## **Catalysts of Change**

People at the Heart of Climate Transformations

Key messages from five years of social science research on climate change



Centre for **Climate Change** and **Social Transformations** 

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### Foreword



Baroness Kate Parminter

Governments seem keener to focus on the 'rocket science' of new technologies to transform power sources, networks and products, than using social science to unleash the power of people to secure a low-carbon future. It's a mistake, as both will be needed to meet the target of net zero by 2050.

Half the world's adult population face elections this year, just when global warming has exceeded 1.5°C across an entire year for the first time, according to the EU's climate service. It means all those seeking election must now take a bold approach. This report, a compilation of 5 years' research showing how changes to people's behaviours can be achieved, is therefore a timely contribution to encourage the right policies and approaches to deliver urgent climate action.

Whilst the polling evidence is clear that people support tackling climate action, that support can falter if the policies and programmes which seek to change how they live are not designed in a way that reflect the real-life impacts. Getting climate action right requires leadership – both here in the UK and globally – with clear communication of the need for change, what the changes will look like in how we travel, what we eat and buy and how we use energy at home. The public are more likely to support that climate action when it is seen to be fair and the many benefits to individuals, families, and communities for doing so are spelt out. It also requires a willingness to listen to people and respond to what they say - using social science and evidence to inform the policies to tackle the barriers, like upfront costs of new EVs or the hassle of retrofitting homes with new technologies.

During my time as Chair of the House of Lords Select Committee on the Environment and Climate Change we published a report entitled 'In Our Hands: behaviour change for climate and environmental goals'. Its conclusions back in 2022 chime with much of the key messages brought together so compellingly in this CAST report 'Catalysts of Change: People at the Heart of Climate Transformations'. Behavioural science evidence and best practice show that a combination of policy levers - including regulation and fiscal measures - must be used by Government, alongside clear communication. Moreover, a behavioural lens must be applied consistently across all of Government as too many policies are still encouraging high carbon and low nature choices.

As we approach a General Election in the UK we must hope that climate policy will not become a party political tool, used as a green wedge issue. Rather that politicians of all hues accept their responsibility to show leadership towards achieving urgent climate action and accept the social science research in this excellent report. If they can do that they will enable people power to transform our society towards a sustainable future.

1 Wast

The Baroness Parminter, member of the House of Lords



CAST is a global hub for understanding the role of people in shaping a positive low-carbon future.

Based at the University of Bath, our additional core partners are Cardiff University, University of East Anglia, University of Manchester, University of York and the charity Climate Outreach.

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## Introduction

#### Climate change has detrimental impact on people's lives. It causes heatwaves and floods, reduces air quality, makes many parts of the world inhabitable, destroys food crops, and influences food and energy prices<sup>1</sup>.

Urgent and radical action is necessary to mitigate the worst climate impacts. Such social transformations require a widespread adoption of low-carbon technologies and policies as well as significant lifestyle changes<sup>2</sup>. In fact, 60% of the changes required to reach net zero must come from lifestyle changes<sup>3</sup>. In other words, progress on climate can only be achieved with people's active involvement<sup>4,5</sup>. As such, climate policies and initiatives increasingly recognise the need to put **people at the centre of social transformations**<sup>4</sup>.

The ESRC-funded Centre for Climate Change and Social Transformations (CAST) is a social science research centre and a global hub for understanding **social transformations**. We understand social transformations to be fundamental societal shifts that involve broad, deep, rapid changes, away from patterns of development that normalise high-carbon ways of living<sup>6</sup>. Over the past five years, we have worked with **governments, businesses, and communities,** addressing the fundamental question of how we can live differently and better to urgently reduce emissions.

CAST's research is focused on people as agents of transformation in four areas that impact directly on climate change but have proven stubbornly resistant to change: **consumption of goods and physical products; food and diet; travel and mobility; and heating and cooling.** Our research spans multiple scales: individual, community, organisational, national, and global. This report summarises the key messages we draw from our research to date.

### Put people at the heart of climate action.

The rapid transformative changes required to build a more sustainable society can only be achieved with the support and involvement of the people that will be affected by them.

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### People are crucial to social transformations.

Reducing emissions requires the widespread adoption of low-carbon technologies alongside significant lifestyle shifts, both of which involve substantial changes in societal norms and habits<sup>7,8,9</sup>. This is particularly important in high-carbon sectors like diet, agriculture, transportation, heating/cooling, and material consumption. Putting people at the heart of climate action and recognising their diverse roles can accelerate rapid and fair change, while also addressing inequalities between high and low emitters<sup>10</sup>. Policymakers and stakeholders from all sectors should therefore prioritise people-centred approaches to drive broader change<sup>11</sup>.

#### Involving individuals effectively in rapid, impactful, and fair transformations demands robust public engagement.

Public discussions and participatory activities should aim to engage a diverse range of stakeholders, publics, businesses, and governments at various levels of change, from individual choices to national policies<sup>11,12,13</sup>. Community-based and grassroots organisations often help to facilitate engagement activities, as well as piloting or demonstrating low-carbon lifestyles<sup>14</sup>.

#### A people-centred approach can be achieved in organisations by embedding sustainability goals within the culture, work design and leadership attributes.

This is important for all governments at all levels and applies to organisations in the public, private and third sectors. For instance, in the business context, leadership awareness drives organisational change, while collaborative solutions arise from 'Communities of Practice' that merge diverse expertise around shared issues<sup>15,54</sup>.



#### OUR WORK ON CITIZENS' ASSEMBLIES

We observed the Climate Assembly UK and compared its process with the French Convention Citoyenne pour le Climat and diverse UK local processes.

We find that design of climate assemblies, including how questions are framed, strongly influences the final recommendations made by attendees. Top-down approaches provide policy-ready options, but limit citizen input, while bottom-up methods encourage citizen ideas but risk unfeasible outcomes. Climate assemblies as part of wider public engagement can accelerate more ambitious policies.

To learn more about this research, please read our CAST report "Citizens' climate assemblies: Understanding public deliberation for climate policy"<sup>12</sup>

#### OUR WORK WITH BUSINESSES

#### One of our research projects explored what social transformations look like.

Our empirical evidence shows that some organisations take a people-centred approach by embedding sustainability goals within their culture, work design and leadership attributes. Systemic support is needed to help ambitious companies achieve their sustainability goals, which includes policy guidance, financial support, and investment in new technologies and organisational innovations.

To learn more about this research, read our CAST report "Organisational transformations for a greener future"<sup>15</sup>



There is conditional public support for decisive action on climate change and significant, rapid emission reductions.

The public are more likely to support climate action when it is fair, achieves co-benefits, retains freedom of choice, and has active and sustained government support.

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#### The majority of people in the UK and internationally are highly concerned about climate change and aware of the urgent need for climate action.

These views have remained stable over recent years despite other issues arising such as Covid-19 or the cost-of-living crisis<sup>16,17</sup>. The public are supportive of many policies and strategies designed to encourage low-carbon lifestyles<sup>12,17,18,19</sup>. For instance, individuals express general support for lifestyle change policies and are willing to change individual behaviours around diet, travel, consumption, and home comfort<sup>16,18</sup>. However, across multiple CAST projects we found that support is contingent on several factors.

### Fairness and freedom of choice matter.

Workshops and surveys conducted by CAST with the UK public revealed that any social changes related to valued lifestyle choices must be fair and uphold freedom of choice. For instance, when considering measures like reducing flying or meat consumption, ensuring fairness in how these policies affect different income groups emerged as crucial<sup>18,20,21,22</sup>. Many existing climate policies fall short of meeting fairness standards, with support for these policies declining notably when financial implications are considered<sup>18</sup>. However, despite the importance of personal choices and freedoms, people are willing to engage in low-carbon lifestyles and generally accept the need to reduce carbon emissions as long as the measures are considered fair and some level of choice remains<sup>20,21,23</sup>.

### Climate action should deliver co-benefits.

Alongside reducing carbon emissions, a social transformation should also enhance lives by offering health, environmental, financial, or job-related benefits. Our research indicates that achieving additional benefits alongside emission reduction is crucial for a desirable low-carbon future<sup>20</sup>. This is even more relevant in the context of local-level climate solutions as grassroots actions are often driven by a social need (e.g., reducing air pollution to boost public health). Across our studies, we found that cutting carbon emissions can yield various co-benefits, particularly in enhancing wellbeing. For example, we found a negative link between sustainable wellbeing and materialistic values, which tend to lead to higher material consumption and carbon footprints<sup>24</sup>. Likewise, in a study spanning Global North and South countries, we found a positive association between low-carbon behaviours and subjective wellbeing<sup>25</sup>. Additionally, programmes that use environmental initiatives to bridge the gap between otherwise disconnected groups can improve people's wellbeing, as shown in a study that connected low-income households in Wales with community food initiatives<sup>26</sup>.

### People want active and stable government support.

Initiatives like the Citizens' Assembly UK demonstrate that effective governance and leadership from politicians and policymakers is crucial<sup>12</sup>. In fact, our systematic review of the literature revealed that government policies are the most important factor driving and/or inhibiting social transformations<sup>6</sup>. Government action is certainly perceived as crucial for addressing climate change in the UK<sup>16</sup>. The Government's role is also essential to support grassroots actions – for example by providing funds or infrastructure, or opening networks for grassroots organisations to scale their climate action initiatives. This highlights the critical need and potential for the Government to elevate its ambitions in driving social transformation<sup>3,27,28,29</sup>, a message that was taken up and emphasised by recent reviews of current government approaches to social transformations, e.g., the Climate Change Committee's progress report or the Skidmore Review<sup>30,31</sup>.

KEY MESSAGE 2 - THERE IS CONDITIONAL PUBLIC SUPPORT FOR DECISIVE ACTION ON CLIMATE CHANGE AND SIGNIFICANT, RAPID EMISSION REDUCTIONS

#### PUBLIC SUPPORT WITHIN CAST'S FOUR KEY RESEARCH AREAS

#### Food

- Strong support for a balanced diet, food waste reduction, local and organic food.
- Lower support for completely meat-free or meat restricted diets<sup>12,20,21</sup>.

#### Consumption

- Universal support for product standards and lifetime guarantees.
- Conditional support for buying less, sharing economy, second-hand consumption practices<sup>12,20,21,23</sup>.

#### Travel

- Strong support for active travel and improved public transport provision.
- Reduced daily travel (linked with increased home-working) also popular, as well as access to small, efficient electric cars.
- Some support for frequent flyer tax<sup>20,21</sup>.

#### Heating

- Strong support for increased access to home refurbishment and improved building standards.
- Support for smart home tech and lower room temperatures <sup>12,20,21</sup>.

PUBLIC PREFERENCES FOR LOW-CARBON LIFESTYLES

#### In this project we conducted deliberative workshops with members of the public in Wales, England and Scotland.

Across the four areas – diet, transport, heating and material consumption – we found many low-carbon lifestyle options were perceived as feasible and desirable, especially if they were perceived as fair and associated with co-benefits. While maintaining personal choice and freedoms were important, only very radical strategies such as living car free, no flying, living in smaller homes, or eating meat-free diets were seen as too restrictive. People felt strongly that more support for enabling low-carbon lifestyles needs to come from government and businesses.

To learn more about this research, read our CAST Briefing 14: "The road to net zero: UK public preferences for low-carbon lifestyles" <sup>20,21</sup>.

#### PUBLIC SUPPORT FOR NET ZERO POLICIES

#### In partnership with Ipsos, we conducted a UK representative survey on public attitudes to eight net zero policies.

The public support transformative policies on food, travel, home energy use, consumption habits and retirement savings. However, backing for net zero policies can be fragile, dropping notably when lifestyle and cost implications are highlighted.

To learn more about this research, read our "Net Zero Living Report 2022" <sup>18</sup> and our open access paper: "Factors and framing effects in support for net zero policies in the United Kingdom" <sup>23</sup>.

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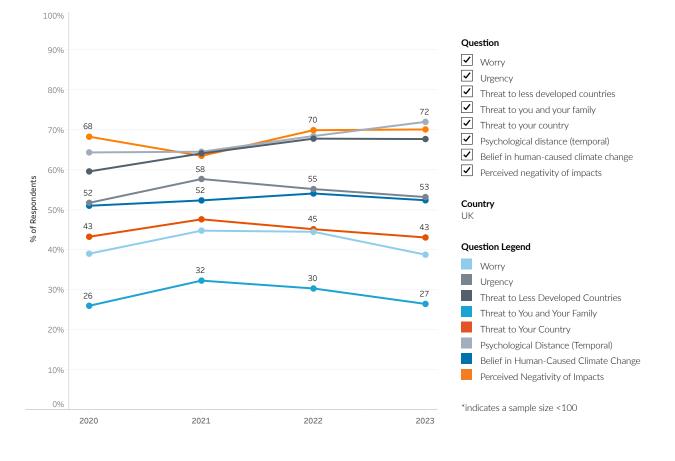
#### CAST DATA PORTAL

#### Understanding how people perceive climate change and climate action is an important focus for CAST.

Over the last four years, we conducted annual surveys with nationally representative samples in the UK and three other countries (Sweden, China, Brazil) to better understand public opinion on climate action. This includes perceptions of climate change, willingness to engage in low-carbon lifestyles and policy support, as well as perceptions of trust and responsibility. The CAST Data Portal provides a comprehensive account of public perceptions and will be useful for anyone who wants to gain an in-depth understanding of public perceptions of climate change and climate action.

The data portal allows for exploration of views across time, countries and segmented by sociodemographic variables (e.g., age, gender, income, political orientation).

#### THE INTERACTIVE DATA PORTAL: CLIMATE VIEWS OVER TIME



Transformative change should embrace diverse perspectives and break down systemic barriers.

Policies and initiatives should make climate action easier, cheaper, and more normal, and coincide with times at which people are open to making different decisions.

#### Addressing systemic barriers is crucial. Climate concern and support for emission reduction do not necessarily lead to sustainable behaviour change<sup>32</sup>. Low-carbon choices must also be practical, convenient and socially acceptable.

Take the example of transport; while there is widespread public support for active and public travel, displacing cars on a large scale requires substantial government investment in infrastructure, safety, and accessibility. CAST research in collaboration with the charity Possible<sup>33</sup> trialled a car-free living initiative that supports travellers in swapping their car for alternative modes of transport<sup>34</sup>. The trial showed an 87% reduction in car travel, with increased use of alternative modes. However, financial and infrastructural challenges hinder going car-free: cycling feels unsafe, shared mobility e-bikes and e-scooters lack availability, and public transport is unreliable. Moreover, the infrequent and perceived low running costs of car ownership make other travel modes seem expensive.

### Connect climate action with things people already care about.

Messages and interventions work best when aligned with people's values and priorities e.g., saving money, being healthy, caring for community and family<sup>35</sup>. For instance, the cost-of-living crisis is an opportunity to engage the public with energy efficiency. Our evidence shows that current economic conditions have not deprioritised the climate crisis in people's minds. Net zero policies can address both energy security and climate change, and improve people's lives (e.g., via lower energy costs) – for this reason demand-reduction policies are strongly supported<sup>19,20</sup>.

#### The timing of interventions plays an important role for their effectiveness.

So-called 'moments of change' are pivotal opportunities to enhance the success of an intervention. Moments of change include societal disruptions like infrastructure upgrades, the cost-of-living crisis, Covid-19, droughts and floods, as well as life transitions like moving house, childbirth or retirement. CAST research conducted during the Covid-19 pandemic illustrates that there is a surge in action across policy spaces, businesses, communities and households when individual and systemic changes align<sup>36,37</sup>. The substantial societal shifts witnessed during moments of change, like the Covid-19 pandemic, highlight the potential for deep changes in everyday routines when the conditions support a shift<sup>38</sup>. In other words, timing matters if we want climate change policies and campaigns to be effective.

KEY MESSAGE 3 - TRANSFORMATIVE CHANGE SHOULD EMBRACE DIVERSE PERSPECTIVES AND BREAK DOWN SYSTEMIC BARRIERS.

#### MOMENTS OF CHANGE

#### CAST research has found that concern for climate change was not dented by Covid-19 or the cost-of-living crisis, and indeed these may be important moments in which people are open to change.

Our Covid-19 surveys show that normal routines were significantly disrupted, and new practices emerged. For example, working from home had considerable knock-on effects for shopping, cooking and eating, and this affected the sustainability of food practices<sup>36</sup>. Similarly, the cost-of-living crisis put a spotlight on the need for energy efficiency policies (or lack thereof), which people continue to strongly support. To learn more about this research, read our CAST Briefing 04 "How has COVID-19 Impacted Low-Carbon Lifestyles and Attitudes towards Climate Action?" <sup>38</sup>;

Briefing 05 "Tracking the effect of COVID-19 on low-carbon behaviours and attitudes to climate change: results from wave 2 of the CAST COVID-19 Survey."<sup>53</sup>; and

Briefing 17 "Public worry about climate change and energy security in the cost-of-living crisis."<sup>54</sup>

#### CASE STUDIES WITH OUR PROJECT PARTNERS ON MOTIVATING BEHAVIOUR CHANGE

#### Reducing air travel with Climate Perks:

Climate Perks is an employee benefits scheme that offers additional paid days of annual leave to employees travelling by land rather than air, showed what is possible when routines are disrupted.

To learn more about this research, read our briefing note with 'Possible' "Going Car Free: Assessing the barriers to low-carbon"<sup>33</sup> and the "Preliminary evaluation of the Climate Perks initiative" <sup>34</sup>

#### Encouraging low-carbon behaviours with Cornwall Council:

Drawing on survey and focus group data, the project finds Cornwall residents are supportive of a range of low-carbon policies and willing to change some behaviours. Policies include stricter building regulations for new housing developments, increasing solar and onshore wind infrastructure, and traffic policies such as low traffic neighbourhoods and 20mph speed zones. They are less willing to change their travel behaviours or diet.

To read more about this project, read our CAST report "Cornwall Council behaviour change and engagement programme – survey of residents." <sup>19</sup>

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Action across all levels of society and in all sectors is needed to drive impactful societal change.

People can act on climate in many contexts and roles, creating change at different rates and scales.

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### People can act in different contexts and roles.

While there is often debate about the relative importance of individual versus system change, our work shows both are needed and they are connected. People can engage in system change through their various roles as citizens, consumers, parents, employees, homeowners, community members and leaders<sup>39</sup>. To reshape societal systems and realise a low-carbon future, active engagement across diverse societal roles and sectors is essential<sup>6</sup>.

#### Key change makers we have studied include communities, organisations, universities and local authorities.

Communities are involved in diverse climate actions in all areas including energy, transport, food, activism and lifestyle change<sup>40</sup>. Whilst outcomes vary and communities define success differently, supportive networks/partnerships, policies and funding are key to success. Grassroots and community action are catalysed where environmental and social motivations, for example reducing carbon emissions and improving communities, are supported by economic enablers such as funding and opportunities to generate income<sup>40</sup>. The project "Our Streets Charlton" - a collaboration between CAST and a community-led initiative in South Manchester - demonstrates the impact of community engagement. The project aimed to co-create solutions for reducing car use for short journeys. It showed that connecting change makers and collaborating with communities can increase local interest in low-carbon travel<sup>14</sup>.

**Organisations** can normalise and increase access to environmental practices and technologies. Furthermore, successful smaller scale projects in organisations can increase acceptance and desire for larger scale projects, such as a local biodiversity project leading to positive attitudes towards larger scale change at a mining refinery<sup>15</sup>. **Universities** have an important role in climate action through research, education and by reducing their own carbon emissions. They are in a unique position to help shape lowcarbon futures by engaging with students, staff. local communities and wider society. Climate emergency declarations from universities signal that climate change is a common and significant threat which requires action. However, declarations have been used for publicity and promotion, with transformative change rarely touched upon<sup>55</sup>. There is considerable scope for institutions to more actively disrupt and reshape professional practices to improve sustainability<sup>41,42,43</sup>, but those working in universities feel disempowered by a host of barriers (e.g., workloads, professional norms, uncertainty). CAST researchers have supported attempts to drive more transformative change in their own institutions - for example, at the University of Manchester there is now a 50% emission reduction target for business air travel on pre-pandemic levels.

City and local authorities across the world have set ambitious climate targets, often exceeding those made by their national government. Many are trying new ways of doing things to drive significant change - for example, adopting new approaches to financing projects, developing local area energy system plans, improving building standards and including climate into budgeting processes. Working with Greater Manchester Combined Authority and Greater London Authority, CAST have developed a decision support tool<sup>44</sup> for local authorities to help embed climate action and equalities into their policies, enabling a more systemic approach across all departments. The tool has helped raise awareness and consideration of climate issues, while providing opportunities to discuss the challenges and opportunities for greater action<sup>45</sup>.

### Bridges between change makers across levels and sectors matter.

Establishing connections among change makers and across different levels and sectors is very important. A systemic literature review conducted by the CAST team showed that collaboratively and consistently delivered government policy is a key driver of social transformations. However, poorly designed and inconsistently delivered policies risk becoming a barrier to societal transformations<sup>6</sup>. This is reinforced by our review of grassroot-level action – while action can be transformational and achieve wide-spread change, this requires strong networks and supportive partnerships with local government.

#### THE COMMUNITY-LED TRAVEL INITIATIVE WITH OUR STREETS CHORLTON (MANCHESTER)

#### **Out Streets Chorlton**

The project showed that community engagement and collaboration serve as crucial catalysts, bridging the gaps between change makers in diverse networks and significantly amplifying local enthusiasm for embracing low-carbon travel options.

Read more about this research: "What did people think about getting around in Chorlton"; "What do people value most about living in Chorlton" <sup>14</sup>.

#### CAST impact case studies

In addition to the core research programme, CAST launched a competitive open Impact Fund for practitioners, communities, or organisations who want to work closely with CAST researchers to co-develop and deliver lowcarbon transformative initiatives. So far, 10 projects have been supported. Read more about our projects on our CAST webpage.

- Connecting Chorlton Climate Action Partnership to strengthen climate action in cities. Led by Dr Angela Mae Minas and Dr Sarah Mander, University of Manchester
- Creating a Stakeholder Toolkit for Building Engagement with Climate Change in the context of Covid-19. Led by Dr Chris Shaw, Climate Outreach
- Co-production of an assessment toolkit to embed assessment of carbon and co-benefits in decisionmaking. Led by Dr Chris Jones, Tyndall Centre, University of Manchester
- Developing practical resources for transformative citizens' assemblies on climate change. Led by Dr Stuart Capstick, Cardiff University
- Co-developing a net zero behaviour change strategy & toolkit for Cornwall Council. Led by Professor Lorraine Whitmarsh, University of Bath. Read a summary of the research's key findings in our blog post.
- Designing new intervention pathways to reduce water and energy use in high-use households. Led by Dr Claire Hoolohan, Tyndall Centre, University of Manchester.
- Positively influencing the travel choices of live music audiences. Led by Dr Adam Corner, Independent Researcher.
- Household behaviour change interventions to meet water efficiency and other pro-environmental organisational objectives. Led by Dr Joanne Swaffield, Cardiff University
- Sustaining the political mandate for climate action. Led by Professor Rebecca Willis, Lancaster University.
- Impact Partnerships Engaging Loyal Nationals on taking climate action. Led by David Powell, Climate Outreach.
- Fostering Collaborative Climate Solutions for Social Transformations. Led by Dr Angela Mae Minas, University of Manchester.
- Evaluating the impact of the Greener and Cleaner Hub in motivating low carbon behaviours. Led by Dr Mark Wilson, University of Bath.

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Clear leadership at all levels will shape the frameworks we need for system change.

Outright climate denial has been replaced by climate delay. Effective and clear leadership drives action, builds trust and legitimises change.



### Effective leadership guides social transformations.

Leaders should provide resources, support experimentation and translate climate goals into actionable plans to drive change. Leaders should also address pressures from vested interests seeking to hinder rapid fossil fuel phase-outs and highlight public support for policies before implementation. One CAST project with local authorities developed a decision support tool which successfully integrated climate considerations, co-benefits from policy actions, as well as carbon impacts into initiatives<sup>46</sup>. The work emphasised that effective leadership was pivotal in developing clear processes and fostering a culture of collective engagement in driving change. Similarly, CAST research on organisations underscores that while leaders acknowledge the moral imperative for net zero, there is often a struggle in navigating transitions. This is due to uncertainty, hesitancy and the need for trusted guidance<sup>15</sup>.

#### Political leadership is crucial.

This is highlighted in a project CAST undertook in partnership with Green Alliance and the Climate Coalition<sup>47</sup>. The team conducted interviews with Members of Parliament (MPs) regarding their peers' perspectives on addressing climate change within the parliamentary setting. The project found that there has been a shift in MPs' perceptions of climate change - it is now a mainstream concern, with most MPs expressing support for action and recognising the associated benefits. However, MPs face challenges in managing the complexities of the net zero transition and have concerns about fairness and the pace of change. Discourses of delay are present in UK political circles, indicating that continuous effort is required to maintain ambitious climate progress and political will. Particularly, it is

crucial that politicians are continually reminded of the robust scientific case for very rapid climate mitigation, at a UK level and globally, so that narratives of "pragmatism" (as we have witnessed recently) are not used by the Government to slow climate action. Scientists, NGOs, academics and the public have a role to play in countering this tendency to reduce the pace of change by urging their MPs to act according to the scientific evidence.

#### Widespread "discourses of delay", seen in political and media conversations on climate change, obstruct urgent action.

Such narratives – e.g., 'I'll only act if everyone else does', 'what about China or the USA?', 'small changes are enough', 'climate action is too expensive' - justify inadequate efforts and impede significant public backing for radical lifestyle changes. CAST research with the public revealed strong support for lowcarbon strategies, but also that support is often undermined by entrenched narratives of delay<sup>21,48</sup>, making it difficult for people to believe low-carbon futures are possible. This needs to be addressed in order for a low-carbon transformation to be successful. Importantly, some of these narratives may be rooted in concerns about unfairness and are being stoked as part of the 'culture' war' to create a backlash against net zero policies like '15-minute cities' and 'ultra-low emission zones'. These concerns should not be dismissed, but rather aired and addressed through early and substantive engagement with communities to develop policies that are both fair and effective<sup>13,49,50,51,52</sup>.



KEY MESSAGE 5 - CLEAR LEADERSHIP AT ALL LEVELS WILL SHAPE THE FRAMEWORKS WE NEED FOR SYSTEM CHANGE.

#### LEADERS SHOULD TAKE ACCOUNTABILITY AND RESPONSIBILITY IN DELIVERING CLIMATE ACTION AND CREATE THE RIGHT ENVIRONMENT FOR OTHERS TO DO THE SAME

#### Our partnerships with local authorities have highlighted the importance of demonstrating leadership both at strategic and dayto-day levels.

Leaders should demonstrate that prioritising carbon reduction and sustainability is part of their own decision-making practice and that this is expected throughout the organisation. For example, by only driving and supporting projects that deliver on sustainability. Where trade-offs or tensions exist, these should be discussed transparently and include a system of reviewing and monitoring progress against climate and other strategic priorities.

Learn more about our City Level work by reading CAST Report 9: "International Round Table - Accelerating Climate Mitigation at City Level"<sup>44</sup>.

#### WHAT DO PEOPLE EXPECT FROM LEADERS?

The public is willing to play their part in reaching net zero, but in order to do this they want to see clear and consistent leadership from government institutions and individuals.

Our research shows that politicians and celebrities who lead by example with lowcarbon behaviours increase the willingness of the public to change their own behaviour and also boost trust and confidence in leaders. Similarly, behaviour from leaders that seems to contradict the need for urgent emissions reductions undermines the public's willingness to take action and erodes trust.

Learn more about leadership by reading "The power of leading by example with highimpact low-carbon behaviour: emulation, trust, credibility, justice"<sup>53</sup>.

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## References

1 IPCC (2022). Summary for Policymakers. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Retrieved from https://www.ipcc.ch/report/ar6/wg2/

2 Climate Change Committee (2021). Independent assessment: The UK's Net Zero Strategy, October 2021. Retrieved from https://www.theccc.org.uk/publication/independent-assessmentthe-uks-net-zero-strategy/

3 House of Lords: Environment and Climate Change Committee (October, 2022). 'In our hands: behaviour change for climate and environmental goals', HL Paper 64. Retrieved from https:// publications.parliament.uk/pa/ld5803/ldselect/ldenvcl/64/6402. htm

4 IPCC (2023). AR6 Synthesis Report: Climate Change 2023, The IPCC finalised the Synthesis Report for the Sixth Assessment Report during the Panel's 58th Session held in Interlaken, Switzerland from 13–19 March 2023. Retrieved from https:// www.ipcc.ch/report/sixth-assessment-report-cycle/

5 Climate Action Tracker (2023). Retrieved from https:// climateactiontracker.org/countries/uk/

6 Moore, B., Verfuerth, C., Minas, A. M., Tipping, C., Mander, S., Lorenzoni, I., Hoolohan, C., Jordan, A., & Whitmarsh, L. (2021). Transformations for climate change mitigation: A systematic review of terminology, concepts, and characteristics. Wiley Interdisciplinary Reviews: Climate Change, 12(6), e738. https://doi. org/10.1002/wcc.738

7 Whitmarsh, L., Poortinga, W., & Capstick, S. (2021). 'Behaviour change to address climate change', Current Opinion in Psychology, 42: 76–81. https://doi.org/10.1016/j.copsyc.2021.04.002

8 Lee, S., Freer, M., Wood, R., Edelenbosch, O., Sharmina, M., Doelman, J., Van Vuuren, D., & Wilson, C. (2023). From future diets to dishes: Communicating dietary shift associated with a 1.5°C scenario for Brazil, China, Sweden and the United Kingdom. Frontiers in Sustainable Food Systems, 7, 1266708. https://doi. org/10.3389/fsufs.2023.1266708

9 Hanmer, C., Wilson, C., Edelenbosch, O. Y., & van Vuuren, D. P. (2022). Translating Global Integrated Assessment Model Output into Lifestyle Change Pathways at the Country and Household Level. Energies 15(5), 1650. https://doi.org/10.3390/en15051650

10 Capstick, S., Khosla, R., Wang, S., van den Berg, N., Ivanova, D., Otto, I. M., ... & Whitmarsh, L. (2020). Bridging the gap-the role of equitable low-carbon lifestyles. UNEP (2020): The Emissions Gap Report. Retrieved from https://www.un-ilibrary.org/content/ books/9789280738124c010 11 Verfuerth, C., Demski, C., Capstick, S., Whitmarsh, L., & Poortinga, W. (2023). 'A people-centred approach is needed to meet net zero goals'. Journal of the British Academy, 11(s4): 97–124. https://doi.org/10.5871/jba/011s4.097

12 Cherry, C. E., Capstick, S., Demski, C., Mellier, C., Stone, L., & Verfuerth, C. (2021). 'Citizens' climate assemblies: Understanding public deliberation for climate policy', The Centre for Climate Change and Social Transformations, Cardiff. https://orca.cardiff. ac.uk/id/eprint/145771/

13 Demski, C. (2021). Net zero public engagement and participation. A research note. BEIS UK Government. Retrieved from https://assets.publishing.service.gov.uk/ media/604f7d6cd3bf7f1d1a836ac9/net-zero-publicengagement-participation-research-note.pdf

14 Minas, A. M., & Mander, S. (2023). Driving change from Our Streets: Insights from a community initiative to reduce car use for short journeys. Science Talks, 5. DOI: https://doi.org/10.1016/j. sctalk.2022.100120

15 Graham, J., Tregaskis, O., Maguire, D., Baric, M., Michaelides, G., Nayani, R., & Watson, D. (2023). Organisational transformations for a greener future. CAST report, retrieved from https://cast.ac.uk/wp-content/uploads/2023/02/Organisational-Transformations-report-compressed.pdf

16 Steentjes, K., Demski, C., & Poortinga, W. (2021). Public perceptions of climate change and policy action in the UK China, Sweden and Brazil. CAST Briefing Paper 10. Retrieved from https://cast.ac.uk/wp-content/uploads/2021/10/01112021-Briefing-10-final.pdf

17 Steentjes, K., Poortinga, W., Demski, C., & Whitmarsh, L. (2021). UK perceptions of climate change and lifestyle changes. CAST Briefing Paper 08. Retrieved from https://cast.ac.uk/wpcontent/uploads/2021/03/CAST-Briefing-08.pdf

18 Ipsos and the Centre for Climate Change and Social Transformations (2022). 'Net zero living', Ipsos, London & CAST, Cardiff. Retrieved from https://www.ipsos.com/sites/default/ files/ct/publication/documents/2022-06/net-zero-living-ipsoscast-2022.pdf

19 Wilson, M., & Whitmarsh, L. (2023). Cornwall Council behaviour change and engagement programme – survey of residents: Report to Cornwall Council by the Centre for Climate Change and Social Transformations. Retrieved from https://cast. ac.uk/wp-content/uploads/2023/09/CAST-cornwall-councilbehaviour-change-and-engagement-programme-survey-ofresidents-report-2023.pdf 20 Demski, C., Cherry, C., & Verfuerth, C. (2022). The road to net zero: UK public preferences for low-carbon lifestyles. CAST Briefing Paper 14. Retrieved from https://cast.ac.uk/ wp-content/uploads/2022/09/CM\_UOB\_49-CAST-Report\_v5\_ FINAL\_27.9.22.pdf

21 Cherry, C., Verfuerth, C., & Demski, C. (2023; under review). Discourses of climate inaction undermine public support for 1.5oC lifestyles.

22 Toy, S., Whitmarsh, L., Mitev, K., Gan, Y.S., Player, L., McGuicken, T., Thorman, D., Wilson, M., Graham, J., & Hayden, N. (2023). Motivating a low-carbon workforce - Insights from Cornwall Council. CAST Briefing Paper 18. Retrieved from https:// cast.ac.uk/wp-content/uploads/2023/10/the-centre-for-climatechange-and-social-transformations-CAST-briefing-18-motivatinglow-carbon-behaviours-in-the-workplace-insights-from-cornwall-council-3.pdf.pdf

23 Poortinga, W., Whitmarsh, L., Steentjes, K., Gray, E., Thompson, S., & Brisley, R. (2023). Factors and framing effects in support for net zero policies in the United Kingdom. Frontiers in Psychology, 14. https://doi.org/10.3389/fpsyg.2023.1287188

24 Isham, A., Verfuerth, C., Armstrong, A., Elf, P., Gatersleben, B., & Jackson, T. (2022). The problematic role of materialistic values in the pursuit of sustainable well-being. International journal of environmental research and public health, 19(6), 3673. https://doi. org/10.3390/ijerph19063673

25 Capstick, S., Nash, N., Whitmarsh, L., Poortinga, W., Haggar, P., & Brügger, A. (2022). The connection between subjective wellbeing and pro-environmental behaviour: Individual and crossnational characteristics in a seven-country study. Environmental science & policy, 133, 63-73. https://doi.org/10.1016/j. envsci.2022.02.025

26 Verfuerth, C., Bellamy, A. S., Adlerova, B., & Dutton, A. (2023). Building relationships back into the food system: Addressing food insecurity and food well being. Frontiers in Sustainable Food Systems, 7. https://doi.org/10.3389/fsufs.2023.1218299

27 Demski, C., & Capstick, C. (2022). To address climate change, lifestyles must change – but the government's reluctance to help is holding us back. The Conversation. Retrieved from https:// theconversation.com/to-address-climate-change-lifestyles-mustchange-but-the-governments-reluctance-to-help-is-holding-usback-190300

28 Thorman, D., Poortinga, W., & Steentjes, K. (2023). CAST responds to the Prime Minister's new approach to Net Zero: How will this impact the UK meeting its climate targets? CAST blog post: https://cast.ac.uk/cast-responds-to-the-prime-ministers-new-approach-to-net-zero-how-will-this-impact-the-uk-meeting-its-climate-targets/

29 Whitmarsh, L., Verfuerth, C., & Westlake, S. (2023). Net zero: direct costs of climate policies aren't a major barrier to public support, research reveals. The Conversation: https:// theconversation.com/net-zero-direct-costs-of-climate-policiesarent-a-major-barrier-to-public-support-research-reveals-210851

30 Climate Change Committee (2023, June). Progress in reducing UK emissions: 2023 Report to Parliament. Retrieved from https:// www.theccc.org.uk/wp-content/uploads/2023/06/Progress-in-reducing-UK-emissions-2023-Report-to-Parliament-1.pdf

31 Skidmore, C., Rt. Hon. (January 2023). Mission Zero: Independent Review of the UK Government's Approach to Delivering Zero. Retrieved from https://assets.publishing.service. gov.uk/government/uploads/system/uploads/attachment\_data/ file/1128689/mission-zero-independent-review.pdf

32 Mitev, K., Player, L., Verfuerth, C., Westlake, S., & Whitmarsh, L. (2023). The Implications of behavioural science for effective climate policy. Report commissioned by the Climate Change Committee. Retrieved from https://www.theccc.org.uk/ publication/the-implications-of-behavioural-science-for-effectiveclimate-policy-cast/

33 Possible (2023). Going Car Free - Case Studies [Website]. Retrieved from https://www.wearepossible.org/gcf-case-studies/

34 Possible (2023). Going Car Free: Assessing the barriers to low-carbon transport for existing car users [webpage]. Retrieved from https://static1.squarespace.com/ static/5d30896202a18c0001b49180/t/62a2196fd681bc751e3 4de84/1654790512740/Copy+of+Going+Car+Free+briefing+n ote.pdf

35 Capstick, S., Wang, S., Khosla, R., & Corner, A. (2020). Achieving low-carbon and equitable lifestyle change. CAST briefing paper 06. Retrieved from https://cast.ac.uk/wp-content/ uploads/2021/01/CAST-Briefing06.pdf

36 Hoolohan, C., Wertheim-Heck, S. C., Devaux, F., Domaneschi, L., Dubuisson-Quellier, S., Schäfer, M., & Wethal, U. B. (2022). COVID-19 and socio-materially bounded experimentation in food practices: insights from seven countries. Sustainability: Science, Practice and Policy, 18(1), 16-36. https://www.tandfonline.com/ doi/full/10.1080/15487733.2021.2013050

37 Poortinga, W., Latter, B., & Wang, S. (2022). Comparing coronavirus (COVID-19) and climate change perceptions: Implications for support for individual and collective-level policies. Frontiers in Psychology, 13, 996546. https://doi.org/10.3389/ fpsyg.2022.996546

38 Whitmarsh, L., Hoolohan, C., Larner, O., McLachlan, C., & Poortinga, W. (2020). How has COVID-19 Impacted Low-Carbon Lifestyles and Attitudes towards Climate Action? CAST Briefing Paper 04. Retrieved from https://cast.ac.uk/wp-content/ uploads/2020/08/CAST-Briefing-04-Covid-low-carbonchoices-1.pdf 39 Hampton, S., & Whitmarsh, L. (2023). Choices for climate action: A review of the multiple roles individuals play. One Earth, 6(9), 1157-1172. DOI: https://doi.org/10.1016/j. oneear.2023.08.006

40 Minas, A. M., & Mander, S. (2024, under review). "Unpacking the transformative potential of grassroots climate action: when, why, and how do actors drive decarbonisation?"

41 Hoolohan, C., McLachlan, C., Jones, C., Larkin, A., Birch, C., Mander, S., & Broderick, J. (2021). Responding to the climate emergency: how are UK universities establishing sustainable workplace routines for flying and food? Climate Policy, 21(7), 853-867. https://doi.org/10.1080/14693062.2021.1881426

42 Latter, B., Demski, C., & Capstick, S. (2024). Wanting to be part of change but feeling overworked and disempowered: Researchers' perceptions of climate action in UK universities. PLOS Climate, 3(1), https://doi.org/10.1371/journal. pclm.0000322.

43 Latter, B., Demski, C., Capstick, S. (2024). Academic researchers' perceptions of climate action in UK universities. CAST Briefing 22. https://cast.ac.uk/wp-content/uploads/2024/01/castthe-centre-for-climate-change-and-social-transformations-castbriefing-22-academic-researchers-perceptions-of-climate-actionin-UK-universities.pdf

44 CAST toolkits (2023): https://cast.ac.uk/carbon-and-cobenefits-decision-support-tool-resources/

45 Braunholtz-Speight, T., McLachlan, C., & Barton, H. (2023). International Round Table - Accelerating Climate Mitigation at City Level. CAST Report 9. https://cast.ac.uk/wp-content/ uploads/2023/10/CAST-report-international-round-tableaccelerating-climate-mitigation-at-city-level.pdf-2.pdf

46 Jones, C., Minas, A. M., McLachlan, C., & Atherton, M. (2023). CAST toolkits: https://cast.ac.uk/developing-a-toolto-accelerate-climate-action-at-the-city-scale-co-productionof-an-assessment-toolkit-to-embed-assessment-of-carbonand-co-benefits-in-decision-making/ & https://cast.ac.uk/ carbon-and-co-benefits-decision-support-tool-resources/

47 Westlake, S., & Willis, B. (2023). Sustaining the political mandate for climate action. London: Green Alliance. Retrieved from https://green-alliance.org.uk/wp-content/uploads/2023/09/ Sustaining-the-political-mandate-for-climate-action.pdf

48 Lamb, W. F., Mattioli, G., Levi, S., Roberts, J. T., Capstick, S., Creutzig, F., Minx, J. C., Müller-Hansen, F., Culhane, T., & Steinberger, J. K. (2020). Discourses of climate delay. Global Sustainability, 3, e17. DOI: https://doi.org/10.1017/sus.2020.13 49 Powell, D., & James, E. (2023). How can politicians avoid a netzero backlash? The role of public engagement: a briefing for policy makers and communicators. CAST Briefing 20. Retrieved from https://cast.ac.uk/wp-content/uploads/2023/11/CAST-the-centefor-climate-change-and-social-transformations-cast-briefing-20how-can-politicans-avoid-a-net-zero-backlash-the-role-of-publicengagement-a-briefing-for-policy-makers-and-communicators.pdf

50 Powell, D., & James, E. (2023). How public engagement can support reducing car use: A briefing for policy makers and communicators. CAST Briefing Paper 21. Retrieved from https:// cast.ac.uk/wp-content/uploads/2023/12/CAST-the-centre-forclimate-change-and-social-transformations-briefing-21-howpublic-engagement-can-support-reducing-car-use-a-briefing-forpolicy-makers-and-communicators.pdf

51 Cherry, C., Verfuerth, C., & Demski, C. (2024). Social visions for a low-carbon future. Cardiff: The Centre for Climate Change and Social Transformations.

52 Verfuerth, C., Jones, G., & Roberts, L. (2023). Workshops to discuss the future of tree planting with Welsh farmers. Cardiff: Welsh Government. Retrieved from https://www.gov.wales/sites/ default/files/statistics-and-research/2023-11/workshops-to-discuss-the-future-of-tree-planting-with-welsh-farmers.pdf

53 Westlake, S. (2022). The power of leading by example with high-impact low-carbon behaviour: emulation, trust, credibility, justice. PhD Thesis, Cardiff University. Retrieved from https://orca. cardiff.ac.uk/id/eprint/159995

54 Tregaskis, O., Graham, J., Baric, M., Harvey, V., Maguire, D., Michaelides, G., Nayani, R., Watson, D. (2023). Organisational Change towards sustainability: from ambition to impact through mindsets and communities of practice. Edited collection Di Fabio. A., and Cooper C. Psychology of Sustainability and Sustainable Development in Organizations. Routledge Taylor & Francis.

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