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Adapting to climate change:
opportunities for public engagement on
climate adaptation research and policy

Disclaimer: The views expressed by participants at the UKRI Sciencewise roundtable on climate adaptation do not represent the views of UKRI. However, the Sciencewise programme has identified adaptation as an important policy issue that would benefit from public engagement, and welcomes further discussion with government departments and public bodies working on these issues.

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Executive summary

How ready should we be for climate change? Rising global temperatures means more flooding, hotter cities, greater threats to water availability, and changes to our food production and natural habitats. How we adapt, to what extent, and where, are policy questions with significant social, economic and ethical implications, but with very little public or political airtime. Citizen engagement is key to stimulate, improve and legitimise decision-making in this important area.

In March 2021, UK Research and Innovation's Sciencewise¹ programme convened experts from the adaptation policy and research arena to discuss key challenges in climate adaptation, and debate the potential for public engagement to address those challenges.

We were not starting from a blank slate. Recent studies into public attitudes towards climate risks and adaptation action confirmed the public are concerned about flooding and extreme heat, and view health, emergency services and society's most vulnerable people as the highest priority for protection. We know that the majority of British adults are also willing to pay to reduce future health risks of climate change. Perspectives vary on the urgency with which we should act and who – government, individuals, civil society, businesses - should be responsible for action.

When compared to mitigation, the low political profile of climate risks and adaptation was a great concern to all of the experts involved in the roundtable. They felt that adaptation was being overlooked in national conversations about the path to net zero and Building Back Better, risking plans being set in motion that would make adaptation harder down the line. An improved climate risks and adaptation narrative was seen as one way to tackle the relatively low profile of climate adaptation. For example, a narrative centred on resilience and preparedness over "climate adaptation", and focussed on benefits and specific actions rather than more abstract concepts of risk and uncertainty.

Attendees felt climate adaptation policy lacked a clear direction of travel and defined outcomes. Creating this would galvanise decision-maker action and build interest and confidence among the public. Attendees also highlighted that the balance of responsibilities between the national and local level, private and public, and organisations and individuals was still unclear. In the meantime, locally-led action was seen as a practical way forward, given the breadth of activity already underway in cities and regions across the UK.

Four recommendations arose relating to the role of public engagement in climate adaptation:

- 1. Organisations working on climate adaptation policy and research should explore how to bring diverse perspectives into the policy making process through public engagement, as there have been few processes seeking to do this.**
- 2. Local, place-based adaptation activity offers a practical, impactful way to bring the public meaningfully into adaptation decision-making.**
- 3. Climate adaptation needs a new narrative and clearer messaging. In-depth understanding of public values in relation to the climate can play an important role in developing the right framing.**

¹ [Sciencewise | Supporting the commissioning of deliberative dialogue by government bodies to support socially informed and transparent policy making](#)



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- 4. Research will be critical in shaping effective adaptation policy and input from a range of perspectives, including the public, will ensure research priorities have the widest social and economic benefit.**

Finally, Sciencewise welcomes further discussion with government departments and public bodies who want to understand more about the opportunities for public dialogue on climate adaptation.

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1. Introduction

The growing momentum behind the path to net zero has made a carbon-neutral United Kingdom feel more possible than ever before. But, however much we reduce our carbon emissions, our climate is changing and will change further. This brings consequences, negative and positive.

We can invest in climate adaptation now so that the impact of flooding, overheating and other climate impacts are less severe, thus saving lives, livelihoods, and habitats in the long run. But preparation is expensive, and will undoubtedly require state funding as well as changes to how we live our lives. This presents policy makers with significant dilemmas – how much to spend to protect ourselves against climate risks, what to protect and what not to protect, who is responsible and for what? Public engagement with these questions can help navigate trade-offs and legitimise judgement calls on policies which will have important economic, social and ethical implications.

The Sciencewise² programme is led and funded by UK Research and Innovation (UKRI) with support from the Department for Business, Energy & Industrial Strategy (BEIS). It is an internationally recognised public engagement programme which supports government bodies to commission public dialogue on science and technology, to foster socially informed policy.

In convening this roundtable, Sciencewise sought to understand where there are public engagement opportunities in the climate adaptation³ policy and research space. The event took place online on Monday 8 March 2021 and brought together senior representatives from central government departments, universities, research councils, non-departmental public bodies, and independent statutory bodies. This short report summarises the discussions including priority themes and the implications for public engagement on climate change adaptation.

2. What do we already know about public attitudes to climate adaptation?

Some high quality research into public awareness and attitudes towards climate risks and adaptation actions has already been done. Recent studies include⁴:

- A 2020 survey⁵ into the British public's perceptions of climate risk and adaptation options found that the public are very concerned about storms and flooding, and are increasingly aware of the risks from hot weather. However, many other major risks, such as water shortages and disruption to food supplies, are little known about. Health, emergency

² Ibid.

³ Climate adaptation is the process of adjusting to the actual or expected climate and its effects. This differs from interventions to reduce the sources or enhance the sinks of greenhouse gases, which are broadly referred to as climate mitigation (IPCC) https://www.ipcc.ch/site/assets/uploads/2019/01/SYRAR5-Glossary_en.pdf

⁴ Most of these studies were conducted before April 2020, meaning we do not have clear view of how awareness of, and attitudes towards, climate risk and adaptation has been impacted by the Covid-19 pandemic and subsequent Build Back Better agenda. The ResilRisk study was repeated in August 2020 and results were broadly the same as in 2019 (N. Pidgeon, personal communication, 6 May 2021)

⁵ *British Public Perceptions of Climate Risk, Adaptation Options and Resilience (RESIL RISK)*, Steentjes et al, 2020 <http://orca.cf.ac.uk/129452/>

services and the most vulnerable people in society are top priority to protect, while economic growth and historical sites and buildings are further down the priority list.

- A 2019 willingness to pay survey⁶ sought to understand whether there is public support to reduce future health risks from climate change. It found a majority of British adults were willing to pay to reduce climate related deaths. Willingness to pay varied depending on how serious people thought climate change impacts would be.
- An analysis of 2019 UK newspaper stories on climate adaptation found that coverage presented a limited picture of when and how the UK should adapt. Only the more immediate climate change impacts were presented as necessitating a response, and the range of adaptive actions written about was limited and unchallenging to the status quo. Government was portrayed as primarily responsible for action; with citizens given few responsibilities.
- A small, in-depth quantitative and qualitative survey⁷ from 2018 found UK public perspectives on climate change adaptation were not uniform. Rather, attitudes varied on the urgency and potential impact of climate change, on the correct balance of responsibilities (from government-led to the emphasis on individual action), and in terms of levels of optimism that adaptation measures will have an impact on our capacity to adapt to climate change.
- A nationwide deliberative study of public acceptance of different levels of climate risk and preparation⁸ from 2013 found support for investing in adaptation, even if it meant preparing for events which never happen. Participants accepted that not all things should be protected equally, and gave priority to preparing for flooding, water shortages, and protecting urban areas and productive farmland, while sparsely populated coastal areas and areas of natural environmental importance were among the areas to focus less investment.

This roundtable sought to build on what we already know about public attitudes towards climate risks and adaptation measures, and identify areas where further evidence is needed.

3. Summary of roundtable discussions

3.1 Overview

The roundtable attendees were clear that getting climate adaptation right is a key challenge for the UK and the world. The discussion was expected to identify short and medium term adaptation policy and research decisions that public engagement might inform. To begin with, what arose were much more upstream and fundamental issues. Attendees reflected that there is not a shared view amongst policy makers and stakeholders about the goal of climate adaptation, what outcomes we want to achieve, or how to measure progress. Political attention was considered to be low

⁶ *Willingness to pay for policies to reduce future deaths from climate change: evidence from a British survey*, Graham et al (2019) <https://www.sciencedirect.com/science/article/pii/S003335061930191X#!>

⁷ *Mapping Discourses of Climate Change Adaptation in the United Kingdom*, Cotton and Stevens (2018) https://www.researchgate.net/publication/328013098_Mapping_Discourses_of_Climate_Change_Adaptation_in_the_United_Kingdom

⁸ *Programme of research on preparedness, adaptation and risk (PREPARE)*, Defra (2013) <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=18552>

(compared to mitigation), and there is a limited understanding of the public's receptiveness to adaptation action, including what level of risk and investment they might tolerate.

Discussions touched on four broad themes which are covered in more detail below:

1. The limited public understanding and awareness of climate adaptation
2. How to define adaptation-related goals, outcomes and calls to action
3. Roles and responsibilities
4. Communications and messaging

Attendees felt strongly that the urgency required for adaptation action necessitated public engagement. This was in part to move climate adaptation higher up the policy agenda, but also because public engagement could reveal the public's take on thorny adaptation policy challenges, giving policymakers the confidence to take action. Attendees agreed that the sooner action is taken, the greater the chance of reducing the impacts of climate change such as excess deaths and loss of key habitats. In light of this, all felt that the roundtable was timely.

3.2 The limited public understanding and awareness of climate adaptation

The relative low prominence of climate risks and adaptation in public and political discourse was a dominant theme throughout discussions: *"we're heading for an iceberg and no one's really noticing"*. Attendees cited the limited reference to "resilience" in the government's Build Back Better narrative⁹, and the low proportion of Climate Emergency declarations mentioning adaptation, as two illustrations of this. The low political profile worried attendees as it was seen as out of line with the increasing scale, frequency and impact of climate-related changes.¹⁰ The momentum behind the climate mitigation net zero agenda was seen to overshadow the need for climate adaptation, limiting the bandwidth decision makers had available for moving urgently on adaptation at the same time

There was concern that opportunities to incorporate resilience and climate adaptation into big programmes of change and investment (such as the Green Recovery¹¹ and the path to net zero) would be missed, making it harder to adapt down the line: *"This huge investment in getting to net zero is fantastic; how do we make sure all that investment doesn't take us further away from the goal of getting on a resilient pathway to net zero?"*

Attendees reported difficulties making the case for action on climate adaptation because its impacts were often hard to demonstrate. Impacts such as flooding of hospitals (actual or predicted), or excess deaths arising from more extreme temperatures, were "absorbed" into the huge health system and difficult to demarcate. Many benefits of adaptation interventions are long-term and hard to articulate persuasively to those working in short term political cycles.

Finally, adaptation measures often involve additional investment, which was seen to be even less appealing in the context of Covid-19's economic impact and expected reduced appetite for costly

⁹ <https://www.gov.uk/government/publications/build-back-better-our-plan-for-growth>

¹⁰ Since this roundtable took place, the Rt Hon Alok Sharma MP, president of the next UN Climate Change Conference (COP26), listed climate adaptation as one of his key priorities for the conference <https://unfccc.int/news/un-climate-change-negotiations-and-making-effective-progress-at-the-june-session>

¹¹ <https://www.gov.uk/government/news/80-million-fund-for-green-jobs-and-new-national-parks-to-kick-start-green-recovery>

measures to address problems beyond the here and now.

Implications for public engagement

The discussions on this theme highlighted some potential avenues for public engagement:

- A robust deliberative engagement process like Parliament's UK climate assembly on net zero¹² in 2020 could help to raise the profile of adaptation among the public and stakeholders, many felt. Public dialogue would give it "kudos", bring it to the attention of key decision makers while also legitimising policy-making.

3.3 How to define adaptation-related goals, outcomes and calls to action

Developing a clearly defined goal for adaptation was thought to be crucial as it was felt this would better support conversations about direction of travel, outcomes, and levels of 'acceptable' risk and loss.

Attendees felt that the absence of a clear goal made it difficult to plan effectively, to assess and demonstrate progress and to build interest and confidence in adaptation actions amongst the public, decision-makers and politicians. They also saw a risk that, without a clear destination, action on adaptation could amount to tweaks to business-as-usual, when more transformational change may now be needed.

Discussions touched on what should feature in adaptation goals, outcomes and strategies.

Suggestions included:

- More urgency. Some attendees felt that existing plans were now too "*pedestrian*", and didn't reflect the quickened pace of climate change impacts: "*the old ways of dealing with adaptation may not be appropriate any longer*".
- Equality and justice baked in. Others highlighted that the impacts of climate change and adaptation action would vary across different segments on society. They emphasised the importance of building in questions of equality and justice to adaptation goals.
- A focus on win-win actions. Some urged a realistic approach which focussed on "*sweet spot*" policies that yielded benefits in multiple areas. Behind this was an acknowledgement that adaptation policies may be expensive and could have negative consequences elsewhere, making them unpopular with politicians and the public. To progress, any overarching adaptation strategy should emphasise policies that are good for adaptation, compatible with mitigation, health and nature, and are economically affordable.
- Adaptation repackaged? Noting the difficulty of bringing attention to the climate adaptation agenda, attendees questioned whether adaptation goals and strategies would be better packaged as something broader. This could mean aligning more closely with climate mitigation, or using a broader "*resilience*" frame (see section 3.5 for more on adaptation narratives and messaging).

¹² <https://www.climateassembly.uk/>

Implications for public engagement

Attendees saw much potential for public engagement to add value in this area. Suggestions included:

- Engagement to feed into the design of adaptation plans and policies at a national level. For example the next National Adaptation Programme and stages prior, although further discussions are needed to determine appropriate points of influence.
- Public engagement on how much to invest in preparing the country for climate risks, addressing questions such as what should we be aiming for in terms of risk reduction? This could involve a willingness-to-pay exercise for adaptation measures, looking at how trade-offs between different risks and investment vary by type of individual, group and geography.
- An all-encompassing climate assembly-type engagement on what adaptation goals and outcomes should be. This could also include what types of behaviours are needed and what the roles are of different actors (individuals, communities, business, national government) to minimise risks, harms, and promote fairness. Public engagement to feed into the adaptation plans of key organisations participating in the third round of adaptation reporting currently underway. The Environment Agency's adaptation report is due in summer and will cover how they will manage water scarcity and flooding.

3.4 Roles and responsibilities

Effective climate adaptation requires action at a range of different levels. But who needs to be involved, and who is responsible for what? Attendees recognised the significant role of government in climate adaptation, but noted that diffuse responsibilities for adaptation across government departments made it difficult to generate momentum. Greater clarity was sought on the changes needed at different levels – including nationally vs locally, organisations vs individuals, and private vs the public sector – to ensure a coordinated approach that avoided duplication of effort.

Attendees also saw limited action on adaptation at the individual and business level. They felt those who may benefit from taking action were often not aware of the risks and options. People confused adaptation with mitigation – *“I’m hearing some organisations saying that because they’re on the path to net zero that they’re resilient”* – or found the data and projections around climate risks difficult to understand, attendees reported. Attendees felt there was a need for better understanding of how people think about adaptation, their beliefs about the different types of risk, and what is stopping them taking action.

Attendees spoke of place-based approaches as a logical way to move forwards on adaptation. They recognised that a lot of existing adaptation work is *“locally driven by local priorities”*, for example regional and city-level Climate Commissions. A locally-led approach was felt to enable tailored solutions for different areas, although attendees acknowledged that national interventions will always be required. Focussing on what can be achieved locally through collaboration between partners, in line with existing local priorities, made sense to attendees since appetite for national level action was low. Attendees reported that local actors have the appetite for adaptation action but may need support and additional resource to be most effective.

Implications for public engagement

Attendees put forward a few specific suggestions for how public engagement could play a role in facilitating effective local adaptation action:

- A visioning exercise bringing together local stakeholders and citizens to map out what an adaptive, resilient place would look like and the scale of change needed. Workshops in different locations (e.g. rural, urban and coastal) could feed into a national conversation, allowing place-based visioning to inform national policy. Alternatively there may be opportunities to bring the public into visioning processes already underway, led by Climate Commissions¹³.
- Public engagement tied to large government investment programmes, such as BEIS' industrial clusters initiative¹⁴ or the £5bn to tackle the risks of flooding and coastal erosion¹⁵, to ensure those programmes respond to local needs.
- Behavioural research to identify the barriers and enablers for individuals, households, communities and businesses to take adaptation action. This would seek to understand the constraints on action, and could draw on similar approaches to 'health seeking behaviour' research associated with public health initiatives.
- Deliberation to determine the public's expectations of the roles and behaviours different actors should do to take action on climate change. Research into top-of-mind attitudes has established that the public consider government should take the main responsibility, but how does that change following deeper consideration and deliberation? Does it become more nuanced once people realise that a greater government role will mean their taxes will go up?

3.5 Communications and messaging

Attendees partly attributed the relatively low profile of adaptation to them not having "cracked" how to communicate about it effectively. Inherent difficulties in communicating about adaptation were noted, including that: risks and uncertainty are difficult concepts to communicate; people aren't enthused by policies which amount to expensive "insurance"; adaptation can be seen as "giving in", particularly amongst those in the climate world whose focus is achieving net zero.

Several ideas were put forward for how the climate adaptation narrative could be improved. Attendees felt that framing and messaging should:

- talk about resilience and preparedness – attendees believed the need for "resilient systems" would make sense to people following Covid-19 which drew attention to the resilience of the health system. It was suggested that the UK's pandemic experience may make the public

¹³ Climate Commissions are city-wide partnerships bringing together people from the public, private and civic sectors who work collaboratively with the local authority to help drive climate action.

<https://pcancities.org.uk/climate-commissions>

¹⁴ The UK's six industrial clusters are Grangemouth, Teesside, Merseyside, Humberside, South Wales and Southampton, identified as areas with several industrial sites that are crucial to the economy and use energy intensively. The industrial clusters mission is to create a net zero carbon industrial cluster by 2040

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/803086/industrial-clusters-mission-infographic-2019.pdf

¹⁵ <https://www.gov.uk/government/news/multi-billion-pound-investment-as-government-unveils-new-long-term-plan-to-tackle-flooding>

more receptive to the economic case for preparing rather than just responding or recovering.

- talk about multiple benefits – for example the varied positive outcomes of moving from petrol vehicles to electric vehicles in city centres, such as improvements to health because air quality improves. Bringing the co-benefits of adaptation to the fore would help make the case for actions which otherwise may seem prohibitively expensive.
- be more positive – following the example of the strongly positive story around net zero. Attendees felt that negative tone of adaptation messaging caused people to switch off. Highlighting where there are benefits of adaptation action to health and the economy, for example, could help to create a more positive narrative.
- not lead with the climate – this would avoid unhelpful confusion with the climate mitigation agenda. Some also saw a climate risk focus as feeding a feeling of fatalism, preventing people from thinking of other drivers of risk, such as where houses are built and land management approaches, over which they have more control. Resilience was considered to be a better way to frame the issue.
- less abstract, more meaningful – levels of risk can feel intangible and so don't resonate. Attendees suggested focussing on specific issues which connect more easily to the public consciousness, such as coastal erosion and the impact of high temperatures on towns and cities. There was recognition that this may not present the full picture of climate risks, but that a simpler story, for areas where most change is needed, may be most effective.

Attendees discussed the merits of a public awareness campaign to raise the profile of adaptation in public consciousness and compel politicians to take the necessary urgent action. This would connect with climate campaigning charities and draw on their expertise in shifting public opinion. While 'nudge tactics' were acknowledged to be an effective route to behaviour change in many cases, some felt that the level of political delay on climate adaptation warranted a full-blown campaign to spark political action. Others were more sceptical of the role for a public awareness campaign around climate adaptation compared to (or in the absence of) other key drivers of public and political action such as financial incentives.

Implications for public engagement

Attendees made several suggestions for how public engagement could improve communications and messaging around climate adaptation. These included:

- Qualitative research into public perceptions and beliefs about heat, cold, flooding and other climate risks to inform the design of more effective 'informative' communications to businesses and individuals about what they need to do to protect themselves from climate risks. It was felt that cultural beliefs around risk heavily inform the likelihood that an individual would take adaptation action. This work could build on the findings of the RESIL-RISK study which looked at social attitudes to the risks and impacts of climate change.¹⁶
- Framing/narrative research to understand what messaging works to gain attention at a

¹⁶ <https://www.ukclimateresilience.org/projects/resilrisk-understanding-uk-perceptions-of-climate-risk-and-resilience/>

societal level for the need for adaptation action.

- A theory of change piece to identify how wider public awareness/understanding of adaptation risks/actions could contribute towards wider adaptation goals and outcomes

4. Way forward and next steps

4.1 Conclusions

Four recommendations arise from the roundtable discussions and subsequent reflections from UKRI's public engagement team and Sciencewise:

1. **Organisations working on climate adaptation policy and research should explore how to bring diverse perspectives into the policy making process through public engagement, as there have been few processes seeking to do this.** The roundtable was well-timed in relation to the government's Climate Change Risk Assessment, due in 2022, and the National Adaptation Programme (NAP) in 2023. Under the Adaptation Reporting Power, many public sector organisations are preparing reports to government outlining what they are doing to adapt to climate change. The UK will also host the 26th UN Climate Change Conference of the Parties (COP26) in Glasgow in November 2021. These all provide potential opportunities for public engagement. Further work liaising with key partners is needed to identify where public engagement could be most valuable.
2. **Local, place-based adaptation activity offers a practical, impactful way to bring the public meaningfully into adaptation decision-making.** Attendees recognised the range of work already in progress in areas across the country, such as local stakeholders collaborating on shared adaptation action, and the various local and regional Climate Commissions. Some of these partnerships are already considering questions such as what a resilient place looks like, presenting an opportunity for citizens in these areas to add their voice through well-designed engagement. This place-based work could link into a national conversation, with engagement in different locations (e.g. coastal, urban and rural) feeding into national policy-making processes.
3. **Climate adaptation needs a new narrative and clearer messaging. In-depth understanding of public values in relation to the climate can play an important role in developing the right framing.** Attendees agreed that current narratives on climate adaptation are not effective at garnering political attention or instilling behaviour change in individuals, businesses and communities. In-depth qualitative research with the public would help unpick cultural beliefs about the different climate risks, and the existing constraints to adaptation action. This work would inform the design of more effective policies, and the development of communications about those policies which resonate and lead to action.
4. **Research will be critical in shaping effective adaptation policy – input from a range of perspectives including the public will ensure research priorities have the widest social and economic benefit.** Several research councils are already heavily involved in climate adaptation research, for example NERC's ongoing Climate Resilience Programme¹⁷,

¹⁷ <https://nerc.ukri.org/research/funded/programmes/ukclimate/>



and EPSRC's Resilient Nation research priority¹⁸, and AHRC's Living with Environmental Change research programme¹⁹. Research councils may want to consider how public engagement can add value as these programmes continue and new ones emerge.

In summary, the Sciencewise programme has identified adaptation as an important policy issue that would benefit from public engagement, and welcomes further discussion with government departments and public bodies working on these issues.

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¹⁸ <https://epsrc.ukri.org/about/plans/dp2019/priorities/objective1/resilient/>

¹⁹ <https://ahrc.ukri.org/research/fundedthemesandprogrammes/crosscouncilprogrammes/livingwithenvironmentalchange/>

Appendix

A1. About the adaptation mini roundtable

The purpose of the mini roundtable was to identify potential policy challenges, plans and research areas relating to climate adaptation where public engagement and dialogue will be most needed, and outline potential next steps, including opportunities for partnership working.

The event took place online on Monday 8 March 2021 and brought together senior representatives from a wide range of organisations, including central government departments, universities, research councils, non-departmental public bodies, and independent statutory bodies.

The process included a facilitated discussion in the following three areas:

1. What are the pressing and medium-term policy, planning and research challenges and priorities for climate change adaptation?
2. Of those challenges and priorities, where is public engagement and dialogue most needed?
3. Way forward – who is best placed to take these ideas forward, who else needs to be involved, are there opportunities for partnerships and cross-cutting engagement, what are the critical next steps?

The meeting took place under Chatham House rules. Senior representatives attended from the following organisations:

- Arts and Humanities Research Council
- Cardiff University
- The Climate Change Committee
- Department for Environment, Food & Rural Affairs
- Economic and Social Research Council
- Environment Agency
- London School of Economics and Political Science
- Natural Environment Research Council
- Public Health England
- University of Leeds