate Action Plan – "treats the emergency as an emergency". In short, Skidmore's Mission Zero demands that government take an interventionist approach to making the net zero economy happen. This will require real buy-in and action from HM Treasury that is swift to arrive and stays for the long haul.

> **"The Yorkshire and the Humber region has a long legacy of carbon intensive industries; transforming these for a zero-carbon future is a great economic opportunity. But this not without risks"**

INVESTMENT ZONES – WHAT DO THEY MEAN FOR CLIMATE ACTION?

Andrew Wood
(20 October 2022)

> **We consider that the de-regularisation of planning controls and reductions in environmental protection, which appear to be a condition of any investment zone, are incompatible with our net zero carbon aspirations and our commitment to protect and enhance biodiversity and environmental quality.**
>
> *Oxfordshire County Council*

One of the first planning interventions of Liz Truss's government was to introduce Investment Zones. What are they, and how might they impact on efforts to act on the climate emergency?

Incoming governments of all persuasions tend to announce deregulatory changes to the planning system aimed at stimulating economic growth, and Liz Truss's few weeks as Prime Minister were no exception. The rhetoric states that development, housing delivery and business opportunities are held back by delays and uncertainties in the planning system and relaxing the regulatory framework will speed things up.

The evidence does not support this argument. Any investor or developer wants certainty and is unimpressed by frequent changes to the financial incentives or regulatory framework. Examples include the abandonment, in 2015, of a requirement for all new homes to be zero-carbon by 2016; and the ending of feed-in-tariff incentives for solar panels in 2019, which put the brakes on the burgeoning solar panel installation businesses that had sprung up across the country. Businesses do not like rollercoaster rides, and that is a key risk to delivering climate action.

Are Investment Zones really anything new?
Similar initiatives, such as Enterprise Zones, have been around for decades. The 2020 white paper, Planning for the Future, proposed a much broader restructuring of the planning system around three types of zones – 'growth', 'renewal' and 'protection' – but these did not make it into the legislative changes set out in the draft Levelling Up and Regeneration Bill (LURB) in spring 2022. The LURB did, however, provide for a new wave of Development Corporations, which would have planning powers, and Spatial Development Strategies, which could enable local authorities to work together across their boundaries on big strategic issues including carbon reduction and climate change adaptation.
At this stage in the life of the government - currently undergoing another upheaval with the resignation of Liz Truss on 20 October after only 44 days in office - we do not know what will become of the LURB or of wider planning reform (more uncertainty). Investment Zones (IZs) are a less ambitious change to the system, but we should not dismiss the potential risks they pose for climate action.

> **Incoming governments of all persuasions tend to announce deregulatory changes to the planning system aimed at stimulating economic growth, and Liz Truss's few weeks as Prime Minister were no exception.**

Downsides
Mayoral and local authorities have been invited to apply for designation of IZs to accelerate housebuilding and economic development. On the upside, authorities seem unlikely to apply for IZs that are not compatible with their own wider strategic aspirations, including climate action. On the downside, government guidance to applicants appears to make planning relaxations a pre-requisite for designating an IZ. Specifically, it says that IZs will:

- "reduce burdensome EU requirements" – this suggests lower environmental expectations;
- "reduce lengthy consultation with statutory bodies" – this implies that key consultees such as the Environment Agency and Natural England would have less opportunity to influence development proposals within IZs, but it is unclear how that would fit with their own regulatory duties;
- "focus developer contributions on essential infrastructure" – this might be code for funding roads and utilities, but not green space, nature recovery or community infrastructure;
- "relax key national and local policy requirements" – this is the real eyebrow-raiser. Key national and local policy requirements are there for good reason: surely, development should either conform with them (for example, design standards) because they are important, or they are unimportant – in which case they should not be required. And, crucially, if development and investment were to shift from outside IZs, where good design is required, to inside IZs, where design standards are relaxed, then the overall quality of design will inevitably deteriorate.

Lower policy standards, relaxed regulatory frameworks, and less opportunity for statutory environmental bodies to influence development could all pose a major risk to the delivery of local and combined authorities' climate ambitions. Many environmental bodies, including Yorkshire Wildlife Trust, are deeply concerned about this. Oxfordshire County Council has already decided not to apply for an Investment Zone for precisely this reason, stating, "We consider that the de-regularisation of planning controls and reductions in environmental protection, which appear to be a condition of any investment zone, are incompatible with our net zero carbon aspirations and our commitment to protect and enhance biodiversity and environmental quality."

Climate expectations
Many local authorities will want to harness IZs as an economic vehicle, but they will need to mitigate the risk to their climate actions which they have legal duties as well as political commitments to deliver. Creativity and leadership will be crucial here. Public bodies could work across their boundaries to set out shared expectations of what all new development should achieve from a climate perspective, whether or not it is in an Investment Zone, and together ensure that these expectations are not within the scope of the planning relaxations.

They could also make a joint commitment that climate action objectives will be a key purpose of what their IZs will deliver, for example by specifically targeting exemplary housing developments, and the needs of businesses who are working to decarbonise. We are in a climate and ecological emergency; it is only beneficial to accelerate housing and economic development if that brings with it accelerated climate action, so investment needs to be deployed imaginatively.

COLLABORATION KEY TO NI'S FIRST CLIMATE CHANGE ACT

Dr Amanda Slevin
(8 April 2022)

82%

CCBill2 was premised upon 82% greenhouse gas emissions reductions by 2050.

Throughout the Place-based Climate Action Network, there are amazing examples of diverse people and organisations working together to translate climate policy into action "on the ground" to bring about transformative change. Yet what happens when climate action efforts are constrained by the absence of policy? Northern Ireland is such a case, but that is set to change following collaborations between civil society, politicians and legal experts to advance Northern Ireland's first Climate Change Act.

Although the UK has climate legislation with a net-zero emissions target by 2050 (Climate Change Act, 2008), climate change policy is a devolved matter. The Climate Change (Scotland) Act (2009) involves a net-zero target of 2045 and just transition principles, exemplifying how devolved administrations can innovate and become climate leaders. In March 2021, Senedd Cyrmu (the Welsh Parliament) increased their climate ambition by approving a net zero target of 2050, up from 80% reductions by 2050 established in the Environment (Wales) Act (2016).

Legacy of missed opportunities
In Northern Ireland, we have experienced the opposite, despite various opportunities since 2008. The Northern Ireland Executive's (NIE) Programme for Government (2008-2011) identified climate change as "one of the most serious problems facing the world" and committed to a 25% carbon reduction by 2025. The Committee for the Environment's Inquiry into Climate Change (2009) also agreed climate targets were important: it made 52 recommendations, including a proposal that new primary legislation in the medium to longer term should be considered when "sufficient local information is available to identify challenging but achievable targets". However, primary legislation was not pursued.

Fast forward to 2016 via other potential inflexion points (advice from the UK's Committee on Climate Change on greenhouse gas reduction targets in 2011; the SDLP's efforts to develop climate legislation in 2013-15, along with further CCC advice on legislation and targets). Following the 2016 NI Assembly (NIA) Election, the Department for the Environment was dissolved and the new Department for Agriculture, Environment and Rural Affairs (DAERA) assumed responsibility for climate action. This, in itself, could be regarded as problematic, since agriculture has consistently produced the largest share of NI's greenhouse gas emissions (26%). When the Assembly collapsed over the Renewable Heat Incentive scandal (January 2017), NI climate legislation still did not exist. Three years later, following British and Irish government-led negotiations, the Executive was restored, based on the New Decade New Approach Deal (NDNA), which committed to a climate change act that would "give environmental targets a strong legal underpinning" and reduce carbon emissions in line with the Paris Agreement.

After the NIA's hiatus, the Democratic Unionist Party (DUP) MLA[1] Edwin Poots became Minister for Agriculture, Environment and Rural Affairs (AERA). When the Assembly passed a Sinn Féin motion declaring a climate emergency (3 February 2020), it appeared political momentum for climate action and associated legislation was finally building. The motion recognised the climate and biodiversity crises, called on NIE to fulfil NDNA commitments, proposed a review of NIE strategies to ensure carbon reductions, and asked the AERA Minister to establish an independent Environmental Protection Agency. When the motion was not acted upon, the Assembly passed an AERA Committee motion calling on the Minister to introduce a climate change act with "legally binding and ambitious sectoral emission reduction targets" within three months (21 July 2020). In the associated debate and subsequent media coverage, the Minister made clear he would not introduce urgent climate legislation.

Civil society takes action
The legendary Civil Rights activist, John Lewis once asked, "If not us, then who? If not now, then when?" Recognising the extent of the climate emergency and the necessity of multi-level action, in August 2020, colleagues and I in Climate Coalition Northern Ireland (CCNI) began to explore possibilities for civil society to advance climate legislation in partnership with cross-party politicians[2] and independent legal experts[3]. Formed by NI Environment Link in early 2020, CCNI is a network of organisations and individuals concerned with cooperation on climate change issues, locally and globally, in order to bring about climate mitigation and adaption action across Northern Ireland. With close to 30 member organisations that represent, collectively, around 400,000 people, CCNI is NI's largest civil society network for climate action. Our members include academics, businesses, environmental NGOs, farmers, international development agencies, student groups and youth climate strikers.

Hand in hand with collaborations with Members of the Legislative Assembly and legal experts, CCNI consulted with our members and stakeholders such as civil servants and representatives from agriculture and industry bodies around a potential climate change bill for NI. Following our multi-sectoral endeavours, Clare Bailey (Leader of the NI Green Party, Lead Co-Sponsor) presented Northern Ireland's first Climate Change Bill to the NIA Speaker's Office as a Private Members' Bill (PMB) on 21 October 2020. The achievement of cross-community collaboration on such a crucial matter was momentous and saw, for the first time, MLAs from across the political spectrum working in partnership with civil society groups to co-develop legislation. The majority of NI's political parties supported the PMB, except for the DUP and Traditional Unionist Voice (TUV), although DUP MLA Jim Wells was a vocal advocate for the Bill.

A Climate Change Bill for NI
Learning from countries like Scotland, Germany and Sweden, the PMB sought to make Northern Ireland, "a net-zero carbon, climate resilient and environmentally sustainable economy by the year 2045." The PMB recognised the climate emergency, mandated climate action plans (including carbon budgets, nitrogen budgets and sectoral plans) shaped by just transition principles, and entailed independent oversight via the Northern Ireland Climate Office and NI Climate Commissioner. The PMB passed First Stage (22 March 2021), Second Stage (10 May 2021) and on the day it passed Committee Stage (after extensive public consultation), Minister Poots opened an online consultation on a separate climate change bill (8 December 2021). The Executive nature of the resultant Climate Change Bill (no.2) (CCBill2) meant it was given precedence over the PMB and it rapidly moved through the legislative process, amidst much debate and amendments by all parties.

On 9 March 2022, when the PMB was due to commence Consideration Stage, CCBill2 passed Final Stage. After an arduous, protracted process dating back to 2008, NI's first Climate Change Act will now come into operation when it receives Royal Assent. The passing of CCBill2, rather than the more ambitious PMB, might seem like an anti-climax but the PMB and associated collaborations strongly influenced CCBill2. When introduced, CCBill2 was premised upon 82% greenhouse gas emission reductions by 2050; gave the Department power to amend targets; and created requirements for carbon budgets. Originally, it did not involve sectoral plans, nor did it establish independent oversight.

Following wide-ranging amendments, CCBill2 incorporated core aspects of the PMB: achieving net zero (by 2050 instead of 2045); sectoral plans; carbon budgets; just transition principles, and it established the independent office of the Northern Ireland Climate Commissioner. In addition, new amendments meant CCBill2 included aspects not in the PMB, such as a Just Transition Commission, concern for nature-based solutions to "enhance biodiversity, protect and restore ecosystems" and help reduce greenhouse gases, and a Just Transition Fund for agriculture. However, unlike the PMB, the Climate Bill enables split greenhouse gas targets and methane (primarily produced by agriculture) will only be subject to 46% reduction by 2050.

Northern Ireland's first Climate Change Bill is to be celebrated, not least given the role civil society involvement and cross-community collaboration has played. Arguably, no Bill would have passed without the unique partnership inherent to the PMB. In many ways, the forthcoming NI Climate Change Act symbolises new, inclusive ways of working, offering hope, and illustrating that we can transcend entrenched political divisions to move towards a better, fairer and more sustainable future for us all.

1 Member of the Legislative Assembly
2 The resultant Climate Change Bill was co-sponsored by Philip McGuigan (Sinn Féin), Mark H. Durkan (Social Democratic and Labour Party), John Stewart (Ulster Unionist Party), John Blair (Alliance Party), Clare Bailey (Lead Co-Sponsor, Green Party), Gerry Carroll (People Before Profit), Claire Sugden (Independent) and Trevor Lunn (Independent).
3 The Climate Change PMB drafters included: Anurag Deb (PhD Researcher, Queen's University Belfast); Laura Neal (Lawyer, Friends of the Earth); Nicolas Hanna QC (The Bar of Northern Ireland); Monye Anyadike-Danes QC (The Bar of Northern Ireland); Dr Ciara Brennan (School of Law, Newcastle University and Environmental Justice Network Ireland); Professor Ole Pederson (School of Law, Newcastle University); Dr Thomas L Muinzer (Senior Lecturer in Energy Transition Law and Co-Director, Aberdeen University Centre for Energy Law).

"Northern Ireland's first Climate Change Bill is to be celebrated, not least given the role civil society involvement and cross-community collaboration has played."

46%

the Climate Bill enables split greenhouse gas targets and methane will only be subject to 46% reduction by 2050.

NET ZERO IS THE CATALYST FOR DELIVERING LEVELLING UP

Brendan Curran
(18 March 2022)

While awareness of "levelling up" has grown in the political consciousness in recent years, it is really a recognition of a long-standing problem within the UK economy: regional inequality and productivity. Few wealthy countries have the regional disparities we see in the United Kingdom. While many nations have seen a geographic concentration of economic activity due to globalisation and rapid technological progress, the stark divergence in regional economic opportunity in the UK has been nurtured by decades of centralisation in policy-making and the financial sector alongside uneven infrastructure spending (for example in life sciences).

The Johnson Conservative Government recognised the importance of this disparity and has made reversing it a central litmus test of his premiership. However, there remained (and remains) ambiguity on the actual meaning of "levelling up" as the term has tended to be a catch-all for any regional and sub-regional differences. Boris Johnson's July 2021 speech emphasised regional inequalities in health, crime and education but there was a clear disconnection between the ambition of levelling up and another central policy of his Government, the transition to net zero.

The publication of the Levelling Up White Paper in February did little to establish the link between these two policy objectives. There was no mention of climate change or net zero in the press announcement or the national "Levelling Up Missions". Closer inspection of the full white paper revealed that mention of "net zero" didn't appear until 50 pages in. The actual section on net zero emphasised regional opportunities from delivering net zero and regional comparative areas of advantage but was mostly recycled from the Net Zero Strategy (a document strong in ambition but lacking in a delivery plan) and didn't involve any new commitments.

Missed opportunities

It seems the delivery of net zero and climate change action was not paramount in "levelling up". So, here we have the two major transitions within the UK economy for the next decade, which have clear interlinks, and Government policy suggesting they will be delivered almost independently of each other. There are two risks in this, discussed below. First, the risk of missed opportunities, such as failing to harness synergies between levelling up and net zero. Second, the risk of perverse outcomes, in which some policies for levelling up increase greenhouse gas emissions.

This is a missed opportunity as there is inherent potential for cutting regional inequality from delivering place-based net zero transitions across the UK. Many local authorities recognise the moral imperative to act on climate change (with around 300 councils declaring a climate emergency) but also the economic development opportunities that could stem from a transition to net zero. There are the obvious job creation upsides in emerging low carbon and renewable sectors (which have currently peaked during 2018) but also in transitioning workers from carbon intensive industries into new, quality jobs in these emerging industries.

This was recommended by the Green Jobs Taskforce but the Levelling Up White Paper failed to make linkages to several potential growth areas within the Net Zero Transition. A clear example of this is the necessary retrofit revolution across the UK building stock. This will unlock c.100,000 new construction roles across the country but will need locally conscious approaches due to the variation in housing stock and densities. Retrofit at this scale is also vital to reducing energy demand. There is much the Government could take from the National Retrofit Strategy and their strategy to develop local skills and capacity for retrofit. This approach will decarbonise the local economy and provide job growth.

This place-based approach is the most efficient method for delivering net zero and will simultaneously level up regions. The executive summary of the Levelling Up White Paper emphasises "Pride in Place" as a significant focus area. A recent PWC report compared place-specific and place-agnostic approaches for net zero delivery, and found a staggering divergence in investment cost and social co-benefits between both. The "place-based" bottom-up approach saved more than half the investment cost while still providing more than double the social co-benefits.

The Levelling Up White Paper, to its credit, did introduce greater devolution powers, but greater links need to be established between local climate finance plans and levelling up. This will also attract flows of private finance into under-invested regions, connecting the £130 trillion of assets under management from members of the Glasgow Financial Alliance for Net Zero (GFANZ) who are looking for net-zero aligned projects. This "wall of money" can simultaneously be leveraged into the net zero and levelling up transition, delivering a just and equitable transition across the UK. It will require expanded place-based finance development capacity, otherwise the project pipeline will not be created. The five Local Net Zero Hubs announced in the Net Zero Strategy are a start, but should be proliferated and scaled up if they are to meet the needs of place-based climate investment across the UK.

Finally, a place-based approach to net zero and levelling up demands integration of the Government's proposed planning reforms with both agendas. The local and regional planning system is currently not well aligned with net zero – as, for example, its inability to prevent the proliferation of poorly insulated new housing in flood plains. Ensuring that an improved planning system supports net zero, nature recovery and levelling up in an integrated way is vital.

Net zero and adaptation

There are other risks in not having a joined up approach around both environmental resilience and health and wellbeing. Levelling up policy implementation that does not consider investing in climate adaptation could further exacerbate loss and damage from climate impacts. For example, coastal communities will be abundantly aware that investment in greater adaptation will not only provide development but also protect their communities. Health and wellbeing benefits, meanwhile, are a key focus areas of the levelling up programme. Likewise, Chapter 5 of the CCRA3 Technical Report emphasises how net zero strategies have the potential to bring significant co-benefits in terms of population health and wellbeing. The dots between them need connecting and adaptation must be considered in any net zero and levelling up transition.

The cost-of-living crisis alongside our new reality of war in Europe creates additional considerations to delivery of both transitions. It would be remiss not to acknowledge the additional complexity, and heightened sense of urgency for action, since the publication of the White Paper at the start of February. The Ukraine war and its ramifications highlight that the unsustainability of our reliance on fossil fuels is not solely about carbon emissions but also the insecurity, social injustice and turmoil that our dependence on non-renewable energy resources brings.

There is a clear economic case for investment in net zero to alleviate unequal impacts on different consumers across the UK while still providing all the social co-benefits outlined above. Investing in reducing energy demand as well as production of low carbon renewable energy will provide consumers with greater protection from fossil fuel price volatility and greater security of energy supply in the UK. Therefore, accelerating the energy transition should continue to be a priority for the policy of levelling up (this has been outlined by Secretary of State Kwasi Kwarteng).

Holistic approach needed

The Levelling Up White Paper did recognise much of what has been outlined. There was provision for increased devolution (particularly in England) and, while there continues to be centralisation of the financial sector in London, much of the net-zero aligned investment flows were outside the southeast (to industrial hubs like Humberside). There certainly appears to be broad policy support, even if detailed structures for delivery remain absent so far. Looking forward, as the Government seeks to deliver on both its Net Zero Strategy and the Levelling Up White Paper, it needs to overcome the legacy silos in Whitehall and attempt to join up efforts. The delivery of a net zero strategy that is embedded in the distinct nature of different places will accelerate levelling up. The delivery of a levelling up strategy should also seek to reinforce, rather than contradict, the net zero agenda, and to build resilience rather than new vulnerabilities.

There is an opportunity to outline a more holistic approach from Government in the upcoming Green Finance Strategy later this year. Through this updated strategy, HM Government can outline an integrated approach to investment in net zero and levelling up, as well as investing in Britain's natural capital. This approach gives the best chance of a truly net-zero, climate resilient and prosperous future for all places across the UK, one that ensures climate fairness and justice for all. Surely this is exactly the purpose of creating the Levelling Up programme?

Additional content from PCAN Plus Network contributors.

WHY PLACE-BASED CLIMATE ACTION HAS NEVER BEEN MORE URGENT

Andrew Kythreotis
(21 October 2022)

326

MPs voted against introducing a ban on fracking for shale gas under Liz Truss' government on 19 October 2022.

The release of the House of Lords report on climate change and (individual) behaviour on 12 October 2022 demonstrates the turbulent times we have ahead in developing more effective and collective place-based climate action.

The report, which is nearly 140 pages in length, delivers key messages that dovetail with the ideals and tenets of place-based climate action. These include instilling individual and organisational behaviour change to meet net zero targets; ramping up business and civil society climate action; instilling greater climate leadership and co-ordination across all levels of society; and the current government having a more clear, positive vision and narrative that enables individuals to act on climate change.

The House of Lords report is backed up by sound science and theory, a refreshing change from the era of global post-truth and territorial sovereignty politics that has systematically terrorised recent international climate negotiations. But the report also illuminates the systemic problems regarding how UK society, as individuals, as households, as government and policymakers, as businesses, community groups and others can act collectively on climate change to become net-zero and climate resilient by 2050.

Regression in climate policy
Taking the parliamentary politics of climate change as an example, we are witnessing a House of Commons, where the real policy decisions are made, being led by a Conservative government serving up, at the very least, inconsistencies in climate policy strategy, and at the very worst, a serial UK-wide regression in climate policy progress. This was exemplified by the government decision under Liz Truss to reverse the moratorium on the ban on fracking, and the contentious parliamentary vote on 19 October, where MPs voted by 326 to 230 against introducing a ban on fracking for shale gas. Such political decisions are in direct contradiction to what some local PCAN climate commissions, like Lincoln, are trying to act against locally.

The House of Lords report quite rightly positions 'behaviour' as a key factor in helping the UK attain its climate goals. Significantly, if we change our behaviour and actions regarding saving carbon, this has 'spill over' benefits in other areas, like health and reducing (regional) inequalities. It is difficult to argue against the idea that behaviour change, in addition to technology development and increased government investment, is needed at different levels of society to get to a net zero and well-adapted society more quickly. But affecting behaviour change should not solely be reserved to us as individual citizens.

Whose behaviour counts?
Behaviour change must also emanate from the higher echelons of society – those with a larger mouthpiece to augment change – as a matter of moral disposition that supersedes just mere environmental benefit. The recent advice to King Charles III from Liz Truss that he should not attend COP27 in the UAE next month, is an example of government behaviour that does little to dispel the idea that our current government does not prioritise the transformational changes needed to reach net zero and a well-adapted society in the timescale needed, despite some senior cabinet politicians recent claims of support for net zero. With Prime Minister Truss now having stood down, there is an opportunity to reset this.

This brings us squarely back to the question of whose behaviour counts. The House of Lords report tells us that civil society, local authorities, businesses, devolved governments and the UK Government all have key roles in this, and it outlines these succinctly and sensibly. Place-based climate action plays a significant part in helping to translate the behaviours of individuals, the public, and private community sectors into meaningful local actions through local governance conduits like climate commissions, who can work with, as well as advise and scrutinise local authority climate policy.

National-local disconnect
The actions of local authorities, who, from my personal experience, have welcomed the recent creation of climate commissions across the UK as a supporting network for instilling greater place-based climate action, are severely handicapped when inconsistent national policy decisions on climate and energy circumscribe local efforts to work with commissions, local businesses, and communities. There is certainly a disconnect between national climate policy decisions and what local authorities would like to implement locally.

Whoever picks up the reins from Liz Truss, the current UK government needs to understand that the need for behaviour change is engrained within the mantra of what constitutes place-based climate action. It is such a pity that some of our key politicians cannot act in accordance with this mantra by making the necessary decisions to enable place-based climate action to thrive, not hinder or stunt it.

Call to new Prime Minister
Such a step change will not only help relieve the many institutional, economic and policy responsibilities the government has regarding climate policy action but will create a fairer society for everyone to act on climate change in their own diverse, but meaningful ways. While the behaviour of every citizen certainly counts in engendering greater place-based climate action, it is the behaviour of our government and politicians through their policy decisions that must be more forensically scrutinised as a first port of call. These are the decisions that allow our own behaviour and (place-based) actions over climate change to reach their fullest potential. The new Prime Minister needs to recognise this if the Lords' report, which recognises that behaviour change is in our hands, is to have meaningful impact.

"Taking the parliamentary politics of climate change as an example, we are witnessing a House of Commons, where the real policy decisions are made, being led by a Conservative government serving up, at the very least, inconsistencies in climate policy strategy"

6.0

CLIMATE COMMISSIONS AND PARTNERSHIPS

IN THIS SECTION

INSIDE EDINBURGH'S CLIMATE COMPACT

Rosanna Harvey-Crawford
(16 June 2021)

“Numerous reports have been written on the steps that need to be taken in order to make these ambitions a reality, including PCAN’s Net-Zero Carbon Roadmap for Edinburgh. However, translating this ambition into practice remains a key challenge.”

All over the UK, cities and regions are grappling with how to translate their net-zero commitments into action. In Edinburgh, an innovative “Climate Compact” was launched at the end of 2020 with intention of addressing this challenge. The Compact is a shared endeavour between City of Edinburgh Council and the Edinburgh Climate Commission, and was designed by a team of ECCi and council employees and commissioners, led by commissioner Clare Foster.

The Climate Compact is a commitment by leading businesses and employers in Edinburgh to make the necessary changes within their organisation and sector to support the radical reduction of greenhouse gas emissions in the city. It brings together key stakeholders in Edinburgh to identify common challenges and explore opportunities for shared investment in large scale projects, such as city district heating. In short, the Compact is there to enable the “action” in climate action. However, during the time the Compact was established, familiar questions resurfaced: how to resource such an initiative, and who should resource it?

Drawing up a Climate Compact

In May 2019, the Scottish Government set a legally binding target to achieve net-zero greenhouse gas emissions by 2045. In the same month, City of Edinburgh Council set its own target to become net-zero by 2030. Since then, the Edinburgh Commission has been established as a “critical friend” to help the city realise its net-zero ambitions. The Climate Compact was launched in December 2020 and received a warm media reception, with coverage ranging from The Scotsman, Herald, Business Insider and The Times. As the first partnership of its kind in Scotland, it generated a lot of interest not only in its potential to support Edinburgh’s net-zero efforts, but for replication in other Scottish cities.

An effective city response to the challenge of meeting net-zero will require organisations to work together in ways they haven’t before. Previously, large scale, low carbon infrastructure projects have been challenging to undertake as they require collaboration across different sectors and between different city stakeholders. The Compact brings together these diverse stakeholders: so far, the University of Edinburgh, NatWest, Scottish Power, NHS Lothian, Shepherd and Wedderburn, Robertson Group, SP Energy Networks, Edinburgh International Festival, Edinburgh Airport, Edinburgh Fringe Festival, Changeworks and City of Edinburgh Council.

These first signatories of the Compact were chosen by the Commission for their influence and impact. They are large city employers with a high annual turnover and are some of the biggest emitters in the city, or those organisations that have most influence over area-based emissions from people and businesses in Edinburgh. One important aspect of the Compact is the requirement for organisations to look at their operations – where can they influence climate action, from their suppliers to their customers, as well as taking internal steps to become more sustainable.

A significant challenge for the team drawing up the Compact was maintaining ambition and accountability without alienating the signatories. This required meeting organisations in the middle on the terms of the Compact. One of the Compact designers spoke of the difficulty in achieving this balance - the need to establish targets that work for both the city and the signatories, without watering down climate ambitions. The first signatories were presented with the draft Compact terms, and were able to contribute feedback. It was a collaborative process that has ultimately built a successful partnership, with the signatories eager to start work.

Making ambition a reality

In addition to the Compact’s requirements to address sustainability in organisations’ operations, the Compact has another significant aim. The past couple of years have seen countries, cities and regions declare climate emergencies and net-zero targets. Numerous reports have been written on the steps that need to be taken in order to make these ambitions a reality, including PCAN’s Net-Zero Carbon Roadmap for Edinburgh. However, translating this ambition into practice remains a key challenge.

The Compact signifies an effort to try and bridge this gap between advisory reports and meaningful action. Bringing together key stakeholders in Edinburgh to discuss what needs to be done to reach net-zero and how they can work together to implement ambitious programmes of work will hopefully kick-start climate action in the city. A particular focus will be how to unlock private finance for investment in infrastructure projects, such as electric vehicle charging networks and district heating installation. Although the first signatories are some of the largest organisations in Edinburgh, the Compact is not intended to be an exclusive club. All organisations in the city have been invited to apply to become a Compact signatory, ensuring that different sectors and diverse organisations are represented.

Familiar challenges

While the Compact is an important step in facilitating climate action in Edinburgh, it has also served to highlight a persistent problem. Local authorities have set ambitious climate targets, however, the reality is that securing funding for climate initiatives remains a major hurdle to climate action. Important and innovative enterprises like Climate Commissions and Climate Compacts require coordination and support, most of which is currently provided through voluntary time and goodwill. As the Green Alliance highlighted in December 2020, local authorities are not receiving sufficient funds and support to lower their emissions, and this follows a decade of severe budget cuts to Councils. PCAN’s report, Trends in Local Climate Action in the UK, published in March 2021, similarly described how councils’ delivery capacity on climate action has been hit hard by the Covid-19 pandemic, while also being hindered by inconsistent support from national government..

The Climate Change Committee, in their Local Authorities and the Sixth Carbon Budget report, stressed the importance of partnerships within their national coordination framework for net-zero. It states that, in order to affect emissions beyond their direct control, local authorities should “work in partnership to reduce area wide emissions”. The report also highlights the need to increase funds and capacity in local authorities.

While the Compact addresses the need for city partnerships and presents an opportunity to catalyse shared investment, it is undeniable that these efforts will be challenging to sustain without national government support. In order to resource these important initiatives, local authorities need to be provided with the funding and capacity they currently lack. Without the efforts of local authorities, the national target for net-zero will be considerably harder to reach. It is important to not let the opportunity for coordinated and meaningful action to pass by.

PLACE-BASED COLLABORATION: WHAT MOTIVATES STAKEHOLDERS TO JOIN CLIMATE NETWORKS?

Katherine Maxwell
(21 October 2020)

Both networks in Glasgow (Sustainable Glasgow) and Copenhagen (Copenhagen Climate Panel), highlight a split between stakeholders aligning with their own organisation's strategy and personal altruism, demonstrating a genuine passion to collaborate and work towards ambitious climate targets

Implementing climate action at city level increasingly necessitates collaboration between a plethora of stakeholders often found in place-based climate networks: public sector; private sector and third sector organisations. Collaboration between stakeholders in such networks enables knowledge exchange and learning, partnership development and can encourage stakeholder buy-in for designing and implementing climate action.

This approach can enhance municipal efforts by enabling the development of more fruitful relationships with stakeholders from across the city, as well as leveraging their support for the city's climate policies and targets. However, although the collaborative nature of such networks is appealing to stakeholders, there are various motives for joining.

This commentary, which is a small excerpt from my PhD research, explores the key motivations behind stakeholders' participation in place-based climate networks, providing insight from European cities in order to help understand why an individual or organisation would participate in such networks, and how this may influence their contribution.

Insights from European cities
With increasing demand to deliver effective climate policies and outcomes, European cities have experienced significant resource and budget cuts which has hindered progress. To address this, many municipalities have created climate networks to draw on resources from a range of local stakeholders to support climate action that aligns with European policy guidance. (For example, in the UK, municipalities have developed a variety of approaches as explored in Alice Creasy's article here.)

My research looked at alternative approaches adopted by Glasgow (Sustainable Glasgow) and Copenhagen (Copenhagen Climate Panel), where each city has developed its own network with multiple stakeholders actively participating in implementing climate action (e.g., through various activities, projects, programmes and policies). Within each city, such networks are deliberate attempts by the municipality to engage local stakeholders on key sustainability challenges.

Key motivations for stakeholders' participation in place-based networks?
As place-based climate networks are becoming an increasingly common approach for cities to engage with stakeholders on climate action, there are a variety of motivations to consider, as evidenced through Glasgow and Copenhagen. It is important to note that the following list of motivations are not strictly inherent in either network in Glasgow or Copenhagen - in many cases there are cross overs - but these were the key themes that emerge from each city.

Glasgow

- **Partnership development and knowledge exchange.**
  The collaborative nature of climate networks can be a motivating factor for stakeholders to participate, as they intend to develop partnerships with other local stakeholders. In Glasgow, many stakeholders felt that it was part of their remit to engage with other network actors and identify areas of collaboration (e.g., projects), whereas other stakeholders aimed to strengthen their relationship with Glasgow City Council to help them deliver on their sustainable development ambition by sharing sectoral expertise. As such, many stakeholders perceived the climate network as an opportunity to share knowledge and engage in productive discussions with the municipality and other actors.

- **Share organisational perspectives and priorities**
  Climate networks can provide stakeholders with a 'safe space' to showcase their own organisational priorities to potentially influence the networks processes and outcomes. For example, many private sector stakeholders can promote their own organisational priorities (e.g., involvement in new projects), whereas third sector stakeholders can offer a critical eye on city policy by independently reviewing and critiquing climate policy development and implementation. In many cases, stakeholders are motivated by the fact that network participation will benefit their own organisation in some shape or form, such as enable them to identify new funding streams, participate in funded projects, access political intelligence or emphasise a commercial agenda (e.g., test out new products or services).

Copenhagen

- **Access to decision-makers**
  There are various stakeholder motivations in climate networks, such as access to key decision-makers (e.g., the Technical and Environmental Mayor in Copenhagen), as some stakeholders seek to lobby or influence public sector organsations. The ability to influence city stakeholders in this way can ensure stakeholders that their perspective(s) are not neglected within the policy discussions. This can potentially result in more inclusive and equitable climate policies as the approach encourages more participation in the decision-making process (climate networks don't tend to have formal regulatory powers, but can act as sounding board for the municipality to discuss potential policies and projects).

- **Altruistic reasons**
  Given that conformity to network rules and procedures is purely voluntary, there were elements of stakeholders' altruism within Copenhagen's network, as they sought to donate time and resources in order to play a part in the transition to a sustainable city and enhanced global profile. Many stakeholders perceived involvement in the network as a 'civic duty' and an opportunity for them to build their networks and expand their profile within the sector as well as develop scalable solutions that contribute directly towards reducing greenhouse gas (GHG) emissions.

What can we learn?
Exploring key motivations behind stakeholders participating in place-based climate networks can help us understand why an actor would participate in such networks, and how this may influence their contribution. Both networks in Glasgow (Sustainable Glasgow) and Copenhagen (Copenhagen Climate Panel), highlight a split between stakeholders aligning with their own organisation's strategy and personal altruism, demonstrating a genuine passion to collaborate and work towards ambitious climate targets that has to be supported by the stakeholders' own organisation.

As PCAN aims to produce a replicable model for other cities to establish place-based climate networks, it is recommended that climate commissions capitalise on the partnership approach to climate action by:

- Advocating for balanced sectoral representation within networks (no one organisation should dominate the discussions),
- Specifying how network discussions will feed into the policy process (democratic transparency is critical),
- Creating clear network objectives to enable stakeholders to contribute effectively, and,
- Ensuring that the municipality is accessible, flexible and open to new ideas (e.g., networks are an opportunity to engage directly with city actors to develop innovative, credible and robust climate policies).

By learning from stakeholder motivations, PCAN can accelerate the development of agile and effective UK place-based climate networks that can deliver the transformative change required to realise global ambitions.

WE'RE ALL IN THIS TOGETHER – THE JOYS AND CHALLENGES OF UNUSUAL ALLIANCES

Mike Childs
(2 August 2020)

> **Including local communities is paramount to promoting more robust, evidence-based local climate adaptation strategies where a variety of approaches are needed for identifying risks.**

On 23rd June 2020, a Blueprint for accelerating climate action and a green recovery at the local level was published, examining how government can speed up climate action and implement a green recovery from coronavirus. The document was put together by a new coalition of local government, environmental and research organisations, comprising ADEPT, Ashden, Friends of the Earth, the Grantham Institute at Imperial College, Greenpeace UK, the London Environment Directors' Network (LEDNet), the Place-Based Climate Action Network (PCAN) at LSE and Solace.

I never thought I looked scary. I'm five foot eight, slim, balding, and soon won't even be able to call myself middle-aged. "Friends of the Earth" is about as cuddly you get and not easily confused with the Revolutionary Communist Party. So, I found it slightly bemusing and somewhat amusing that there was a nervousness from some local authority groupings about working together. Personally, I blame the insidious influence of social media which polarises and amplifies difference as well as separates us all into our separate bubbles.

I've always been of the viewpoint that we're all in this together and if we want to solve the ginormous environmental problems we have we surely have to put aside our differences and collectively put our shoulders to the wheel. Happily, we are doing this now, although it's taken a while.

The journey to friendship
I was delighted when in summer 2018, LEDNet invited Friends of the Earth to present our work to a meeting of Environment Directors. We were invited because we'd recently published a briefing on 33 Actions Local Authorities Can Take on Climate Change.

The briefing was produced to help local campaigners know what their councils could do, following the passing of climate emergency motions. The briefing was also at pains to point out that local people should expect miracles from councils, given ten years of cuts and a paucity of powers in some areas. The fact that so many council officers and councillors found the briefing useful was an unexpected bonus, although in hindsight we should have expected the interest given many were themselves scrambling to find out what was possible.

Anyway, at the LEDnet meeting my colleague Aaron and I first suggested that green groups and councils should work together to identify and push for the powers and resources needed. There was a guarded but positive response, including from Hannah Bartram who was also presenting at the event.

The next move was from ADEPT, with an invitation to me to join its Advisory Group, which also included the Local Government Association. More face to face meetings led to more trust, including through chats over coffee (Nigel Riglar and I had a good chat about heat pumps as we'd both acquired them and were enjoying getting to grips with them, as boys are wont to do with new toys).

Finally, following an opportunity to speak at an LGA event, we managed to get a great bunch of people around a table from civil society groups (Ashden, Greenpeace and Green Alliance joined us), and local authority organisations (ADEPT, LGA, London Councils, LEDNET, UK100). The meeting was hosted by the LGA in their grand offices near Parliament. At it we agreed a way forwards for identifying policy recommendations and prioritising these.

The 'Blueprint for accelerating climate action and a green recovery at the local level' was published on 22 June. It is a great document and will form a great basis for building support for councils to get the powers and resources needed. But producing it has not been without challenge.

Reaching out to councils to fully understand the barriers and get policy ideas was time-consuming but essential. But then how on earth do you rationalise so many great ideas? Doing so was tough, and although I think collectively, we've done a great job we will have undoubtedly lost some gems along the way (for which, apologies).

Decision-making for local authorities is a different world than for environment groups. Most local authority organisations had to check back with numerous others in their organisations, and at the same time be acutely aware that their groups represented councils with a diversity of political affiliations. That necessarily led to lots of drafting, redrafting, and tweaking. The emergence of Covid-19 also necessitated changes and reduced the capacity of some participants. Without huge efforts from my colleague Sandra Bell and others we would have still been a long way from finalising the document.

Building pressure for change together
But we have got the 'Blueprint...' now. Not every organisation was able to sign-on at the launch, but in time I'm confident most will because it is good evidence-based work, respectful of difference, and doesn't pretend to be the final word. Testament to the quality is the fact that SOLACE, PCAN, and the Grantham Institute for Climate Change and the Environment asked to support it once they saw the document.

The Blueprint is the foundation for working together to get the powers and resources councils need. If councils don't get these then we fail on climate change, and Friends of the Earth's mission fails. I think councils need all they help they can get to secure these resources. I'm just not convinced that rationale argument alone will secure what's needed.

Avoiding bubbles
There is a climate and ecological emergency. That is a scientific fact (although I understand those that don't warm to the word 'emergency'). We've got to get out of our bubbles and work together. That will include understanding and tolerance of the different ways, experiences, and viewpoints that different people and organisations work. None of us are scary really. We're all humans, and most of us care about the future of our kids and the planet. Let's put differences aside and amplify our similarities.

> **I've always been of the viewpoint that we're all in this together and if we want to solve the ginormous environmental problems we have we surely have to put aside our differences and collectively put our shoulders to the wheel**

Scan here to download the Blueprint for accelerating climate action and a green recovery at the local level

HOW EFFECTIVE ARE CLIMATE COMMISSIONS?

Candice Howarth and Jamie Brogan
(3 February 2023)

In 2022, PCAN funded a project to evaluate the impact of the Belfast, Edinburgh and Leeds Commissions, to help understand the role they are playing in the climate activities of their respective cities, and the extent to which they provide a replicable model for place-based climate governance. A report outlining the findings from this evaluation has now been published; we summarise these findings and reflect on what we have learned on local climate governance and what more needs to be done.

Why did we set up Climate Commissions?
Climate Commissions were designed to fill a gap in local climate governance. They were set up to explore whether introducing an independent form of local governance could help accelerate local climate action, and to stimulate, test and learn from innovative place-based approaches. Edinburgh and Belfast were established in late 2019, with Leeds having been established two years earlier.

What is the role of the PCAN Commissions?
The three core PCAN Climate Commissions are widely valued and respected independent organisations in the local climate policy landscape and have all contributed to the development of local climate policy. Each of the city councils in Belfast, Edinburgh and Leeds have declared a climate emergency, there are more organisations that have publicly committed to working towards Net Zero carbon emissions and there are many more sources of advice and support available on a range of subjects on place-based climate action. The Climate Commissions fill a niche that was missing in each of the three cities. The evaluation found that no other organisations fulfilled the convening and independent evidence-based advisory functions that the Commissions undertake.

They adopt a number of roles, ranging from policy innovation, knowledge brokering, evidence provision on climate change, awareness raising, engagement, facilitation, and challenge. However, the evaluation found that the Commissions have two functions primarily: that of a convenor bringing disparate organisations and individuals to work together to take action on addressing climate change in their cities, and that of an independent, evidence-based advisor role, providing impartial, robust evidence and advice to influence policy and delivery of climate action.

What impact are the PCAN Core Commissions having?
The Commissions have had, and continue to have an important impact locally (see graphics below, which you can also download). From informing the development of city councils' climate plans (e.g. through the Net Zero Carbon Roadmaps), providing a voice for local businesses and employers (e.g. through the Edinburgh Climate Compact), engaging with citizens (e.g. via the Leeds Climate Change Citizen's Assembly) and youth (e.g. Belfast Climate Youth Survey and Summit), and informing practice on finance and adaptation (e.g. by providing case studies in adaptation finance to support the Climate Change Committee's newly published report, Investment for a well-adapted UK). The work of the PCAN Climate Commissions has demonstrated that they play a useful role in facilitating concrete climate actions, but that it can take time for this to translate into actual project delivery.

How could the Commissions evolve?
Re-balancing mitigation and adaptation: the focus of all three Climate Commissions has predominantly been on climate mitigation and much less so on adaptation. More could be done to re-balance this, ensure a better integration of mitigation and adaptation and seek to further inform the local policy priorities for climate action.

Unanticipated contextual factors: the Covid-19 pandemic led to a lack of face-to-face Commission meetings, which was felt to have a detrimental impact on the operation of the Commissions and relationship-building between Commissioners. Similarly, the lack of a Northern Ireland Government for much of the time the Belfast Climate Commission has been in existence was identified as a specific challenge and seen as a contributing factor to there being no national climate legislation in place until 2022 to help shape the priorities of the Commission.

Resourcing and funding: consideration needs to be given as to how the Climate Commissions can secure sustainable and appropriate levels of funding to enable them to continue to deliver both the functions identified in the research and the translation of work into tangible climate outcomes.

Managing expectations: some of the Commissions expressed a perceived lack of funding and resourcing of the Commissions which limited the operation and ability of the Commissions to deliver all the priorities they identified to deliver, such as conducting additional research. And, while each of the Commissions had clear Terms of Reference, Commissioners and individuals in supporting roles from both Edinburgh and Leeds Climate Commissions were not clear on their Commission's roles and purpose. This meant that Commissioners had differing expectations of what they could do and the time and resources they were able to commit.

What does this mean for place-based climate governance?
From both establishing and managing the Commissions, and through this independent assessment, we have learned the following:

- A place-based approach is an essential component of climate action, with so many measures and the engagement needed to support them having to be designed and delivered at the local level to be most effective.
- Commissions can make a valuable contribution in bringing climate action up the local political, social and organisational agendas, and in building partnerships and securing commitments. However, it is difficult to measure and attribute their impact directly to climate projects and emissions reduction.
- What independent Commissions have been most effective at doing is convening different and divergent city stakeholders to start collaborating on key challenges.
- Commissions have been a forum for stimulating collaboration, problem sharing and knowledge exchange, and for helping to establish partnerships or governance mechanisms that can stimulate and support place-based approaches to tackling different components of climate action.
- The governance gap still exists, and it has proven difficult for volunteer Commissions to fill that as the sheer complexity of the challenge requires a complex and interconnected programme of work that a volunteer Commission can often only initiate.
- It seems likely Commissions will still have a role until more formal and better resourced mechanisms for delivering place-based climate action, with appropriate governance structures, are established at the optimum place-based level, whether local or regional.

Key areas of impact and examples of these delivered by Edinburgh Climate Commission to November 2022

Evidence of impacts | Evidence of some progress towards delivering impacts

Types of impact	Examples	
Informed Policy / Plans / Practice	**The Net Zero Carbon Roadmap** informed the Council to set a net zero target of 2023.	All recommendations in the Commission's '**Green Recovery Plan**' in Response to Covid-19 were accepted by the Council: 'A new business plan will incorporate plans for a green recovery and achieving the Council's net zero carbon by 2030 ambition, according to a report considered by Policy and Sustainability Committee. The recommendations were made in response to the Edinburgh Climate Commission's report **Faster Forward Together**, which was published earlier this month and presented to the Committee on 9 July' The Commission's contributions to the City Strategy [2030 Climate Strategy] have been well received "Incredibly helpful how it influenced the Strategy, as some chapters would never have seen the light of day."
Capacity Building: Organisations	**The Edinburgh Climate Compact** is regarded by interviewees as the most successful project delivered by the Commission. 23 leading business/organisations in the city organisations have signed the Climate Compact which commit them to 'take action within their own organisation to contribute to a green recovery and radically reduce the city's carbon emissions.'	
Climate Governance		The Edinburgh Climate Commission is a new type of city-wide partnership.' Bringing together key actors in the public, private and civil society sectors to promote, guide, monitor and review on-going climate and energy transitions'. Described by one interviewee at Edinburgh Climate Commission "a very valuable institution of credible climate experts who have informed, sense checked things moving forward. Welcome and invaluable in meeting the City 2030 [net zero] target. It has challenged some views in the Council re climate facts and galvanised the climate. Has been successful in really challenging circumstances."
Concrete Climate Action Facilitated	Difficult to attribute causal links from the work of the Commission. Early stage discussions taking place between Climate Compact signatory organisations about potential energy project collaboration.	

Key areas of impact and examples of these delivered by Leeds Climate Commission to November 2022

Evidence of impacts

Evidence of some progress towards delivering impacts

Types of impact	Examples	
Informed Policy / Plans / Practice	Leeds Carbon Roadmap (2019). When the Council declared a Climate Emergency in 2019, it used the Leeds Carbon Roadmap as the evidence base. "It was really helpful to say 'this isn't just a declaration, this is a declaration underpinned by road map' that "we can show how we're going to get to net zero by 2038."	One of the position papers prepared was on the expansion of Leeds Bradford Airport and Incorporating aviation into the Leeds Carbon Roadmap. This was mentioned in the CLC Planning application as a consideration.
Capacity Building: Commissioners		Leeds Climate Change Citizens' Jury. The Council accepted the majority of the recommendations.
Capacity Building: Citizens	Leeds Net Zero Carbon Roadmap 2021. Decision-making by the Commission "was heavily influenced and informed by the...net zero analysis showing the economic case."	Leeds Climate Change Citizens Jury. "The citizens' jury did demonstrate that given exposure to the evidence in an intensive environment, the majority of people became engaged and recognised the role they can play." (CLC Climate Emergency Update 2nd January 2020)
Capacity Building: Organisations		Leeds Climate Commission supported a successful application to The National Lottery's Climate Action Fund by a partnership of Leeds organisations for community led climate action - Climate Action Leeds.
Climate Governance	The Leeds Climate Commission is a new approach of a city-wide partnership "bringing together people and organisations from the public, private and civic sectors who work collaboratively to help drive, guide, support and track climate action."	National Conference on Green Finance for Green Great Britain Week organised by UK100.
Concrete Climate Action Facilitated	Leeds City Council received £40k from the Department of Culture, Media and Sport Financing for Society grant fund to work with Abundance and Public Power Solutions to explore the use of crowd-funding as a means of financing solar PV systems on Council buildings.	

Key areas of impact and examples of these delivered by Belfast Climate Commission to November 2022

Evidence of impacts

Evidence of some progress towards delivering impacts

Types of impact	Examples	
Capacity Building: Organisations		Information/data from the Net Zero Carbon Roadmap was used in the Carbon Disclosure Project submission for Belfast in 2021 - a global framework which assesses studies progress around their journey to net-zero.
Informed Policy / Plans / Practice	The Youth Working Group of Belfast Climate Commission hosted the Climate Crisis Youth Summit to coincide with COP26 Youth Day. The summit brought some of Northern Ireland's young leading climate change advocates together to discuss and share ideas on how best to tackle the global emergency.	Young People's Attitudes survey. An online survey was undertaken in October 2021 to gather information on four themes: • Knowledge and understanding of climate change • Accessing information around climate change • Personal participation in climate change related issues • The future and the impact of climate change
Capacity Building: Citizens		
Climate Governance	The Belfast Climate Commission is a new type of city-wide partnership 'Bringing together key actors in the public, private and civil society sectors to promote, guide, monitorand review on-going climate and energy transitions!'	

BUILDING A CLIMATE COMMISSION: SUMMARISING EVIDENCE FROM EXISTING UK CASE STUDIES

Alice Creasy
(8 June 2020)

At this time of unprecedented global crisis, the importance of place-based action that encourages collaborative and effective action has never been more pressing. Action plans to address climate change have become pervasive in policies across the UK, however governance of this issue operates through a multitude of different bodies at different scales, with a variety of partnerships and outcomes.

With this in mind, researchers on the Place-Based Climate Action Network (PCAN) team have evaluated existing collaborative climate change strategies currently or previously undertaken within UK cities. This commentary examines the five 'typologies' of climate governance that have emerged from this research before exploring their relevance to future "climate commissions" of the type that have emerged through PCAN.

Independent groups, such as the Manchester Climate Change Agency, are organisations which most closely reflect the aims and governance structure of PCAN Climate Commissions in Edinburgh, Belfast, Leeds, Lincoln, Surrey and Croydon. Acting as independent voices on climate change in the city, they bring together a diverse range of organisations and actors from across the city in order to inspire and inform place-based climate action.

Expert-led groups, such as The London Climate Change Partnership (LCCP) are often created by local or national governments in order to advise decision-making surrounding climate change within the public-sector. Their work is therefore closely tied to these bodies, both in terms of funding and research focus. These organisations are made up of a small number of individuals from different sectors who have expert knowledge and experience in a particular area.

Organisations within the Local Authority archetype, (e.g. Lancaster Climate Change Cabinet Liaison Group) are closely tied to city councils. While expert-led groups include only a few select individuals, a primary goal of these organisations is to create open groups of external actors, including members of the public, to advise on local authority planning.

Networks of third sector organisations operate within many UK cities (e.g. Derby Climate Coalition). Bringing together a diverse range of environmental groups, these networks help to facilitate action at a local, regional and national scale, often raising funds through donations and fundraising events.

Climate governance beyond the city, such as Bright Green Business, utilise existing networks to maximise engagement. This archetype acknowledges the work of regional and national climate partnerships and their relevance to place-based climate action. In doing so it draws on the work of private sector organisations as well as more recent agendas that seek to engage businesses and industrial sectors in place-based change.

What are we learning?
As place-based climate action emerges as a key area for climate change governance, there are a number of strengths and weaknesses to consider.

Firstly, funding and independence. For climate commissions seeking to be an independent voice on climate change, a certain degree of separation from local authorities is important in creating an equal space for collaborative decision-making. Independence gives commissions the scope to look beyond political decision-making and engage with organisations and actors from across the city, giving all sectors an equal opportunity to be represented.

However, while independence is key, it is important to acknowledge that local authorities are key partners to collaborate with on both the core aims of the commission and provide access to a wealth of knowledge and networks.

Secondly, facilitating and attracting a representative range of sectors from across the city is important in building a relevant and collaborative body. The creation of a diverse network will also help to gather different experiences and perspectives of the city alongside opening doors to new partnerships and funding opportunities for members. With this in mind, inviting a range of sectors to be involved at a core level of the partnership will help to maintain meaningful engagement.

Thirdly, engagement across the city is key. Within all cities there already exist organisations which engage with the issue of climate change, providing important allies for the commission. With regards to citizen engagement, many city residents are unable or unwilling to commit their time to regular meetings and so, implementing an accessible platform for participation could be an important way of hearing from a wider range of people. In Leeds, for example, public engagement campaigns and online surveys have helped to shape the direction of the Commission, whilst in Croydon two members of the Croydon Citizen Jury have been invited to join the Commission.

Fourthly are scale and focus. While 'expert-led' and 'local authority' groups often have a clear brief and structure as they work to advise the needs of an established public body, independent bodies collaborate with a range of different organisations to agree on their own objectives and governance structure. Although creating an open and collaborative group is key to the work of climate commissions, maintaining direction through small representative steering groups is vital. These groups can provide advice and support to the wider network and ensure that its activities align with broader objectives.

> **"Independence gives commissions the scope to look beyond political decision-making and engage with organisations and actors from across the city, giving all sectors an equal opportunity to be represented."**

Finally, funding is important to maintain momentum and ensure that meaningful action is taken. Not only important in attracting membership and facilitating action, sufficient funding to employ staff members makes a significant difference to the impact of an organisation.

Recommendations for future commissions
The research on which this commentary is based provides a rich set of recommendations on how climate commissions can be established building on the range of rich existing models across the UK. These include:

- Utilise existing networks to maximise engagement: The integrity of future climate commissions rests on ensuring representative, diverse and meaningful cross-sector engagement with the issue of climate change. Recognising the existing work being done by groups, organisations and networks within the city will help future commissions to create effective objectives that engage with and build on existing action.
- Secure financial plan. Financial independence is key for climate commissions aspiring to be an independent voice advocating for climate change action within the city. A diversity of funding streams will help maintain a greater degree of independence whilst ensuring future Commissions are financially resilient. Secure and meaningful funding will help to drive engagement and create employment opportunities.
- Engagement with the city beyond the bodies present on boards and in meetings is important for creating a representative and effective Commission. Constructing online engagement platforms alongside social media streams will help to generate fresh ideas, empower individuals and ensure more representative and relevant decision-making.
- Clear focus and governance structure. Bringing together a representative coalition of actors is challenging, particularly when each may have different ideas about the type and scale of action that is needed as well as the methods for realising this action. The creation of a small, representative governing body would help to maintain the focus of the broader group.

CAN CLIMATE COMMISSIONS OWN A CITY'S FUTURE?

Matthew Lane
(16 December 2019)

> **It might be sensible for the council not to run it at all and for the commission to be entirely independent.”**

A question long pondered by urban theorists such as myself, ownership of the city as a spatial, material, and conceptual entity finds increased practical resonance in the ambitions of the ESRC-funded PCAN network.

The adoption of place-based “Mini Stern Reviews” (such as this one for Bristol), and the establishment of city decarbonisation “roadmaps” (following the interest in the Leeds carbon roadmap, produced by PCAN co-investigator Andy Gouldson and team at the University of Leeds), has meant issues of ownership and responsibility loom large as civil servants and academics alike continue to digest the magnitude of the challenge before us. This has been brought into sharp focus by climate emergency declarations in places across the UK, often with considerably more ambitious self-imposed deadlines for achieving net zero emissions than the government's 2050 target.

If “place” is going to be the basis for climate action, however, we must confront the contested nature of its meaning as it pertains to the management of urban climate futures. Is placed-based action to climate commissions what governance is to government?

The question of who owns the city and its future was a central topic at the recent PCAN (Place-Based Climate Action Network) researchers meeting, held at the London School of Economics and Political Science on 26 November 2019. A platform to harness the critical energy of academics involved with PCAN, the research team is focusing on both the institutional contexts from which the climate commissions emerge, and how they ultimately come to affect the places and communities they seek to represent.

The first climate commission was formed in Leeds in 2017, prior to the establishment of PCAN. Building on the Leeds model, the five-year ESRC network will see further new climate commissions established in Belfast and Edinburgh in January 2020. Closely following the process of commission formation in the three cities, the recently established PCAN ethnography working group will explore the following themes across the cities: “Achieving Independence”; “Maximising Representation”; “Formulating Institutionality”; and “Understanding Affect.”

Quantifying the past and the future

Broaching each of the above themes, as the city of Edinburgh's decarbonisation roadmap continues to take shape, attention has turned to the question of achievability, and to the role of the soon–to-be-established climate commission in guiding, steering and managing this agenda. Its relationship to the city government is, therefore, a complex one, to be characterised by the requisite balance of independence and accountability. How to achieve this balance was central to the debate that took place in Edinburgh City Chambers on the afternoon of Friday 25 October 2019.

“It might be sensible for the council not to run it at all and for the commission to be entirely independent.”

These words, from a member of the city's policy and sustainability committee, were instigated by the presentation by PCAN team members of the Mini Stern Review for Edinburgh, which outlines the harsh reality of the city's aspirations to achieve net zero by 2030. Assembled to observe the long-awaited official announcement of the proposed climate commission, the reflections were met with surprise by those in the public gallery. Confronted with a series of reports detailing the magnitude of the task in front of them however, it is perhaps understandable for a city government to seek ways to share in the responsibility for the identification of solutions to problems that themselves have long lacked clear ownership.

The notion that climate change and unsustainable levels of urbanisation are challenges that must be governed proactively is a considerably more radical break from the traditional role of local authorities than is often assumed. As a result, against the backdrop of both squeezed resource bases – still enveloped by the lingering shadow of austerity – and a mandate for devolution as the key to unlocking socio-technical innovation at the local scale, civil society's engagement with climate governance finds support across the political spectrum. However, in pursuing an aspiration for independence, while devolution is something well understood from the perspective of the state, considerably less thought and attention has been paid to how this might play out across other parts of society, particularly within private sector organisations. Organisations, moreover, for whom the concept of “place” has long been subordinate to the more financially determinable (and asset-valuable) notion of location.

Owning the past and the future

The creation of a new institution, such as a city climate commission, requires us to be particularly attentive to the embeddedness of existing arrangements in order both to build on those that are most productive for our cities, and to engage head on with those that are the least.

With this in mind, what, in the context of a place-based climate commission, are we looking for when we seek to establish adequate representation? Should Edinburgh and Belfast, aided by their relationship to Leeds, seek a representative model, broadly capturing key industry sectors while ensuring a suitably geographical spread in its membership? Alternatively, should a climate commission focus its attention on the most carbon-intensive organisations currently present within the city, along with stakeholders who have already started to drive systemic and progressive change in their communities? While the answer to this question is likely to be both, it speaks to the need for closer engagement with our understanding not just of who owns any particular city, but of what “the city” actually is.

Are – to illustrate the above point – Belfast, Edinburgh, and Leeds merely derivatives of a well defined, and shared, understanding of the city as a concept (both sustainable and unsustainable), circulated from place to place? Or are they complex and uniquely material places in and of themselves, upon which we then seek to map our own preconceptions about what a city is and what it should become? This is a crucial question that we must confront as we aspire to partake in the practice of place-based climate governance.

In the meantime, might we be inclined to revisit the temporalities often associated with institutional beginnings and temper our ambitions in accordance with the conceptual magnitude of the task we have set? As the ongoing reshaping and adaptive capacity of the Leeds Climate Commission serves to demonstrate, these are initiatives requiring constant care and attention, ill-suited to well-meaning but outdated attempts to identify clear cause and effect relationships, easily transferable to networked partner cities near and far.

Framed not merely as the starting gun for action then, but as the finish line for decades (even centuries), of urban theorising, might we, in the form of climate commissions, have found an entity with a real mandate for ownership of the future? Only time will tell. For now, there is much work, and much learning, to be done.

7.0

DECARBONISATION

IN THIS SECTION

- Levelling Up or Hollowing Out? The Role of Local Action in Addressing Industrial Emissions
- Getting Behind Local Authorities to Drive Down Area-Wide Emissions
- Coronavirus: How Economic Rescue Plans can set the Global Economy on a Path to Decarbonisation
- What Have Buildings Ever Done for us, or the Climate?

LEVELLING UP OR HOLLOWING OUT? THE ROLE OF LOCAL ACTION IN ADDRESSING INDUSTRIAL EMISSIONS

Imogen Rattle and Alice Owen
(8 March 2022)

Carbon intensive industry is concentrated in particular areas, but UK industrial decarbonisation policy is centrally controlled and funded. A national framework is needed, but what routes are there for local action to ensure the low carbon transition doesn't leave some places behind?

Wind turbines, electric vehicles, thermal insulation - the low carbon transition relies upon industrial materials. But the activity that creates these materials is also a major contributor to climate change. In 2020, energy-intensive industries such as steel and iron, cement and lime, chemicals, paper and pulp, ceramics, glass and oil refining, accounted for 26% of global CO2 emissions.

These heavy industries are considered particularly "hard to abate". Plant costs are high and require an investment case to upgrade, while long facility lifespans weaken the argument for upgrading before an asset becomes uneconomic.

Carbon capture and storage (CCS) and switching to fuels like low carbon electricity or hydrogen will be key technologies to decarbonise the sector but many of the solutions are at a low level of maturity and will require time and investment to realise their contribution. In the interim, energy-intensive industries need to focus on innovations in material and energy efficiency, but narrow profit margins and the lack of a ready market for low carbon materials provide limited incentive for them to invest this work. To decarbonise industry at the required pace, government support is needed to set standards, plan and develop infrastructure, and support innovation.

In 2021, the UK became the first major economy to publish an Industrial Decarbonisation Strategy. The long term ambition is to reduce sector emissions by at least 90% by 2050 compared to 2018 levels. The midterm strategy is more geographically specific. Just over half of UK industrial emissions arise from six coastal industrial clusters. The government plans to deliver at least one low-carbon industrial cluster by 2030 and one net zero carbon industrial cluster by 2040 through the deployment and scale up of CCS and low carbon hydrogen. In Oct 2021, the East Coast (combining Humberside and Teesside) and HyNet (Merseyside) clusters were selected as pilot sites for this work.

Location and emissions of UK largest industrial clusters by CO2 emissions
Prioritising the deployment of decarbonisation infrastructure into clusters is not, in itself, controversial. Infrastructure is expensive. So, too, is research and development. Clusters have the guaranteed customer base, institutional capacity and economies of scale needed to bring new technologies to maturity. Their coastal location provides easy access to offshore wind and transport links for future trade in hydrogen and carbon. Many coastal communities are also "left behind" communities, specifically because of their distance from other centres of population and their industrial heritage.

Investment here supports government commitments to use industrial decarbonisation to level up the economy. But the approach does not deliver equally for all places. While the lessons learned from the pilot sites may transfer easily to the remaining clusters, the benefits for sites outside clusters — the dispersed sites which generate the remaining 47% of industrial emissions — are less clear. The strategy here is for firms to apply for government grants to improve energy and material efficiency, followed by electrification when grid upgrades are complete. This means that industries in inland locations like Sheffield, Bradford, the Black Country — the industrial heartlands of the UK — have fewer options to decarbonise than their cluster-based competitors.

The issue is exacerbated by a lack of clarity about the timetable for electrification. Facing questions about the long-term viability of these sites, there is a risk firms invest in other, lower risk, facilities either in clusters or abroad. The resulting two-tier system threatens not only decarbonisation targets but may worsen longstanding regional inequalities.

Can locally-led initiatives address this emerging issue? Potentially, but being the first major economy to develop an industrial decarbonisation strategy means there are few examples to guide us. Local authorities have an acknowledged role to play in delivering action on climate goals, but their powers focus on waste, transport and social housing with little influence over industrial emissions.

The 2017 Industrial Strategy White Paper attempted to address the shortfall by introducing Local Industrial Strategies. These, however, were axed from the Treasury's 2021 Plan for Growth, which contains no regional or local element, leaving the Select Committee for Business, Energy and Industrial Strategy to conclude:
It is unclear what structure can now underpin strategic conversations about industrial policy at the local level, and support focused engagement between local areas and national Government[1].

This limits local influence on industrial decarbonisation to indirect routes. One key area is skills. A lack of adequate skills and training presents a major challenge for the implementation of industrial decarbonisation strategies and local authorities will play an important role in supporting the workforce to reskill. But we know decarbonising energy-intensive industries also requires support for infrastructure and innovation. What role can local initiatives play here?

In theory, Local Area Energy Plans (LAEPs) could inform conversations about infrastructure. The process of developing a LAEP is intended to help local stakeholders, utilities and infrastructure owners in understanding what the low carbon transition means for the energy profile of their area, including the infrastructure required to enable it. However, the solution is not a complete one. Not all aspects of industrial energy use are included and piecemeal funding means not every place is developing one. Most significantly from the perspective of delivering local action, the process is purely advisory. LAEPs are intended as a tool to guide conversations about local priorities, not a mechanism to access funding to implement them

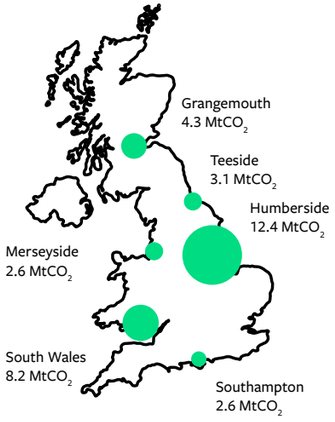
Innovative sector-led initiatives facilitated by local support provide another part of the answer. One example is "Glass Futures", a research technology organisation which, in partnership with local authorities, is developing a pilot plant for decarbonised glassmaking on the site of a former glass works in St Helens, Merseyside. Once operational, the facility will provide a global Centre of Excellence for firms to undertake research into glass decarbonisation.

Such initiatives demonstrate how energy-intensive industries might cooperate yet still maintain competitive advantage while addressing climate change. However, experience shows that the success of such initiatives is often reliant on key individuals or groups with the experience, determination and networks to galvanise change. In short, it relies on local capacity.

And this is the crux of the matter. If decarbonising dispersed industrial sites is to rely on local people and institutions being proactive, bidding for funding, building partnerships, developing plans, then not all places will decarbonise at the same rate. Those that do so will be well-situated to attract further investment into their area. Those that don't are likely to fall further behind.

These places also need support if we are to deliver a Just Transition. Industrial materials are a major contributor to industrial emissions, but they also provide the means to abate them. We need an industrial decarbonisation strategy that actively supports local areas to decarbonise their dispersed industries, rather than relying on local capacity to deliver Otherwise rather than levelling up the country, industrial decarbonisation risks hollowing it out.

The UK's Largest Clusters by Industrial Emissions only



MtCO2 = Million tonnes of Carbon Dioxide (CO2) emissions per year

[1] Business Energy and Industrial Strategy Committee, Post-pandemic economic growth: Industrial policy in the UK. 2021, House of Commons. Available from: https://committees.parliament.uk/publications/6452/documents/70401/default/

GETTING BEHIND LOCAL AUTHORITIES TO DRIVE DOWN AREA-WIDE EMISSIONS

Jamie Brogan
(14 February 2022)

It is great to see more and more UK organisations taking responsibility for reducing their own emissions, and even better to see commitments extending up and down supply chains and into customer influence.”

Local authorities have a key part to play in piecing together the jigsaw of place-based emissions reductions we need to deliver a net zero UK. Many have shown leadership in declaring a climate emergency, by setting area-wide targets, and in taking responsibility for accelerating the climate transition within their areas. I believe local authorities are the organisations that can do the most at the local level to help drive down emissions from UK places.

Those local authorities setting area-wide targets have accepted a huge challenge. It is great to see more and more UK organisations taking responsibility for reducing their own emissions, and even better to see commitments extending up and down supply chains and into customer influence. In setting area-wide targets, local authorities are taking responsibility for their part in an even bigger challenge: to lead, enable or support the changes in local systems, infrastructure, choices and behaviours that are needed to deliver net zero places across the UK.

At the University of Edinburgh, the Edinburgh Climate Change Institute are helping local authorities to define and deliver their role in driving down area-wide emissions. Two of our recent projects working with local authority networks have both shown the extent of their potential influence on area-wide emissions, and highlighted the challenges they face in managing and delivering effective area-wide strategies. These projects are informing organisations who support local authorities, and helping authorities themselves to understand the changes they need to make, where their actions can be most effective, and how they might embed climate impact into city decision making.

Our work with UK100 has shown that local authorities can have considerable influence on area-wide emissions. Our research report shows that councils’ own operational footprints were a higher proportion of area-wide emissions than previously thought; a range of 4-9%, compared with previous estimates of 2-5%. This shows the importance of local authorities understanding and driving down their own organisational emissions, and demonstrating that same commitment to other local organisations.

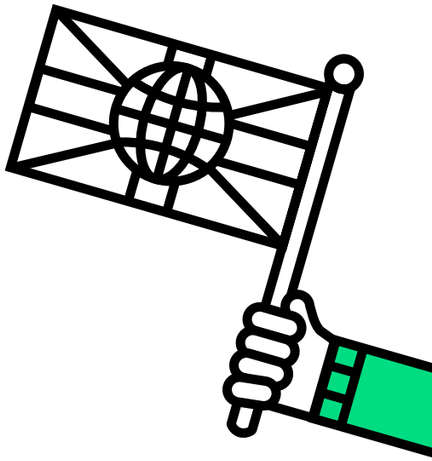
It also emphasises the extent to which local authority decisions and powers can influence the wider set of emissions from across a local authority area. Government analysis in the UK Net Zero Strategy suggests local authorities’ scope of influence can extend to over three quarters of area-based emissions sources, highlighting the importance of understanding that wider impact and embedding climate impact into all city decisions and development.

Our work with the Scottish Cities Alliance, and the leaders of Scotland’s seven city authorities and the national organisations who support them, supports local authorities to embed climate impact deeply into city decision making. The programme looks at capability and capacity. It seeks to build capability by using data to work out emissions reduction scenarios and their costs for city projects at the design and development stage. The work also clearly highlights that local authorities need to build significantly more capacity to effectively resource the delivery of their climate ambitions.

In both of these, responsibility lies not only with local authorities themselves, but also with their private, public and government partners who can deliver economies of scale and consistency of approach through a combination of local, sectoral and national approaches to support the delivery of national climate targets.

Local authorities are often criticised, because they cannot always get everything right. However, in setting targets to reduce area-wide emissions, many are leading climate action at a local level. These authorities are taking on a complex problem, with the intent to use all of their influence and to play the biggest part they can in response to the global climate crisis. They cannot and should not have to deliver these targets and ambitions alone. All of us – businesses, individuals, and communities, and independent bodies like local climate commissions who can help to catalyse and convene – need to help them do the best job they can in creating healthy, thriving places that do not continue to contribute to damaging climate change.

Local authorities are often criticised, because they cannot always get everything right. However, in setting targets to reduce area-wide emissions, many are leading climate action at a local level.”



CORONAVIRUS: HOW ECONOMIC RESCUE PLANS CAN SET THE GLOBAL ECONOMY ON A PATH TO DECARBONISATION

John Barry
(22 April 2020)

“The fossil fuel industry was already struggling before nationwide lockdowns caused a crash in consumer demand. States should end the subsidies propping up the industry and re-allocate that money to research and development funding for battery storage technologies and clean energy.”

As states contemplate how to restart the global economy after the pandemic, it’s important to remember that we’ve been here before. The global financial crisis of 2008 didn’t cause as much social and economic harm as Covid-19 has, but it did force governments around the world to intervene in the economy, to limit the fallout from the crash.

Vital though these interventions are, states need to consider what a post-pandemic economy looks like. If handled correctly, it could be a once-in-a-lifetime opportunity to create a system that’s fundamentally fairer and more sustainable.

That would mean ensuring that climate action is baked in to stimulus packages and bailouts. There were similar ideas floated in the wake of the 2008 crash, but they only amounted to investments in green energy and infrastructure of around 16% of total fiscal stimulus spending.

Given the mounting urgency of the climate crisis, a post-pandemic recovery programme would need to be much more ambitious, ensuring a planned retreat from fossil fuels that reallocates employment into secure and socially useful work, while also making the global economy and supply chains more resilient to inevitable future shocks.

A post-COVID green new deal
Before Covid-19, momentum around the world had been building for “a green new deal” – a programme of state-led investment to rapidly reduce emissions and economic inequality by creating green infrastructure and jobs.

Amid the recent turmoil, investors are looking for safe assets. Governments could finance a green overhaul of the economy by encouraging them to invest in low carbon infrastructure through “green bonds”. These could be issued directly by central governments, or through national or regional green investment banks. That investment could help transform the electricity system to integrate renewable energy generation, roll out charging points for electric vehicles, and build cycle networks and low-carbon housing.

With the nine-to-five rhythm of the weekday grinding to a halt, the lockdown has affected profound changes in energy demand. While the UK approaches its record for the number of days without generating energy from coal, now is a good time to restructure national electricity grids away from a centralised model, with fossil fuel power plants radiating energy outwards, to a model where energy generation is distributed among many sources of solar and wind, like rooftop photovoltaic panels and community-owned wind farms.

The fossil fuel industry was already struggling before nationwide lockdowns caused a crash in consumer demand. States should end the subsidies propping up the industry and re-allocate that money to research and development funding for battery storage technologies and clean energy. Given how weak the sector is – with oil prices plumbing new lows each day – states could buy oil and gas companies out and take their reserves into public ownership, effectively keeping those fuels in the ground. Displaced workers could be compensated and retrained, which has happened in the Spanish coal industry.

The pandemic has also exposed the fragility of the UK’s food supply, with its limited storage capacity, a just-in-time supply model, and dependence on imported food. Suddenly we’ve realised the social and environmental absurdity of flying and driving much of our food from big producers far away.

Many people have taken the initiative during this crisis to support small businesses and buy food from local suppliers. Economic stimulus measures could build on this by ensuring large public sector organisations that are anchored within communities, such as councils, colleges or hospitals, source their food from local producers. The Preston model of “re-localising” economic activity shows how it might be done.

While many people are stuck in their houses, thoughts have inevitably turned to home improvement. It wouldn’t cost a great deal for governments to roll out a mass home insulation effort after the crisis, targeting households which are struggling most with fuel poverty first. This would pay for itself in energy savings, and warmer homes would improve the health and well-being of many, while also creating green jobs that can’t be outsourced. Despite the numerous declarations of “climate and ecological emergencies” in 2019, the pandemic of 2020 has shown what a global emergency looks like in real time – and how public resources can be leveraged to rapidly deal with it. While green investment and climate action were afterthoughts in post-2008 economic recovery programmes, they must be the guiding principle behind rebuilding the economy after the pandemic.

“The pandemic has also exposed the fragility of the UK’s food supply, with its limited storage capacity, a just-in-time supply model, and dependence on imported food.”

WHAT HAVE BUILDINGS EVER DONE FOR US, OR THE CLIMATE?

Dr Alice Owen
(9 March 2020)

The construction industry literally shapes the places where we live and work. Buildings do more than provide shelter, they create character and allow (or disable) activities. The construction industry also provides the shape of the infrastructure that tells us how to use a place – the roads, bridges, and canals that connect, or sever, people and places.

Construction is a big deal in the economy too. In 2018, the Office for National Statistics reported that more than 1.3 million people were employed in construction, in 325 000 firms. The vast majority, around 80% of those firms, are sole traders or micro-enterprises employing three people or less. Those are the official numbers; with the construction industry's reputation for a considerable grey market dealing in "cash in hand", the actual number is likely to be much higher.

Construction also contributes a big element of the carbon emissions that are changing our climate. Using energy in building, particularly in heating buildings, is responsible for around one third of annual carbon emissions in the UK when the emissions associated with generating electricity for use in buildings is included. And, despite progress in decarbonising the electricity grid, energy demand in our homes remains stubbornly high, accounting for 18% of national carbon emissions. The UK's Committee on Climate Change 2019 progress report showed us that emissions from buildings have increased by a small amount since 2015, even when adjusted for temperature.

While it's important that we change the construction industry so that our new buildings and structures going forwards are zero carbon, somehow we've got to face up to this challenge: emissions are associated with the 23 million homes that we've already got. The structure of home ownership doesn't help here. The social housing sector has been leading the way for years, with the most recent example of Goldsmith Street in Norwich receiving justified attention from architects as well as social policy makers, not least because reducing bills reduces the rate at which tenants default on rent. However, less than one in five UK homes are social housing.

Private landlords, providing another one in five homes, have no incentive to improve energy performance since they don't pay the energy bills. Since 2018 there has been a minimum energy efficiency requirement for properties with new tenancy agreements, but this requirement, of energy performance level "E" is a long way off the level "A" which carbon reduction targets require.

The challenge for home owners
For all the other owner-occupiers, the decision to invest in your home to reduce energy bills in a dramatic way will rarely offer payback within the time you live in that building. Even if you are able to go ahead anyway, how do you get advice you can trust on what to do? And how do you find the tradespeople to do the work? This is not the kind of undertaking that the average homeowner in the UK has the time or motivation to tackle.

But there may be a ray of hope on the horizon for the homeowners with mortgages. Alerted, in part, by the Bank of England's requirement that finance providers understand the climate impacts of their activity, mortgage lenders are becoming aware of the liability presented by energy demand of the homes that they are lending against. Nationwide, for example, has just announced a range of "green mortgages" to incentivise buyers to buy more energy efficient houses or retrofit older houses; a sign that perhaps mortgage lending and conditions can take away at least some of the financial barriers to transforming your home to a zero carbon home. There must also be opportunities in finance that's available as some "first movement" developers seek to offset any unavoidable emissions associated with new construction projects. (As yet there is still no legal requirement for developers to do this.)

So there's the first major challenge in achieving net zero in construction: doing retrofit at scale when there is no economic reward to do so, and when home improvements are done in a very fragmented way by tens of thousands of small building firms working for tens of thousands of clients each year.

Embedded carbon, carbon used during construction itself, is reducing, although as the energy efficiency of new homes improves, it is becoming proportionally more. New buildings, particularly new homes, could be built with virtually zero energy demand, with renewable energy generation from photovoltaic cells or heat pumps, and with energy storage systems for home energy and potentially electrical vehicle charging all connected. This will only happen if the construction "client" – a developer – wants it to happen. And it can't happen while new homes are being built with automatic connections to the gas supply network.

The Leeds Climate Commission includes two developers who are bucking the trend and driving a wholesale change throughout their supply system. CEG is embedding the idea of "design for performance" across its many subcontractors. Citu is behind a "Climate Innovation District" south of Leeds City Centre, creating a factory to produce its modular, zero carbon homes, recruiting and training a workforce who blur the boundaries of traditional construction trades.

Industry-wide change needed
Which leads us to the second major challenge: shifting from carbon intensive materials like cement and steel to lower impact materials that will still have the same structural benefits. (As an example of the impact this could make, the Leeds Carbon Roadmap shows that a 33% reduction in concrete and steel consumption would be a significant factor in helping the city achieve its target of being carbon neutral by 2030.)

In theory, a shift to timber construction could be really good news for carbon emissions. Advances in construction in Norway, where high rise timber buildings are under construction, suggests that it should be possible to combine timber construction with very high energy efficiency standards. But the painful truth is that the construction industry in the UK is a long way off being able change to new materials. As well as the supply chain issues of sustainably sourcing volume construction timber, few construction firms, or their insurers, feel comfortable working in new construction methods involving, for example, pre-insulated timber panels.

As with transforming our existing buildings, there is no simple solution to changing new buildings. The construction industry is stuck in a particular equilibrium – low skills and low innovation. To move to a new high skills-high innovation (and low carbon) equilibrium, we need to find a way to create enough momentum to change the whole system.

This would mean:

- Changing what building users expect – for example, being happy with heat pump radiators that appear much cooler than the gas-heated systems we've become used to;
- Changing what builders know how to do through comprehensive reskilling, and ensuring that they are confident that they will still have happy customers if they change their working methods. (Customer satisfaction, and how that affects local reputation, is the main driver of small construction firm behaviour);
- Changing the construction training and accreditation systems so that incentives to retrain and innovate outweigh the current disincentives in terms of cost, low client demand, and insurance cover;
- Changing what construction clients demand, and translating through what professional services like architects specify;
- Changing the materials and technologies readily available to construction firms.

All of these things have to change at once. There are big penalties – financially – from moving only one part of the system, and even bigger carbon penalties if we don't change.

Given all this complexity, it seems like a place-based approach offers real possibilities to unlock the puzzle. Rather than trying to change the whole of the UK's construction industry, can we change one city at a time, sharing experiences as the movement grows? What could be achieved by a group of committed firms and subcontractors in one city, with a supportive planning authority, some long-term financial support with local interests and a community of building users who can learn and support each other?

8.0

FINANCE AND INVESTMENT

IN THIS SECTION

UNLOCKING THE MISSING MIDDLE: HOW LOCAL FINANCE HUBS CAN SUPERCHARGE GREEN INVESTMENT

Jamie Brogan, Andy Gouldson, Brendan Curran, Sabrina Muller and Nick Robins
(25 January 2022)

Over 70%

of the country's 400+ local authorities have declated a climate emergency

Ramping up flows of finance is crucial to delivering the UK's goal to be a resilient, net-zero economy by 2050. According to the Climate Change Committee, extra net-zero investment flows need to grow five-fold this decade from £10bn a year in 2020 to over £50bn in 2030.

In one sense, there's no shortage of capital. The UK financial system holds more than £20 trillion in assets, and the increase in investment that is required is well within the historical range. Moreover, the UK's leading banks and investors have committed to aligning their portfolios with net zero. A "wall of money" is seeking bankable green investment projects.

Yet a thicket of barriers prevents this latent supply of finance connecting with surging demand for green investment in energy, housing, industry and transport and nature up and down the country. The UK Government published its Net Zero Strategy ahead of COP26 and, while there was progress outlining pathways to net zero for many sectors, there were insufficient policy incentives to mobilise capital at scale in crucial sectors. For example, while the grants for heat pumps are welcome, the materiality of the grant fund isn't large enough to make a dent in the domestic energy efficiency challenge we have in the UK.

Financial Institutions looking to invest in net zero with long term returns but currently finding it hard to deploy funds.	**National government** seeking to stimulate investment for net-zero and levelling up, and needing effective mechanisms.
The Local Climate Finance Challenge	
Local authorities seeking investment to meet climate, social, economic goals but unable to attract sufficient financial flows.	**Businesses and communities** with good net-zero ideas, but struggling to make them investable and source finance.

There also remains a particular disconnect between the UK's highly global capital markets and the bottom-up needs of its localities and regions. Over 70% of the country's 400+ local authorities have declared a climate emergency. Some leading cities and regions are starting to develop financing strategies. But the reality remains only a handful have yet started to think through how to raise the capital needed to drive action, both within the public sector, and more importantly, in local businesses and households. This local approach to tackling climate investment was echoed by the UK Cities Climate Investment Commission[1], which recommended "place-based investment demonstrators" that could be replicated and scaled.

If the UK is to deliver on its net-zero and nature-positive ambitions, it will need to catalyse local climate pipelines and pump-prime local finance markets to allow private capital to be leveraged. So, the country faces a real bottleneck. Financial institutions are seeking net-zero investment opportunities but complain of a lack of investable projects and programmes of the right scale and form (notably demonstrated by the GFANZ headline figure of £130tn AUM)[2]. Local authorities and other place-based actors have a wealth of potential projects but find it difficult to develop and aggregate these to attract the finance. What is missing is the intermediary or middle layer that can develop and consolidate projects and programmes and match them to different forms of finance.

Some steps are being taken to overcome this divide. The new UK Infrastructure Bank has a really promising dual mandate connecting net zero and supporting local economic development. To make this happen, it will need local interlocuteurs who can build the project pipelines and make the link with the pools of finance. Furthermore, much of the finance that is needed falls outside the infrastructure arena (for example, for households and SMEs). While the Bank does not have any specific development capital, its guarantee book of £10 billion could be utilised effectively to encourage private investors into frontier sectors and geographies.

A place-based approach to climate investment is essential to support the mobilisation of capital for climate action. Strong evidence suggests unlocking climate finance this way would both enable decarbonisation and deliver local environmental, economic and social benefits whilst generating effective financial returns. But the reality of this "missing middle" is clear from the work we have been doing on the ground as part of the Place-based Climate Action Network (PCAN), from Edinburgh to Surrey and from Belfast to London and Leeds. To close this institutional divide, we believe that the UK needs to establish a network of local climate finance hubs.

Building a network of local climate finance hubs

There is a clear need to bridge gaps between projects and investment by building capability, capacity and connections to match owners of place-based climate programmes with institutional investors. We propose to establish a network of local climate finance hubs around the UK to pilot, evaluate and enable rapid scale-up of the practical steps needed to bridge these gaps. These platforms would support development of programmes to meet the needs of local and national government, communities and investors, as shown below. To be effective, the approach for connecting local projects to national investment must operate on two levels:

1. Locally embedded through place-based nodes to develop and maintain a pipeline of high quality, high impact projects informed by a deep knowledge of local opportunities, needs, capabilities and capacities and the benefits that can be realised from place-based projects.
2. Centrally connected to expertise, knowledge and networks for finance and investment. This central hub can aggregate place-based projects into programmes and articulate them as investable proposals to connect to appropriate sources and models for investment.

The case for such hubs is increasingly accepted, but they have yet to be established, tested and evaluated in the robust way needed to enable widespread adoption. The hubs would lead engagement with financial institutions to target sources of investment and understand their requirements. They would also create and curate a set of assets, tools and resources for developing proposals and securing investment. Many issues also remain to be resolved, including that of the hubs' governance and organisation, their funding, and their precise functions. Establishing the hubs at city-region level would most likely give scale and rootedness.

Proposal: Place-based Climate Finance Hubs?

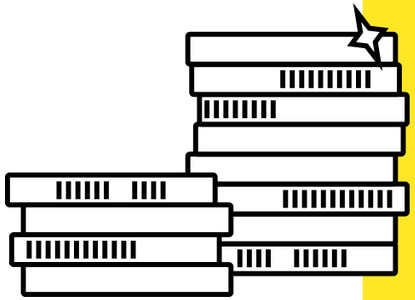
Identify and develop project pipelines	→ Support the creation of investable business models	→ Consolidate programmes at the scale for securing investment	→ **Connect programmes to different sources of finance**	← Unlock systematic investment into place

- Building on experience
- Operating at city/region level
- Linking with public finance: UKIB, BBB, etc.
- Drawing in private and community finance
- A network of hubs across the country

Pilot proposal

One way of getting things underway would be to establish a network of pilot hubs across the UK, from each of the devolved administrations and key English regions. This model enables easy addition of local platforms to grow and scale impact. The network would build and share knowledge and examples of different replicable approaches across the UK, contextualised to place-based requirements and connecting climate action with institutional investment and deliver the economic, social and climate benefits.

2022 is a decisive year for both UK and global climate action. Establishing a network of pilot local climate finance hubs would go some way to filling the missing middle in the country's climate finance architecture. This would enable the delivery of the ambitious net zero roadmap laid out in the Government's Net Zero Strategy, as well as ensuring nature-positive and climate-resilient regions across the UK.



"A place-based approach to climate investment is essential to support the mobilisation of capital for climate action."

"extra net-zero investment flows need to grow five-fold this decade from £10bn a year in 2020 to over £50bn in 2030."

FIVE PRINCIPLES TO MOBILISE FINANCE FOR A SUSTAINABLE AND INCLUSIVE RECOVERY

Nick Robins
(6 May 2020)

> **There is no reason why we should not feel ourselves to be free to be bold, to be open, to experiment, to take action, to try the possibility of things.**
>
> *John Maynard Keynes*

Recent announcements by the UK Government have disappointingly included a watering-down of a number of climate-related policies, such as weakening energy efficiency standards in the private-rented sector.

This has been accompanied by a narrative that attempts to pitch 'actions that are good for the climate' as being in opposition to 'actions that are good for people and the economy'.

We have a lot to build upon. Never before has so much finance been committed to climate action and responsible practices, whether in terms of pledges made by banks, investors, capital markets or indeed central banks and financial regulators.

Equally, however, never before has actual capital allocation been so misaligned with the human and planetary health. So how should we reset sustainable finance in the decade to 2030, when carbon emissions will need to be halved and the Sustainable Development Goals implemented in full?

Closing the gap between intention and implementation

I suggest five principles for the road ahead:

1. **Finance needs to be green.** Today, we have increasing focus on climate disclosure. More importantly, we also have pioneering investors committed to making their portfolios consistent with keeping global temperature rise to 1.5˚C by 2050. By 2030, all financial institutions and regulators will need to be taking action to achieve alignment with net zero.
2. **Finance needs to be just.** To date, the 'S' or 'social' dimension of ESG [Environmental, Social and Governance] has too often been silent, with human rights viewed as a risk, rather than as an imperative to be respected. The need for finance to support a just transition is now acknowledged. By 2030, all financial institutions and regulators will need to show how they are delivering positive social impact, eliminating poverty and reducing inequality.
3. **Finance needs to be resilient.** The current crisis has revealed once more just how fragile we are in the face of shocks. And these shocks are set to increase from climate change and degraded natural resources. This is not just a task for the insurance sector. By 2030, all financial institutions and regulators will need to have strategies for resilience, ensuring that they help both users and vulnerable communities to bounce back.
4. **Finance needs to be rooted.** Over the past 50 years, finance has become global. This has brought benefits. But finance is increasingly seen as a system apart, with benefits flowing to metropolitan finance hubs, to Wall Street not Main Street. By 2030, all finance institutions and regulators will need to demonstrate how they are responding to place-based needs, including via new instruments and institutions rooted in local realities (see, for example, the work of Abundance on crowdfunding for local authorities).
5. **Finance needs to be responsive.** Many are missing out on even the most basic products: about a third of people are still without a bank account. By 2030, all financial institutions and regulators will need to be responsive to over 8 billion individuals and many more institutions, notably the small businesses that prop up the global economy.

Investing in a better world after COVID

These principles should now guide the way we mobilise finance to deliver a sustainable and inclusive recovery. In the words of UN Secretary General Antonio Guterres, we have the strategic responsibility to "recover better". In the wake of the global financial crisis, I and colleagues at HSBC estimated that governments introduced 'green stimulus' programmes amounting to just over 16% of the total public finance boost.

Governments must now take a far more comprehensive view so that 100% of their Covid-19 recovery plans are aligned with the Paris Agreement, with a special focus on the needs of the most vulnerable to deliver a just transition.

What does this mean in practice?

First, recovery plans must be designed and delivered to be consistent with the Paris Agreement. Any support for high-carbon sectors must be contingent on measurable net-zero emissions plans, with programmes for involving workers and communities in their design and delivery.

Second, a sizeable proportion of recovery spending, considerably above the levels seen in 2009– 2010, should be directed to sustainable growth. A wealth of options exists, including renewable energy and energy storage, making buildings more efficient, public transport, as well as land use, climate adaptation and nature-based solutions. Many of these are cheaper and more 'shovel ready' than a decade ago.

Third, the recovery packages should promote a coordinated multilateral response through the UN and the G20. Special attention should be given to the needs of developing economies, where coronavirus impacts are set to be most severe and capital for the transition is in shortest supply. A portion of the recovery funds in industrialised countries must therefore be dedicated to support the transition efforts of developing countries. In this way, we could meet and exceed the longstanding pledge for $100 billion in annual North–South flows in climate finance. And we could make COP26 in 2021 the place where sustainable recovery plans are shared, upgraded and coordinated.

These recovery plans will be financed in many ways. One route is through increased government borrowing in the form of sovereign bonds. So far, around $60 billion of green sovereign bonds have been issued from 12 countries and a further ten nations have indicated that they will issue green sovereign bonds this year. A coordinated issuance of green, social and sustainable sovereign bonds in the hundreds of billions of dollars by governments over the coming year would be both a practical mechanism for paying for a sustainable recovery and a powerful signal to the market.

Alongside this, central banks will need to ensure that climate risks are incorporated into monetary operations to avoid unintended climate consequences.

Be bold and take action

As we think about the action we need to take today, we can draw inspiration from those who faced similar challenges in the past. John Maynard Keynes, the great economist (and investor), guided the world out of the Great Depression. In his Essays in Persuasion, published in 1929, he wrote: "There is no reason why we should not feel ourselves to be free to be bold, to be open, to experiment, to take action, to try the possibility of things." So let us be bold, be open, experiment, take action, try the possibility of things so that sustainable finance becomes the norm.

9.0

MEDIA AND RESEARCH

IN THIS SECTION

DECISION MAKERS MUST ENGAGE WITH REGIONAL AND LOCAL MEDIA ON THE ISSUE OF CLIMATE CHANGE

Georgina Collins
(27 May 2020)

2016 study by King's College London found UK towns whose local newspapers had suffered closure showed a 'democracy deficit'

In my work, I often come up against the perception from MPs and constituents alike that climate change is an exclusively global issue, with little that should or can be done at a local level. However, meeting net-zero targets is fundamentally about transitioning to low carbon infrastructure, and many of the daily decisions around new and existing infrastructure, such as new buildings, roads and utilities, are made at the local level. So why has this generalised perception of climate change continued to be so pervasive?

To answer this, we must examine how the media has been reporting on the issue. Given that public opinion is inextricably linked to mass media, the role it has played in shaping the general public's perceptions of our changing climate should not be ignored.

It seems that the media has failed to report on the issue in a way that has inspired policy action significant enough to overcome the climate crisis. The public response to the media's reporting on global pandemics is a good source of comparison. Or, as Hong Vu, lead author of a 2019 study on media framing of climate change summed up: "As communications researchers we want to know why, if climate change entered public discussion more than 30 years ago and we've been covering it as a global problem since, we can't slow the warming climate down".

Recognition requires coverage
The historical lack of media recognition given to climate change relates, in turn, to the lack of recognition by decision-makers such as MPs. Though coverage of climate change has increased in recent years, reporting on the issue in a way that is relevant and understandable to both the general public and MPs (rather than a 'distant and abstract threat and visualization') has remained a barrier to engagement.

Former press officer Nicole Valentinuzzi describes how the media can play a key role in agenda-setting within Parliament. Not only did ministers see the value of using the media as a vehicle to communicate their policies to the public (often an essential part of progressing in their careers), press coverage can effectively make the case for a policy within Parliament. As Jo Swinson noted; positive press coverage of her shared parental leave policy increased the cost to other MPs of opposing it.

Though in recent years things have certainly improved in the media's reporting of climate change, it's notable that until recently – and to an extent still – it remained a topic that decision-makers and media alike were hesitant to engage with. Over the last few years as the climate crisis has taken up greater space in the public consciousness, largely due the actions of Extinction Rebellion and the school strikers opening up a public discourse, the MPs we at Hope for the Future have engaged with have generally felt more comfortable to discuss what once was a fringe issue.

Local impact
Given the strong link between media coverage and public opinion, we need trusted voices speaking with authority in local and regional media, such as local elected representatives, climate scientists, energy professionals and faith leaders, in order to set a strong agenda on climate action.

Local media must also play a key role in making rigorous connections between local events and climate change, so that residents in the UK understand how climate change affects their lives, and subsequently why action is necessary. For instance, Alexander Stafford wrote passionately in the Yorkshire Post about the flooding his constituency experienced throughout 2019, explaining why this indicated the need to tackle climate change.

At Hope for the Future, we feel it is vitally important for communities around the UK that MPs and constituents have rich and challenging conversations about the climate crisis. Local, grassroots democratic engagement such as this will continue to be essential if we are hoping to transition equitably to a greener society. Local media can be a powerful tool to drive this community engagement; a 2016 study by King's College London found UK towns whose local newspapers had suffered closure showed a 'democracy deficit' that resulted in measurably reduced community engagement by local people and a heightened mistrust of public institutions. This highlights why media is so important in the fight against climate change.

Increasing political mandate
Robust coverage of climate change from regional and local sources, will, in turn, lead to greater participation in the community and then a greater political mandate for MPs to work with. Regional news sources represent a large untapped resource for the climate movement. A 2018 YouGov poll in the UK found that three times as many people claimed they trusted local newspapers compared with social media. Local news is also amongst the most widely read, with 33.6 million people reading local media online each month.

Greater public support is needed in order to drive transformative political will to act on climate change, and the media remains a key way to drive this support. And as such, it is essential that the public see MPs and journalists engaging with both the local challenges, and solutions to, climate change. Current reporting does little to communicate its challenges and opportunities to communities across the UK at a local and regional level. Local media has the power to challenge apathy and inspire action, by making the challenge of climate change more discernible to MPs and constituents alike.

Local media must also play a key role in making rigorous connections between local events and climate change, so that residents in the UK understand how climate change affects their lives, and subsequently why action is necessary.

HOW SCIENTISTS CAN WORK WITH LOCAL MEDIA TO TELL MORE ENGAGING CLIMATE STORIES

Dr Candice Howarth and Prof Alison Anderson
(28 February 2020)

90%

of the British public considers scientists highly trustworthy, however 40% consider scientists poor at communication.

Local media often constitute an important source of knowledge on climate change. Research published by Monash University and by Susan Moser shows that information on the local impacts of climate change is more effective at engaging audiences than national or global information. A recent study in the US tested different TV media reports on climate change found that short (i.e. less than 6 minutes) localised reports on the issue enabled viewers to gain a better understanding of the local and personal relevance of climate change to them. We know that a combination of 'direct experience, vicarious experience (e.g. news media stories) and social construction' affects perceptions and experience of climate change at the local level.

However, there is a distinct lack of widespread engagement between local scientific institutions and local media which poses a real challenge for framing climate change as locally meaningful and relevant.

Environmental stories often get more coverage in local compared to national media, and local media constitute an important source of knowledge, particularly among older age groups, with TV news being the most accessed offline source of news and one of the most trusted media sources. An analysis published in 2011 of 10 UK regional newspapers found that over a quarter of climate change articles focused either on local impacts or local responses. As people's sense of identity ties closely to place, local media has the potential power to facilitate and visualise climate action as relating directly to people's lives – and the everyday environment they know and love. In doing so, there is a great opportunity to help bring both the impacts and opportunities to mitigate and adapt to climate change closer to communities. Local media can have a particularly important role in this by facilitating and visualising climate action locally; but to do this journalists need more and better access to scientists; their data, their findings and their points of view.

Whilst some research does suggest that 'proximising climate change does not directly increase relevant individual action', and projections of climate change at the local level can be subject to uncertainties, nonetheless local engagement with climate change is a vital part of enabling a sense of personal connection to a global and seemingly distant issue. Indeed, a survey into people's attitudes to climate change following the 2013 UK floods found those affected were significantly more likely to be concerned about climate change than those that were not directly impacted.

We know that news stories with strong visuals and a human-interest angle, such as families or local businesses affected by flooding, propel climate change into the headlines. We also know that a combination of 'direct experience, vicarious experience (e.g. news media stories) and social construction' affects perceptions and experience of climate change at the local level. This is where local media can play a more prominent role in localizing climate change's causes and impacts. A 2018 UK poll showed that three times as many people claimed they trusted local newspapers compared with social media and we know that scientists are trusted messengers when it comes to climate change. This likely relates to how people's sense of self identify is connected to local places and institutions.

Scientists are expected to communicate their findings effectively, yet they often lack basic training, support and incentives to do so. An Ipsos Mori poll revealed that 90% of the British public considers scientists highly trustworthy, however 40% consider scientists poor at communicating. Whilst academics are encouraged to engage with media through their university press offices, this is mainly by contributing to press releases and responding to media enquiries. This is also partly down to the culture of the academic system, which values journal article publications and research income generation over proof or demonstration of the impact of science via public engagement activities and the media. Consequently, scientists can perceive public engagement activities to be time and resource intensive, where engaging with the public is seen as an add-on activity rather than integral to the research from the design stage.

Decisions on climate change tend to take place at the local level however science and evidence is often framed at the regional and international levels, leaving science unable to meet the needs of local decision makers and publics. Not only do scientists find it hard to find time and resource for climate change communications, they are also challenged in their ability to engage with local media by the very nature of the work they do, with science being an evidence-base often generated and framed at the global or regional levels. The media play a vital role in framing climate change, however little work has been undertaken to assess the extent to which local media outlets increase public engagement on climate change. This creates a gap for local media to fill and examination of the role that regional or local media play has been neglected.

Scientists must think about their work in more localised terms and simultaneously, local media outlets could do more to reach out to local scientists. A good example of this is Monash University's Climate Change Communication Research Hub that is pioneering a new column called 'Changing Climates' featuring informative, fact-based infographics about local climate change, appearing in 23 local newspapers throughout metropolitan Melbourne. A 'place-based' framing offers an opportunity to foster strong, constructive collaborations between climate scientists and media outlets at the local level to help convey the severity of climate change impacts and solutions to reduce emissions and enhance resilience to climate risks.

WHY WE NEED MORE SOCIAL SCIENCE RESEARCH ON CLIMATE CHANGE

Sam Fankhauser
(10 September 2019)

£438m

research council funding awarded to climate change projects

481

climate change projects with a significant social science contribution

A solid evidence base on the social science of climate change is essential for navigating the scale and complexity of the climate crisis. While climate change requires the input of many disciplines, the drivers of and the solutions to climate change are fundamentally social, economic and political. We need to understand them better.

A solid evidence base on the social science of climate change is essential for navigating the scale and complexity of the climate crisis. While climate change requires the input of many disciplines, the drivers of and the solutions to climate change are fundamentally social, economic and political. We need to understand them better.

Led by the Economic and Social Research Council (ESRC), research funders in the UK have long been aware of this. As far back as 1991, ESRC sponsored the Centre for Social and Economic Research on the Global Environment, where I got my first academic job. I am now directing another ESRC centre, the Centre for Climate Change Economics and Policy, which started operating more than a decade ago.

Now we have published a comprehensive review of UK-funded social science research on climate change over the last 10 years that reveals the country's significant contribution in this area, but also some important research gaps.

Research councils have supported a wide range of projects

We found 481 climate change projects with a significant social science component that have been supported by UK research councils since 2008. This includes 15 research centres dedicated to or contributing to social science research on climate change. Combining both their social science and non-social-science components, the 481 projects have received research council funding worth a total of £438 million.

A search of Gateway to Research, the portal of publicly funded research operated by UK Research and Innovation, yields more than 3,000 climate change projects, however. Our review therefore suggests that only 1 in 6 publicly funded climate change projects has a significant social science component.

The good news is that the supported research covers a considerable diversity of topics, sectors, methods and geographies. Research council support is split evenly between research on adaptation (concerned with increasing climate resilience) and mitigation (concerned with reducing greenhouse gas emissions).

There is also an even split between projects that focus on the UK and overseas. Unsurprisingly, adaptation projects are often about developing countries – with a particular interest in Africa – as these locations face the greatest adaptation challenges. Mitigation projects are typically focused on the UK and other industrialised countries – the nations with the biggest dents to make in their emissions.

Some thematic priorities stand out

Climate change governance – internationally, nationally and sub-nationally – and the design of climate policy are natural research interests for social scientists and almost 40% of the projects deal with these issues. Particularly over recent funding rounds, there has been growing interest in practices and behaviour in relation to climate change, exploring such issues as public attitudes to climate change or to specific climate solutions.

Unsurprisingly, there has been considerable work on the transformation of the UK energy sector, where the Engineering and Physical Sciences Research Council (EPSRC) has sponsored a series of prominent end-use energy demand centres. Climate-compatible development, particularly in Africa, has benefitted from additional funding through the Global Challenges Research Fund (GCRF), which is dedicated to developing countries.

Other funding priorities highlighted in the report include floods and droughts in the UK, agriculture and land use, and climate change and the natural environment.

Notable research gaps remain

Among the most important research gaps we found are:

- The political economy of the zero-carbon transition. The technical and behavioural solutions needed to tackle climate change are increasingly understood, but we need to know more about the political economy constraints that prevent us from implementing them.
- Combining environmental and social objectives into a just transition. The need for a just transition has emerged as an important theme in the international climate negotiations, but has not yet received enough attention from social scientists. The Grantham Research Institute is initiating a new project that will partly plug this gap.
- Poverty alleviation in a zero-carbon world. More research is needed to inform the ongoing debate about (real and perceived) trade-offs between emissions reductions and poverty alleviation.
- The integration of climate and broader environmental research. Social science research on climate change and on the natural environment has been conducted too much in parallel. It is time to bring these important strands of work more closely together.
- The social science of carbon capture and negative emissions technology. Achieving net-zero emissions in the UK and elsewhere will require access to negative emissions technology, such as bioenergy with carbon capture and storage (BECCS). Much work is still needed to understand the social, economic and regulatory aspects of these technologies.
- The role of sustainable finance. Redirecting financial flows towards zero-carbon, climate-resilient investment is one of the biggest levers in the fight against climate change. Decision-makers in policy and practice are beginning to realise this but the social sciences are lagging behind, albeit with a few exceptions such as a new sustainable finance programme at the Grantham Research Institute.

Thanks to the support of research councils, UK universities play a prominent role in international climate change research, including in the Intergovernmental Panel on Climate Change, to which UK researchers contribute actively. This is an important, if sometimes overlooked aspect of the UK's global leadership on climate change.

However, as countries around the world ratchet up action against climate change, so should social science research to study and guide the global effort. Social science input will be essential to the success of COP26, the crucial climate summit the UK is expected to host in 2020. Climate policy needs to be informed by the best available evidence.

FURTHER READING

Links to the following publications can be found on PCAN's publications page, pcancities.org.uk/reports, and can also be found on the Grantham Research Institute for Climate Change and the Environment website, www.lse.ac.uk/granthaminstitute/

Turning up the heat: learning from the summer 2022 heatwaves in England to inform UK policy on extreme heat - Evidence report
Candice Howarth, Niall McLoughlin, Andrea Armstrong, Ellie Murtagh, Sara Mehryar, Anna Beswick, Bob Ward, Srinidhi Ravishankar and Adeline Stuart-Watt (February 2024).
https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2024/02/Turning-up-the-heat-learning-from-the-summer-2022-heatwaves-in-England-to-inform-UK-policy-on-extreme-heat.pdf

Climate change in the East of England: enabling institutions
This report was produced by Martin Mahony, Andrew Kythreotis, Candice Howarth, and Asher Minns. Published by The Tyndall Centre for Climate Change Research (published 1 November 2023).
https://tyndall.ac.uk/wp-content/uploads/2023/11/EoE-Workshop-Report-with-cover.pdf

How do UK citizens perceive the co-benefits of climate action?
This report was produced by Neil Jennings and Pauline Paterson from the Grantham Institute at Imperial College London (published 30 October 2023).
https://www.imperial.ac.uk/grantham/publications/briefing-papers/how-do-uk-citizens-perceive-the-co-benefits-of-climate-action.php

On multi-level climate governance in an urban/rural county: A case study of Surrey
This report was produced by Erica Russell and Ian Christie from the University of Surrey (published 25 October 2023).
https://pcancities.org.uk/sites/default/files/On%20multi-level%20climate%20governance%20in%20an%20urban%20rural%20county%20-%20Surrey.pdf

Enabling Place-Based Climate Action in the UK: The PCAN Experience
A PCAN report by Candice Howarth, Jamie Brogan, Brendan Curran, Millie Duncan, Sam Fankhauser, Andy Gouldson, Alice Owen and Adeline Stuart-Watt (published 19 June 2023).
https://pcancities.org.uk/sites/default/files/Enabling%20Place-based%20Climate%20Action%20in%20the%20UK%20-%20The%20PCAN%20Experience.pdf

Net Zero: Local Authority Powers
This report was produced by Dr Dan Barlow, an Associate of the Edinburgh Climate Change Institute. It has been jointly supported by the Edinburgh Climate Commission, the Scottish Cities Alliance and PCAN (March 2023).
https://edinburghcentre.org/uploads/store/mediaupload/1008/file/Net%20Zero%20-%20Local%20Authority%20Powers%20FINAL.pdf

Evaluation of the impact of PCAN-supported Climate Commissions - Final Report
Rhona Pringle, Denny Gray, Mary Anderson, Lucy Harbor, CAG Consultants (February 2023).
https://pcancities.org.uk/sites/default/files/Evaluation%20of%20the%20Impact%20of%20PCAN-supported%20Climate%20Commissions%20final%20report.pdf

Yorkshire and the Humber Climate Action Plan
Gouldson, A., Harcourt, R., Lock, K., Duncan, A., and Sudmant, A. Yorkshire and the Humber Climate Commission and ESRC Place-based Climate Action Network (10 November 2021).
https://yorksandhumberclimate.org.uk/sites/default/files/Climate%20Action%20Plan.pdf

The Economic Benefits of Local Climate Action
Researched and produced by the Centre for Sustainability, Equality and Climate Action, Queen's University Belfast and the Place-based Climate Action Network for UK100 (October 2021). Report authors: Sean Fearon (Queen's University Belfast), Prof John Barry (Queen's University Belfast and Belfast Climate Commission) and Kathryn Lock (University of Leeds, PCAN).
https://www.uk100.org/sites/default/files/publications/Economic%20Case%20-%20Full%20report_V2.pdf

Trends in Local Climate Action in the UK
A PCAN report by Candice Howarth, John Barry, James Dyson, Sam Fankhauser, Andy Gouldson, Kate Lock, Alice Owen and Nick Robins (published 18 March 2021).
https://pcancities.org.uk/sites/default/files/TRENDS%20IN%20LOCAL%20CLIMATE%20ACTION%20IN%20THE%20UK%20_FINAL_0.pdf

PCAN Net-Zero Carbon Roadmaps
Three Net-Zero Carbon Roadmaps have been published by PCAN for Belfast, Edinburgh and Leeds.
https://pcancities.org.uk/pcan-net-zero-carbon-roadmaps

Climate Assemblies and Juries: A People Powered Response to the Climate Emergency
Research by Shared Future CIC, funded through the PCAN Fund (August 2020).
https://pcancities.org.uk/sites/default/files/Shared-Future-PCAN-Climate-Assemblies-and-Juries-web.pdf

Turning words into action: How Community Municipal Investments can create a new sphere of civic engagement that will galvanise local action in the fight against the climate emergency
Research by Abundance Investment, funded through the PCAN Fund (23 June 2020).
https://pcancities.org.uk/sites/default/files/2020_06_18_PCAN-CMI.pdf

A blueprint for accelerating climate action and a green recovery
Signatories: Ashden, Association of Directors of Environment, Economy, Transport and Planning (ADEPT), Friends of the Earth, Grantham Institute - Climate Change and the Environment (Imperial College London), Greenpeace UK, London Environment, Directors' Network (LEDNet), Place-based Climate Action Network (PCAN) at LSE, Solace (22 June 2020).
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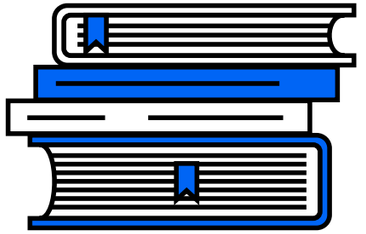
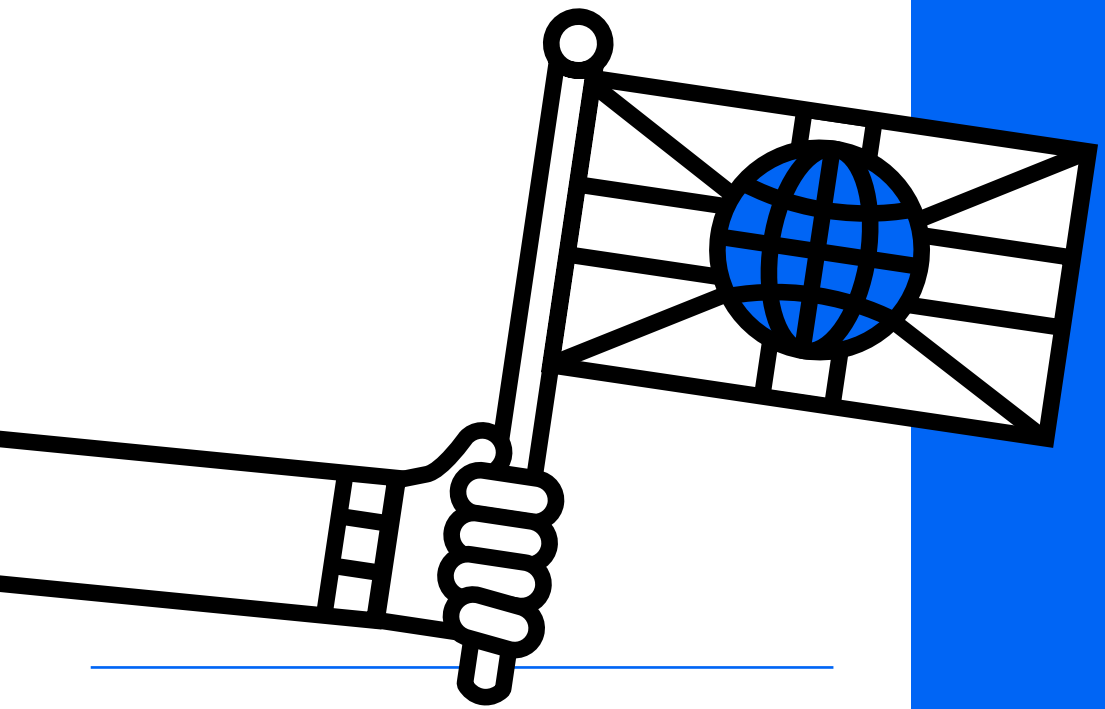


PCAN

PLACE-BASED CLIMATE ACTION NETWORK



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