

Environmental Research Communications



PAPER

OPEN ACCESS

RECEIVED
20 September 2024REVISED
11 March 2025ACCEPTED FOR PUBLICATION
22 May 2025PUBLISHED
4 June 2025

Original content from this work may be used under the terms of the [Creative Commons Attribution 4.0 licence](#).

Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.



Opening-up or closing-down climate deliberations: comparing the Climate Assembly UK and French Convention Citoyenne pour le Climat

Christina Demska¹ , Catherine Cherry² , Stuart Capstick³, Caroline Verfuert⁴ and Claire Mellier⁵

¹ Centre for Climate Change and Social Transformations (CAST), Department of Psychology, University of Bath, Bath, England, United Kingdom

² School of Social and Political Science, University of Edinburgh, Edinburgh, Scotland, United Kingdom

³ Centre for Climate Change and Social Transformations (CAST), School of Psychology, Cardiff University, Cardiff, Wales, United Kingdom

⁴ Centre for Climate Change and Social Transformations (CAST), Cardiff Business School, Cardiff University, Cardiff, Wales, United Kingdom

⁵ Iswe Foundation, England, United Kingdom

E-mail: cd2076@bath.ac.uk

Keywords: climate assemblies, climate deliberations, public preferences, public participation, climate policy, public engagement

Abstract

Climate change is among the most complex problems facing societies, with far-reaching implications for the structure of economies to everyday life. There is no one way to meet carbon targets but decisions on how to do so have, so far, mostly involved politicians and experts. Climate assemblies (CAs) are attempting to give citizens a more direct role in decision-making. There is hope that by engaging more deeply with public perspectives, climate policies could be more ambitious, just, and effective. Existing research has shown that the ways in which CAs are designed has an important influence on their outcomes. This paper contributes to this literature by examining how the recommendations of CAs are influenced by the design of the deliberations, as well as the overall scope and remit of the process. We use two case studies—the Climate Assembly UK (CAUK) and the French Convention Citoyenne pour le Climat (CCC), combining our own observations from attending both processes with analysis of openly available materials. We discuss the extent to which the CAUK and CCC could be considered opening-up or closing-down deliberations and what this means for the way they represent public perspectives on climate policy. We find that both CAs had relatively closed framings around a specific policy target, but the CCC avoids the overly technical framing of climate change, by also including elements of urgency and social justice. The CAUK used a predominantly top-down approach to deliberations whereby the structure of process strongly privileged expert opinion within discussions and recommendations. The CCC used a much more bottom-up approach with recommendations being iteratively developed by citizens. Both processes struggled to engage with more systemic and transformative issues. These insights are important for those designing CAs as well as those who hope to understand more about public preferences on climate policies.

1. Introduction

Climate change is among the most complex and urgent problems facing societies, with far-reaching implications for everything from the structure of economies to everyday life (Moore *et al* 2021, IPCC 2023). The physical and natural sciences can shed light on the level and speed of cuts needed, and the key sectors in which this must occur. What they cannot do is to decide between competing approaches that differ in terms of their effects on wider society (Capstick *et al* 2020). The ways in which we travel, our diets, working practices, and the ways in which we power and heat our homes are all implicated in tackling the climate crisis. Change in these areas can be

accomplished through shifts in people's behaviour and a move towards different ways of life, through technological innovation, and/or intervention by industry. All these are likely to require policies, laws and economic measures to drive that change (Cherry *et al* 2021, IPCC 2023, Park *et al* 2023).

Who is to decide the best course of action to bring about a low-carbon society? For the most part, politicians and policymakers have been expected to do so, with input and advice from experts and others with the ability to make their voices heard. Citizens' roles in the political process have traditionally been limited to voting in elections, aside from a small section of society that is motivated enough to engage directly with politics and activism. Citizens' assemblies on climate change, or climate assemblies (CAs), aim to change that by giving citizens the knowledge and ability to directly inform policymaking. Indeed, CAs may be a promising means by which citizens can be placed at the core of a democratic decision-making process to develop or advise on strategies and policies (Cherry *et al* 2021). They are considered a form of 'deliberative democracy'—a version of decision-making in which citizens are informed, discuss and debate, and then offer recommendations to policymakers (Goodin and Dryzek 2006, Boswell *et al* 2023, Gavan Labrador and Zografos 2023). CAs are a form of deliberative mini-public that focus on aspects of climate policy or action. They typically recruit a representative subset of the wider population (around 100–150 participants) through a random selection process and take place over several weeks or months (Curato *et al* 2021, Boswell *et al* 2023).

Ireland's citizens' assembly was an early example of using such a deliberative process to address climate change in 2017 (Devaney *et al* 2020). More recently, the UK, France, Denmark, Spain, Finland, Austria, Germany, Luxembourg and Scotland have all set up major national processes that have aimed to inform policymaking and generate wider interest and momentum on climate action. There are also a multitude of other climate deliberation processes emerging at local and regional level across Europe and elsewhere (King and Wilson 2023, Lewis *et al* 2023).

As more CAs have taken place, more reflection on how they are designed is however important. In this paper we focus on two of the earliest national-level CAs—the Climate Assembly UK (CAUK) and the French Convention Citoyenne pour le Climat (CCC). Both processes have received increasing attention from research teams and as such provide ample opportunity to learn lessons for future deliberations (e.g., Elstub *et al* 2021a, Galvan Labrador and Giraudet *et al* 2021, Duvic-Paoli 2022, Zografos 2023). Collectively, the authors of this paper were privileged to be part of the research teams allowed to observe the entire process of both assemblies. Here, we bring together some of the findings from the existing literature on the CAUK and CCC with our own unique observations and reflections on how the deliberations unfolded. By doing so we will illuminate how the recommendations of both CAs were influenced by the design of the deliberations, as well as the overall scope and remit of the process.

1.1. Designing climate assemblies

Those commissioning CAs tend to follow a set of standards around participant recruitment and quality of deliberations (e.g., see OECD 2020), but the specific structure and design of the deliberations can vary widely; these design choices are important because they can, in turn, affect outcomes and impacts of CAs. One of the ways in which this has been explored is by distinguishing between top-down or bottom-up approaches. The literature on deliberative mini-publics, as democratic innovations, tends to discuss this distinction in terms of the actors that organise or commission a process and as such have control over its remit and design (Bussu and Fleuß 2023). Processes led by state actors tend to be considered top-down and those led by civil society tend to be considered bottom-up. The former tend to be more closely linked to agendas of current government institutions and therefore pursue less radical or transformative ideas and solutions. However, they may also be more closely linked to decision-making processes and therefore have a greater potential to influence policy. Bottom-up processes are less closely linked to policy making but have more potential to open-up space for discussion of ideas and proposals outside the political status quo (Hammond 2020).

Bussu and Fleuß (2023) further argue that we need to develop more nuanced understandings of what makes a process top-down or bottom-up, including the different features and components of the process rather than solely considering the actors which initiate it. In addition, they advocate that the top-down/bottom-up distinction should be considered as a dynamic continuum rather than a dichotomy. More specifically, they describe four dimensions to consider: 1) the actors leading the process (state versus non-state), 2) the approach to the process itself, 3) the normative values underpinning the process (epistemic versus democratic) and 4) the core aims to either strengthen or challenge existing institutions. Specifically relevant to the analysis in this paper are the first two dimensions, whereby we provide a more in-depth analysis of the way the CAUK and CCC processes, in terms of agenda, evidence provision, deliberation and voting, were able to open-up or close-down opportunities for participants to develop and voice their perspectives on climate policy.

Indeed, one of the key hopes pinned on CAs is to drive more ambitious, just, and effective climate policy, and thus improve legitimacy and acceptance of policies (Dryzek and Niemeyer 2019, Wells *et al* 2021, Willis *et al* 2022,

Ejsing *et al* 2023, Pfeffer 2024). One important mechanism through which this may be achieved is by encouraging deeper engagement with citizens' views and ensuring policies can better reflect people's values, experiences and preferences (Demski 2021, Perlaviciute 2022, Boswell *et al* 2023). As such, it is important that the process is designed in a way to effectively enable participants to develop and discuss their perspectives, and consequently we need to develop understanding of how public perspectives, that emerge from these processes, are shaped by the process itself.

Related research shows that participatory public engagement, which includes climate assemblies, is often credited with 'opening-up' decision-making to wider perspectives and experiences beyond those of technical experts and elites, thus bringing in diverse knowledge with a potential to lead to innovative and fairer solutions (Fiorino 1990, Stirling 2008, van Beek *et al* 2024). At the same time as opening-up issues to wider perspectives, these participatory spaces can also 'close down' discussions if they are designed in a way that privileges expert opinion and does not enable enough space for citizens to bring their own knowledge to bear. This is an important consideration for CAs because they require information provision and expert input to support citizens' deliberations. Indeed, one of the defining features of CAs is that they include a learning and deliberation phase, prior to deciding on recommendations, which gives citizens the opportunity to learn, discuss diverse perspectives and carefully consider options. In this way, CAs are supposed to provide insight into *informed* public preferences that arise from in-depth consideration of relevant issues, rather than shallow opinions that we can obtain through other methods, e.g. opinion surveys (Fishkin 2009, Boswell *et al* 2023). As such, information provision within CAs is considered important for lay people to deliberate meaningfully on such a complex topic (Muradova *et al* 2020, Cherry *et al* 2021, also see van Beek *et al* 2024 for an extended discussion of the role of experts and expertise in citizen engagement practices).

However, it is problematic to claim that the outcomes of CA processes are simply representations of the public's true and considered preferences. People's preferences are formed from a mix of pre-existing assumptions and values (Demski *et al* 2015), the information to which they are exposed, and the structure of climate deliberation, including the choices people are able to make (or not) (Shaw *et al* 2021). It is therefore important that CAs are critically analysed to understand the means by which recommendations have been obtained, and the ways in which both expert and citizen participants contribute to these (Cherry *et al* 2021).

There is emerging research that explores the role of framing and expert input within CAs specifically, although Shaw *et al* (2021) acknowledge it is difficult to disentangle the multitude of co-existing factors that might impact on citizens' deliberations and recommendations. For example, examining the role of experts, van Beek *et al* (2024) found that the setting and staging of expertise within the Irish assembly strongly shaped citizens' deliberations and impacted on its recommendations. Specifically, it tended to closed-down normative perspectives while opening-up policy options under consideration. Also analysing the Irish assembly, Muradova *et al* (2020) found that the extent to which speakers engaged in effective communication, and how often specific proposals were repeatedly mentioned, explained why certain policy proposals were adopted over others. Similarly, research on framing has shown that information provision can alter preferences even before deliberations have occurred (Goodin and Niemeyer 2003). This is in line with research on climate communication generally, which has consistently found that changing the way information is framed can impact on people's attitudes to climate change (Nisbet 2009 Markowitz and Guckian 2018, Badullovich *et al* 2020, Shaw *et al* 2021). Furthermore, the framing of climate change as a technical issue within assemblies can significantly close-down options and ideas, and thus exclude perspectives that may focus more on social, ethical or moral understandings (Blue 2015, Cherry *et al* 2021, Zeitfogel 2023). Specifically important for climate change and environmental sustainability more broadly may be the extent to which citizens are able to engage with more transformative solutions that disrupt current structures and systems of governance, including reshaping how our societies and economies operate (Hammond 2020, Demski *et al* 2024).

1.2. Aims and contributions

The research to date shows that there is no single way to run CAs but the ways in which they are designed has an important influence on their outcomes and recommendations (Boswell *et al* 2023). The aim of this paper is to explore and reflect on how the outcomes and recommendations of CAs are influenced by the structure and design of the deliberations, as well as choices surrounding the overall scope and remit of the process. By focusing on both the CAUK and CCC, we can compare and contrast two different national-level processes. Specifically, the following sections discuss the extent to which CAUK and CCC could be considered opening-up or closing-down deliberations on climate policy and what this means for the way they represent public perspectives on climate policy. We do not aim for a systematic analysis of the two processes. Rather we aim for a reflective comparative account of the way the two processes were structured and framed, and how recommendations emerged in each.

2. Methods and analysis

2.1. Case study descriptions

The CAUK was commissioned by six Select Committees of the UK Parliament and took place in early 2020 to assess the level of public support for various climate policy options. The process was organised and facilitated by a leading public participation charity, who were closely supported by an advisory group of four academic ‘expert leads’ in the design and oversight of the assembly. The assembly took place over four months (25th January—17th May 2020), including three in person weekends (six full days) and three online weekends (rearranged as virtual sessions due to the COVID-19 pandemic). In total, 108 assembly members were selected by sortition, using random stratified sampling to represent the socio-demographic profile of the UK based on seven criteria, which included ethnicity and attitude to climate change. The assembly was framed around the question ‘How should the UK meet its legally binding target of net zero greenhouse gas emissions by 2050?’. Six core themes were used to structure the assembly including: ‘where our electricity comes from’ and ‘removing greenhouse gases from the atmosphere’ which were discussed by the full assembly, and ‘how we travel’, ‘in the home’, ‘what we buy’ and ‘what we eat and how we use the land’ which were discussed within four thematic sub-groups of 36 people each. The process culminated in 50 recommendations from the assembly, presented in a 556 pages report (Climate Assembly UK 2021). An official evaluation team specialising in deliberative democracy was commissioned to produce a report focusing on how assembly members were recruited, how expertise was presented to assembly members, how individuals’ views evolved during the four weekends, and the assembly’s impact on Parliament (Elstub *et al* 2021b). There was no formal response from the Select Committees or government, although the Select Committees officially supported the report and launched additional inquiries.

Commissioned by then French President Emmanuel Macron, the CCC was conducted in 2019/2020 to identify structuring measures that could be enacted either by a national referendum, parliamentary vote or directly turned into regulations ‘without filter’ from the Executive. The process was organised by the Conseil Economique Social et Environnemental, supported by a governing committee, composed of 17 people (15 permanent stakeholder members and 2 citizens drawn by lot) that set the agenda and the rules for deliberations. The process took place over 9 months (3rd October 2019–21st June 2020) and an additional 8th session in February 2021. Seven of these were in person sessions (2.5 days), with three online weekends. 150 participants were selected by sortition, using random stratified sampling according to six criteria: gender, age, socio-professional category, education level, geographic origin and rural/urban. Ethnicity and climate change attitude were not used as selection criteria. A comparison between CCC members and the French general population indicates broad representation although CCC members were more favourable to climate policies than the general public (Fabre *et al* 2021). The assembly was framed around the question ‘How can France reduce its greenhouse gas emissions by at least 40% (in relation to 1990’s levels) by 2030, in the spirit of social justice?’. The deliberations centred on five thematic groups (each with about 30 participants): ‘Se déplacer’ transport, ‘Se nourrir’ food, ‘Consommer’ consumption, ‘Travailler et produire’ work and manufacturing, ‘Se loger’ housing. The process culminated in 149 measures, presented in a 460 pages report (Convention Citoyenne pour le Climat 2021). There was no formal external evaluation, but the process was monitored by 30 Accredited Researchers observers. The Climate and Resilience Bill adopted by the French parliament in 2021 included some of the proposed measures, however many were modified or revised. Recent research indicates that 20% have been implemented in their original form (or even reinforced), 51% have been implemented in a partial or modified form and 22% have been abandoned or not implemented to date (Averchenkova 2024). Prior to this, only informal assessments had been undertaken, for instance by the charity ‘Les 150’, which was created by the CCC assembly members to follow the uptake of each recommendation (Mellier and Tillekete 2024). Please refer to Giraudet *et al* (2021) for a detailed account of the CCC process.

For more comparative information on the two CAs, the appendix includes three tables on commissioning, governance, and process features.

2.2. Methods and data

The analysis is based on the reflections of the authors, supported by extensive observations of both the CAUK and CCC (Cherry, Verfuert, Capstick attended the CAUK; Mellier attended the CCC and CAUK) and analysis of relevant materials presented to participants. This includes expert presentations or participation handbooks (in the case of the CCC) as well as the final report with recommendations that was published. This paper builds on a previously published report presenting preliminary findings from these observations (Cherry *et al* 2021). In this paper, we deepen the reflections presented in the initial report (e.g., we more fully explore how recommendations emerged in both CAs) and embed the analysis in existing research that has since been published on both the CAUK and CCC. In addition, we provide a new comparative analysis of the two processes with a view to draw out implications for future CAs.

As agreed with the CAUK organising team, 1–2 members of the research team attended each of the in-person weekends to conduct non-participant observation. This method was chosen because it provides a way to collect ‘nuanced and dynamic’ data regarding the process of structure of the event, which cannot easily be captured through the collection of discussion recording data alone (Liu and Maitlis 2010). Additionally, the decision was a practical one, as the terms of the agreement between the research team and the CAUK organisers required the team to observe in-person evidence sessions, while maintaining the privacy of assembly members (i.e., the research team were not permitted any direct contact with participants). With the research team firmly in the background of the process, this approach had the advantage of preventing any ‘observer effect’ on participants, as well as providing researchers with the capacity to fully focus on the unfolding events and ensure that observations were as rigorous and systematic as possible.

All full group sessions were observed in person and extensive notes were taken on both the content of the evidence provided and the process by which these sessions were run. Not all sub-group sessions could be observed in this way; in these cases, voices recorders still collected data from on table discussions and publicly available recordings of the evidence sessions were used to assess the evidence provided in the learning phase. Attendance at voting sessions was not permitted for the CAUK, so observations of the decision phase were not possible. Due to disruption by the COVID-19 pandemic, the final sessions of the assembly were conducted online. The research team was not permitted to attend these online calls, but was provided with video recordings after the event, which were observed retrospectively using the same criteria as disrobed above.

Mellier was part of the team of 30 accredited researchers for the CCC process. This group worked together to observe and collect data during all plenary and thematic group sessions, as well as additional webinars. They were allowed to take notes, record audio and observe. Researchers also had access to the online internal platform that was available to citizens to enable further information sharing and collaboration. Mellier extensively observed the consumption thematic group which is the focus of section 3.2.3. For more insights into the collaboration and research conducted as part of the wider CCC research team, please consult Giraudet *et al* (2021).

While the comparative analysis presented in this paper was conducted retrospectively, all authors had taken notes on all three phases of the CAUK and/or CCC which enabled comparisons across 1) the learning phase (including content, evidence format, process for discussing trade-offs), 2) the deliberative phase (including, structure of discussions, criteria/prompts provided for deliberation, participant ability to open up the agenda/discussions), and 3) facilitation approach (including, style, consistency, leading nature of discussions).

2.3. Author reflections

We take a critical approach in line with the research aims of this paper, but we also acknowledge that we are strong proponents of people-centred approaches to climate change (Verfuerth *et al* 2023) and the role of participatory public engagement to inform policymaking (Demski 2021). We consider both the CAUK and CCC to be pioneering in terms advancing these aims, nonetheless we hope to add valuable insight that can help push these processes forward in the most effective and rigorous way by highlighting the way that process design and framing can influence outcomes. To ensure our analysis was rigorous and not unduly affected by personal views we discussed and reflected on our insights as a group over many months, challenging and sense checking observations, assumptions and conclusions with other members of the team. Nonetheless, the account in this paper still only reflects our own observations and views and we acknowledge that these may differ from others who observed these processes. We also note that we were acting as independent observers of both the CAUK and CCC and were not in any way involved in the commissioning, design or running of the assemblies. The one exception was Mellier who acted as facilitator for one of the CAUK sessions. She was invited at short notice because another facilitator was unable to attend. We have also made an effort to integrate our own observations and reflections with those of others who have written about the CAUK and CCC and make frequent reference to other reports and papers in our analysis section (some of these provide more in-depth accounts of the processes). This way we hope to build on the existing evidence base and learnings from these early national-level climate assemblies.

3. Analysis and reflections

We divide the analysis into two main sections. The first discusses the scope and overall framing of the two case studies (section 3.1), and the second focuses more specifically on the actual sessions (i.e. the deliberations and voting), how these were structured and how recommendations emerged from them (section 3.2). Within this second section, we first discuss the top-down and bottom-up nature of the two CAs (section 3.2.1), and then provide a more detailed account of how recommendations emerged in the CAUK and CCC respectively (sections 3.2.2 and 3.2.3). For each we focus on one specific thematic area (travel for CAUK and consumption for

CCC) to more closely examine how recommendations were decided upon and what this means for understanding public preferences.

3.1. Scope and overall framing

One of the most significant design factors to influence the nature of climate deliberations and its outcomes is their scope and remit. Particularly the framing of the question around which a CA is organised can significantly close-down or open-up the discussions and influence the outcomes and recommendations of a process (Devaney *et al* 2020, Muradova *et al* 2020). For example, Willis *et al* (2022) discuss how a narrow framing of climate change as a scientific or technical problem can overlook the social, ethical or political context of the issue. Some argue that narrow framings can produce more practical and effective policy recommendations, while others believe that more open and transformative framings could provide avenues to more effectively tackle climate change (Ainscough and Willis 2024, Mellier and Capstick 2024, Pfeffer 2024). According to Bussu and Fleuß's (2023) framework, both the CAUK and CCC could be considered top-down in terms of the actors that initiated both processes (state-led). This means there are similarities in terms of the overarching scope and remit that set the boundaries of the process, but there are also observable differences in terms of what assembly members were able to discuss and contribute.

In the CAUK, assembly members were asked 'How should the UK reach its legally-binding target of net zero by 2050?'. This close focus on the policy question of how to reach 'net zero by 2050' was set at an early stage by the commissioning Select Committees, but was also influenced by wider events unfolding in Parliament, with then Prime Minister Teresa May's government separately publishing legislation committing the UK to net zero carbon emissions by 2050, which would strengthen the previous commitment to an 80% cut in emissions. For those working to shape the terms of the CAUK, the introduction of this legislation was seen as an opportunity to anchor the process to these political developments, giving the advantage of being clearly aligned with national policy and better oriented towards providing practical, actionable responses from the process. In contrast, French citizens in the CCC were asked to consider 'How can France reduce its greenhouse gas (GHG) emissions by at least 40% (in relation to the 1990's levels) by 2030, in the spirit of social justice?' The question was negotiated between the civil society group 'Gilets Citoyens' and representatives from the government. This was because the CCC was in large part a response to the Gilets Jaunes (Yellow Vests) protests, which were prompted by a proposed carbon tax increase, but eventually came to symbolise the divide between ordinary citizens and Parisian elites. Gilets Citoyens were given a role on the governance committee for the CCC as civil society representatives and had an active role in determining the mandate and process, including the overarching question (Cherry *et al* 2021).

In both cases, the choice of question was framed around a specific policy (emission reduction) target which enabled a focus on practical and actionable proposals as is often the case in state-led mini-publics. However, the CAUK provides an example of a more closed process for a number of reasons. Framed in the long-term (2050) and with a focus on future scenarios, the CAUK's approach was more technical, focusing on policy solutions to reduce carbon emissions. Contrastingly, the CCC focused on a near-term target (2030) and included the term 'at least 40%', implying greater urgency for action and providing the opportunity for participants to argue for measures beyond the stated emissions reduction target (Cherry *et al* 2021). The CCC also included explicit considerations of wider societal implications of emission reduction policies with the inclusion of social justice in the question. While both processes did consider the ethical and moral issues behind both the causes of and solutions to climate change, the wider framing of the CCC provided space for participants to broaden the recommendations (such as a proposed law on Ecocide, Pfeffer 2024). It should however be noted that fairness emerged as an important consideration in the CAUK despite this not being mentioned in the overall question; perhaps a result of expert input on this topic and/or because fairness and justice are well-known values that influence people's judgements about what policies and interventions are considered acceptable (Demski *et al* 2015, Sovacool *et al* 2017, Cherry *et al* 2021).

The difference in remit of the two assemblies may also have resulted because of the extent to which citizens and participants were involved in the process of framing the assemblies (Boswell *et al* 2023). The CAUK question was framed and designed by an advisory and academic panel (to the specifications of policy makers). As such, there was minimal opportunity for participants to shape the agenda and proceedings and as such it consisted mostly of appraising pre-determined policy proposals (also see section 3.2). In contrast, throughout the CCC, citizens were supported to engage with the framing of the process and to suggest expert speakers and topics for discussion (Giraudet *et al* 2021, Galvan Labrador and Zografos 2023). The more factual and technological framing of the CAUK meant that questions of political economy, power and influence were largely absent within the CAUK. The CCC, while also framed around solutions within technical sectors (i.e. the thematic groups), there was at least some space to consider the role of powerful actors (Mellier and Capstick 2024). This may have

been the reason for more far-reaching recommendations, such as the proposals to extensively regulate the advertising industry that emerged from the consumption group (Galvan Labrador and Zografos 2023).

Finally, although the CCC can be seen as a more open deliberation than the CAUK, neither process can be described as attempting to include genuinely transformative response to climate change (Mellier and Capstick 2024, Boswell *et al* 2023), which is also typical of deliberative processes that are led top-down by state actors and as such tend to be more controlled and focused on discrete (policy) decisions (Hammond 2020). Both the CCC and CAUK struggled to, or did not intend to, engage assembly members with more system-level issues and trade-offs inherent in climate policy making. Although, at least for the CCC, some participants did show significant interest in opening-up the process and engaging with deeper underlying systems of production and consumption, such as the shape and objective of the economy. Nonetheless, the complexity of this topic meant that these considerations did not make it into the recommendations (Cherry *et al* 2021). Essentially this means citizens were not well supported to explore their views on more systemic issues and more innovative or creative solutions (e.g. those outside existing economic and political paradigms) to climate change, and as a result both CA processes reveal little about public perspectives on these issues. We return to this point in section 3.2.3 in relation to the consumption thematic group discussions in the CCC.

3.2. Deliberating and deciding

In this section we focus on the extent to which the CAUK and CCC could be considered opening-up or closing-down discussions among its assembly members through the design of the deliberation and decision-making spaces.

3.2.1. Top-down versus bottom-up approaches to deliberations

In line with emerging literature on deliberative mini-publics, it is also important to consider the way processes within the CA are designed and how different features shape the discussions and decisions of assembly members.

Top-down approaches to deliberation typically involve a structure decided in advance by organisers, and allows for specific questions to be addressed, with concrete and usable outcomes as the goal. Top-down approaches tend to be more closed because they are pre-determined, with expert advice, structure and voting options decided in advance. There is limited scope for participants to shape the topics of conversations. Top-down processes are associated with addressing a specific question (e.g. around policy or technology acceptance), and a strong focus on evidence provision on the basis of which assembly members are supposed to form opinions. This was the case for the CAUK where most of the supporting materials for the learning phase, and the policy recommendations that were covered in the report, were decided in advance by the expert advisers. In the CAUK, for example, assembly members were asked to appraise and vote upon a pre-determined set of future scenarios and policy options for the bulk of the deliberations (Wells *et al* 2021). The value and practicality of such an approach is that it permits expert-informed and policy relevant content to be prioritised and thus practical recommendations to emerge. They do however limit the ability of citizens themselves to direct proceedings, or to allow participants to build their own visions of future society, and thus risks losing the wider context in which citizens' views—and ultimately the assembly's recommendations—need to be understood. In top-down or more closed deliberations, there is little space for assembly members to come up with their own creative or more far-reaching proposals beyond those originally envisaged by the organisers and expert advisers (Cherry *et al* 2021).

The CAUK was, however, not entirely closed to new ideas, although it should be noted that where it did contain elements to allow for citizen input this was also highly constrained. In the last session, assembly members were able to suggest additional recommendations to be voted on. They supported 39 other statements to be included in the report focusing on accountability and transparency, education and communication as well as specific policies and ideas (Climate Assembly UK 2021). No additional evidence sessions or support was provided to citizens to flesh out recommendations. Therefore, it is perhaps not surprising that these additional statements were somewhat repetitive and mostly reemphasised principles or policies that had already been discussed in earlier sessions. Only a few of the new recommendation statements touched upon more transformative ideas, such as legislation to protect future generations, but these remained abstract principles. The two proposals that focused on reaching net zero by an earlier date than 2050 were not supported by a majority of assembly members. While this could be interpreted as informed publics not supporting more urgent action on climate, it should be noted that no evidence was provided in support of an earlier date and the assembly was predicated on 2050 being the planned target date.

In contrast to top-down approaches, bottom-up approaches are less constrained, with the structure designed to provide ample opportunities and time for participants to guide the content and direction of the process (e.g., by deciding on topics for debate, inviting experts to speak, choosing what to vote on). Such co-produced approaches lend themselves to consideration of wider, more open questions around the future of

society, and greater emphasis is given to the diverse forms of knowledge that citizens can provide. It allows for content and recommendations to be developed and driven by assembly members themselves; this permits scope for creativity and unrestricted viewpoints to feed into the content of recommendations. The CCC adopted such an approach (Eymard 2020). While the main structure of the process, and the voting procedures were initially determined by the steering group, assembly members, in subgroups, were tasked with generating and finalising policy proposals through collective decision-making and consensus. There are multiple examples of assembly members shaping the process in this way, for example Giraudet *et al* (2021) describe how an originally scheduled discussion on the controversial carbon tax was removed from the entire programme due to objections from some of the assembly members. Similarly, citizens requested an additional session be added to the programme to discuss implications from the Covid pandemic. It should be noted that assembly members, alongside the experts, in the CAUK were also able to discuss Covid implications as part of the last session. For a more detail account of how participants in the CCC were able to shape the process, see section 3.2.3 which describes in more detail how deliberations in the consumption theme played out. Indeed, we would argue that participants shaping the deliberations was an integral aspect of the CCC design rather than a one off example of participants suggesting additional topics for the agenda.

There are, of course, drawbacks to such bottom—up approaches as well. Recommendations from such processes may be less specific, or less closely connected to contemporary policy processes, and so risk reduced traction with policymakers. This appears to be the case with the CCC where many of the more transformative or innovative proposals have not been fully translated into the Climate and Resilience bill (Averchenkova 2024). So, while the CCC was more tightly linked to a political process compared to the CAUK, it was also difficult to translate recommendations into legislation because the bottom-up approach resulted in proposals that were not favoured by politicians (Boswell *et al* 2023, Galván Labrador and Zografos 2023, Mellier and Capsitck 2024).

The CCC, while being much more open to citizens' own ideas, also contained elements that were predominantly top-down in nature, and as such constrained and closed-down citizens' ability to express their perspectives. One stark example is the way the final voting occurred. As described in Giraudet *et al* (2021), the final voting mechanisms were decided on by the steering committee and only communicated very late in the process, thereby giving little opportunity to citizens to shape or change how this was done. Assembly members were only able to vote on blocks of proposals (see table 3) rather than each individual measure that made up a specific block. This created some negative feedback amongst the participants because it constrained their ability to voice opinions on specific policies. It is therefore possible that assembly members supported a block of measures despite being less supportive of specific measures within each block.

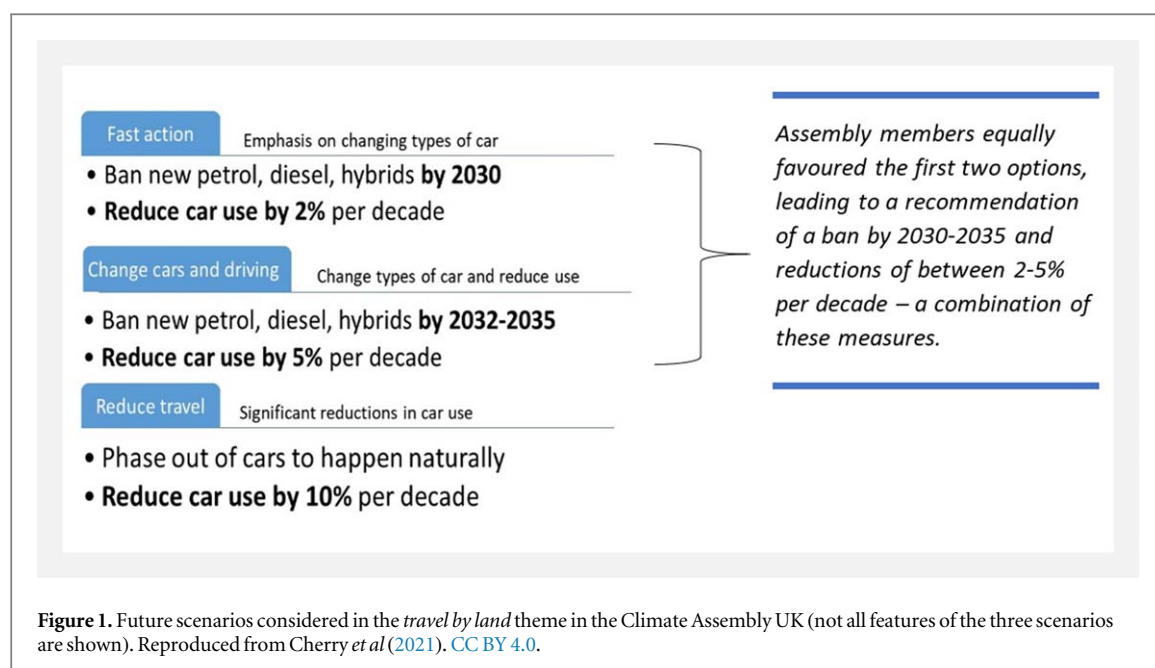
We now go on to provide more detailed observations and reflections about the way specific design choices in each CA affected the way assembly members were able to deliberate on key issues and voice their perspectives.

3.2.2. How recommendations emerged in the CAUK 'travel on land' theme

In this section we discuss how the recommendations from the CAUK were arrived at, with specific examples drawn from the *travel on land* thematic group. As an example of a predominantly top-down approach, we explore how the structure of the process privileges expert opinion within participant discussions and final recommendations.

Recommendations, as presented in the final report submitted to the Select Committees, took the form of statements about participants' preferences for different options and reasons for these preferences. Recommendations mostly arose from voting each weekend (except in weekend 2 which was dedicated to learning and deliberating within themes) and were not re-examined at a later point. Weekend 1 included recommendation on general principles and values for the path to net zero (all assembly members), weekend 3 included voting in the three themes (assembly members voted within each theme only), weekend 4 included voting on electricity, weekend 5 on greenhouse gas removal, and weekend 6 focused on the effect of covid-19 and allowed some space for members to put forward new recommendations on any topic. Recommendation on electricity production and greenhouse gas removal technologies focused mostly on (dis)agreement that various technological options should play a part in the road to net zero. The remainder of this section, however, focus on the bulk of the recommendations that were made within thematic areas. These came in three formats—considerations, future scenarios, and policy options. Additionally, the report included commentary on pros and cons assembly member associated with different options, which provided insight into why some options may have been supported over others.

Considerations followed a primarily open process; by contrast, appraisal of *future scenarios* and *policy options* used a primarily closed format. In the case of *considerations* (matters to bear in mind when implementing policies) assembly members were able to develop aspects to which policymakers should consider when addressing each of the thematic areas relating to the UK's emissions. This was carried out in advance of the appraisal of specific measures, and so this process led to generalised considerations linked to a thematic area (Cherry *et al* 2021). A wide range of considerations emerged across the thematic areas, with common threads



including an emphasis on fairness, information provision, and investment in technology. In the travel theme the most popular considerations included accessibility and affordability, importance of encouraging significant behaviour change, cross-party support and polluter pays principles.

In the case of both *future scenarios* and *policy options*, assembly members voted on preferred future scenarios and/or expressed the extent to which they agreed that measures should be implemented. The future scenarios were combined assemblages of what society might look like some years in the future. Assembly members' appraisal of these mostly entailed ranking by preference, with the proportion of first choices seen as an indicator of their appeal; in this sense, their appraisal comprised a forced choice between a small number of possible versions of society. In the case of the *travel by land* theme, assembly members were asked to consider three future scenarios: Fast Action, Change Cars and Driving, and Reducing Travel. Each future included a number of different elements including when a ban on new petrol cars would come in, and how much we reduce the use of cars etc. Votes were split evenly between the first two scenarios. In the final report, the recommendation combined these two options (see figure 1, Cherry *et al* 2021). While a pragmatic solution to a tie-break situation, nevertheless this meant that the majority (from two of three scenarios) of the content presented to citizens, itself designed by experts, was then incorporated into the recommendations of the CAUK. The only proposals *not* included in the recommendations were features from the Reducing Travel scenario that reflected more dramatic reduction in car use (10% per decade).

The combining of features from two future scenarios resulted in the recommendation of a 'ban on the sale of new petrol, diesel and hybrid cars by 2030–2035' and a 'reduction in the amount we use cars by an average of 2%–5% per decade'. This was one of most prominent recommendations that emerged from the CAUK and was widely reported in the media. While these options were supported by assembly members, it is important to note that this was in the context of a restricted choice based on degree of preference for each of three *future scenarios*; these were structured in advance to emphasise the date of a ban on polluting vehicles versus reduction in car use. For each of the three *future scenarios* considered, a range of other hypothetical circumstances were also included (not shown in figure 1), and so assembly members were required to express their preference for these as a complete package when voting upon them rather than on particular features (Cherry *et al* 2021). Therefore, it is difficult to know what aspects of these futures citizens used to inform their preferences because they were not able to express preferences for individual aspects of these futures; this was similar to how block voting in the CCC restricted expression of preferences.

Another example of expert choices strongly influencing the way public preferences were reported in the final report concerns the use of pro and con lists. When appraising different options, expert speakers presented pro and con lists associated with different options. Presenting information in this way can be beneficial for saving time in focusing attention on particular issues and can help to prompt initial responses and wider debate (Cherry *et al* 2021). Indeed, Elstub *et al* (2021a) note that restricted time to discuss a large range of issues was one of the main issues in the CAUK, which may have resulted in the need to quickly distil complex information for participants. However, an important drawback is that this approach often impedes deeper deliberation by leading to a reliance by participants (whether consciously or not) on a pre-determined set of benefits and

Table 1. Examples of phrasing of pro and cons used by experts (left column) and in the final report (right column).

Phrasing presents on expert speaker slides	Phrasing of assembly member's perceived pros and cons presented in the report
Faster uptake of electric buses and trains	Some assembly members liked... 'faster uptake on [electric] buses and trains.'
Air quality will also improve quickly	Others suggested... that 'air quality will improve quickly'
Do not have to reduce car use as much as in some scenarios	Some assembly members liked that you 'do not have to reduce car use'.
Will not solve other problems of car use e.g. congestion, space for walking, buses and bikes	Assembly members suggested it would 'not solve [the] problem of congestion.'
Health benefits from active travel, air quality improvements, better urban environments	Some assembly members cited the 'health benefits from active travel, air quality improvement, [and] better urban environments.'
Much improved public transport, car sharing, cycling and walking means less need to own a car	Some assembly members states that 'much improved public transport, car sharing, cycling and walking means less need to own a car.'
Reducing car use by an average of 10% per decade	Others[...] noted we would be 'reducing polluting car use by 10% per decade.'

challenges. This is evident in the final recommendations. At its most extreme, this manifested in assembly members repeating word-for-word the quotes that were included on the slides of expert presentations, with these then presented, in effect, as the voice of participants themselves. We show in table 1 how this occurred, comparing the phrasing used by expert speakers, with the pros and cons presented as citizens' viewpoints. What these examples show is that recommendations, while presented as assembly member views, are strongly influenced by the expert input and decision-making in advance of any deliberation.

Finally, *policy options* were for the most part appraised through assembly members indicating whether they agreed or disagreed that provided options 'should be part of how the UK gets to net zero'. Surveying of members' views on this did not treat *policy options* as mutually exclusive as many options could be supported as people wished. In practice, this led to very widespread agreement across the range of options presented (see Climate Assembly UK report page 115 for a summary of all 15 policy options considered in the travel theme). The predominantly positive endorsement of different policy options shows the appeal and feasibility of those options. However, it also raises the question to what extent assembly members might be inclined to support whichever options they had presented to them—the use of agree/disagree in survey methods can fall prey to 'acquiescence bias' whereby people are naturally inclined to agree with options presented to them (Krosnick 2000, Cherry *et al* 2021).

Of course, participants' responses to the future scenarios, policy options and the pros and cons lists still represent valid expressions of opinion. Indeed, this way of gathering public opinion can be helpful when considering a set of specific options a government is considering. Although it needs to be acknowledged that they represent appraisals of existing options and thus the recommendations are heavily influenced and constraint by expert choices. There is also a clear drawback because this way of engaging assembly members can lead to omissions of other perspectives. In particular, concerns which are linked to the impact of technologies or policies on everyday life. For example, in relation to the travel theme there may be a number of other challenges to be overcome before people can engage effectively with the presented policies, such as finding time in a busy daily routine to research a new form of travel. Such perspectives are likely to be important for successfully implementing policy proposal. Ultimately, then, it is essential to recognise that these design decisions can be consequential for the depth and quality of deliberations—and also for the nature of public perspectives and recommendations obtained (Cherry *et al* 2021).

3.2.3. How recommendations emerged in the CCC consumption theme

In this section we discuss how the recommendations from the CCC emerged as part of the overall assembly process, with specific examples drawn from the *consumption* thematic group. As an example of a predominantly bottom-up approach, we explore how the final recommendations were shaped by discussions, expert input and over time. A full list of recommendations arising from this theme can be found in table 3.

Recommendations from the CCC, as presented in the final report, took the form of 'measures' or 'propositions'. Unlike in the CAUK, assembly members developed the recommendations in an iterative manner over several sessions which allows for analysis of how these emerged over the course of the assembly. Each set of thematic recommendations were developed within small working groups within thematic workstreams, and in plenary for cross-cutting issues (e.g., finance and governance) over the seven sessions. During two dedicated sessions, proposals could be reviewed by members working on other themes with amendments adopted through online votes before the final session. Proposals required support from two thirds of the members of each

Table 2. Results of the priority judgement exercise for the consumption group (translated from French). Reproduced from Cherry *et al* (2021). CC BY 4.0

Measures	Average ranking (1: low priority, 5: high priority)
1. Reduce waste by developing reuse, especially of glass, and recycling (<i>dropped</i>)	4.11
2. Tax the product at source according to the waste it produces (<i>dropped</i>)	3.81
3. Make the use of recyclable materials mandatory in the textile industry (<i>dropped</i>)	3.92
4. Increase the life span of consumer goods	4.74
5. Create an observatory for the ecological transition	4.40
6. Regulate advertising in France	3.29
7. Significantly limit the use of energy (electric and fossil) in public and private places	4.53
8. Index the amount of VAT on the distance between the location of production and the location of sale	4.44

Table 3. Final proposal from the ‘Consumption’ thematic group in the French climate assembly. Adapted from Cherry *et al* (2021). CC BY 4.0

Measures (translated from French)	Votes
Group A: Information Display	
C1: Create an obligation to disclose the carbon impact of products and services	98.0% Yes
- C1.1 Develop and then implement a carbon score on all consumer products and services.	
- C1.2 Make it mandatory to display greenhouse gas emissions in retail and consumer places and in advertisements for brands.	
Group B: Advertising	
C2: Regulate advertising to reduce incentives for over-consumption	89.6% Yes
- C2.1 Prohibit the advertising of products that emit the most greenhouse gases, in all types of advertising.	
- C2.2 Regulate advertising to strongly limit the daily and non-chosen exposure to incentives to consume	
- C2.3 Put in place labels to encourage people to consume less	
Group C: Overpackaging	
C3: Limit overpackaging and the use of single-use plastics by developing bulk products and deposits scheme in distribution sites	95.9% Yes
- C3.1 Gradually introduce an obligation to introduce zero-waste systems in all stores and impose a percentage on central buyers	
- C3.2 Gradually implement a glass deposit system until generalised implementation in 2025C	
- 3.3 Promote the development of compostable bio-based packaging	
- C3.4 Replace a part of the Household Waste Disposal Tax (TEOM) by modalities that encourage eco-responsible behaviours	
Group D: Education	
C5: Make education, training and awareness raising leverage tools for responsible consumption	97.9% Yes
- C5.1 Modify the education programme to generalise education on the environment and sustainable development in the French school system	
- C5.2 Strengthen education on environment and sustainable development by making it a cross-cutting subject for teachers	
- C5.3 Raise awareness among the French population by linking understanding of the climate emergency and action	
Group E: Monitoring and control of public environmental policies	
- C6: Ensure better implementation of public environmental policies and evaluate them in order to make them more effective	95.9% Yes

working group to be considered by the full assembly. Final recommendations and wording of the report were accepted through simple majority voting in a final assembly vote.

The consumption group was composed of 28 citizens. Session 1 focused mostly on understanding the topic, sharing initial thoughts, defining the scope of the topic, and providing suggestions for expert speakers. The initial themes that emerged from this group centred on ways of consuming, awareness raising, regulation, transparency and waste. Session 2 included further learning through expert presentations and interaction, with a focus on identifying levers and barriers for change. The concept of fairness and social justice was also considered, and initial proposals were developed. These proposals focused on the topics of 1) circular economy, 2) information provision, 3) monitoring lobbying activities, 4) developing financial incentives 5) reduction in energy consumption in businesses and public spaces, 6) transforming transport modes and 7) promoting local products. During session 3, further expert presentations were included and the proposals from session 2 were

also reviewed and amended. Synthesised by facilitators, the consumption group came up with eight more concrete measures. The assembly members were then asked to undertake a priority judgment exercise (see table 2), by ranking each of the eight measures on a scale from 1 to 5 (1: low priority, 5: high priority). The five measures with the highest scores were presented to the whole assembly in plenary. This was the first time that some of the measures were dropped because of a ranking process (Cherry *et al* 2021).

During session 4 discussions, the ambition of the group became clearer as they highlighted the need to consider imported or embedded emissions as well as territorial emissions when dealing with consumption of products. They started to use the concept of a personal carbon footprint and moved away from considering greenhouse gas emission reductions only. As a result of this focus, some measures were dropped (number 7 in table 2), and new measures were considered (on encouraging digital sobriety to reduce environmental impact and making children the actors of responsible consumption). After this session, legal experts provided feedback on the wording of the proposals to ensure they could be translated into legislative or regulatory text. Session 5 was the last session in which thematic groups could finalise their measures and were also presented with feedback from business and other stakeholders. Session 6 was held in plenary and was dedicated to discussion and validation of the measures prepared in the thematic groups, followed by a final vote on all proposals in session 7.

Table 3 presents the final set of proposals from the consumption group and the voting outcome from the whole assembly in session 7 (Cherry *et al* 2021). We note that Group A proposals focused on awareness raising and information provision - ideas which are already evident as early as session 1. Group B focuses on regulating advertising which emerged most clearly in session 3. Group C includes a collection of proposals to encourage the circular economy. It is evident that discussions throughout the sessions saw different proposals on this topic tabled, withdrawn and new ideas created. For example, in session 3, while some measures were dropped, a version of this reemerged in the final proposals in the form of a glass deposit scheme. Ideas were also refined through a process of expert input and discussions especially around financial incentives. Group D proposals on education was a late emergence although these ideas overlap with information provision in Group A, albeit more strongly focused on children and the education system. Group E includes a general measure around monitoring; a notion that is clearly evident from the start of the process and the initial categories that emerged from discussions early on.

The above reflections and observations demonstrate the iterative nature in which recommendations were created through a process of discussion and deliberation amongst assembly members. However, there was also input from experts of course. In fact, a range of experts worked closely with members to develop recommendations and influenced the final proposals (see Giraudet *et al* 2021 for a more extensive discussion of the influence of experts on the CCC generally). In particular, the Legislative Committee drafted legal transcripts of the proposals to ensure legal appropriateness. In this sense there was also significant expert input into the recommendations, but it is worth noting that Convention members had the final say as to the integration of the transcripts in their final report.

There was also a concerted effort to clearly delineate between assembly members' ideas and input from experts. The final document reviewed in the later sessions clearly highlighted three types of content: the text that was created by the members, the comments from the expert group and the notes from the facilitators based on their understanding of the key outcomes of the sessions (Cherry *et al* 2021). Assembly members were of course influenced by the information presented to them. For example, the consumption group started focusing on carbon footprint as a relevant concept, which was also presented in the information booklet distributed to all assembly members at the start of the process⁵. Nonetheless, unlike in the CAUK, this did not translate directly into recommendations. Instead, assembly members created specific wording to express their views on the importance of carbon footprints, which also shaped the final wording of the Conventions' report.

One concern that may be levelled at the CCC approach being so citizen-led refers to diversity and inclusion of perspectives. For many who specialize in developing participatory processes, one of the most surprising aspects about the CCC was the lack of facilitation of the deliberations. This raises the question of whether citizen discussions may have been dominated by certain people, as it is typically trained facilitators whose role it is to ensure that all voices are heard and that discussions stay focused and productive. An example where this may have been the case is discussed in Giraudet *et al* analysis of the CCC process, whereby the carbon tax appeared to have been taken off the agenda due to a small number of assembly members objecting to the discussions on the tax specifically. It is unclear if the wider group of participants agreed with this move. In contrast, the CAUK had clear, agreed-upon ground rules for participation, which were reiterated at each session; the CCC process had fewer rules, trusting citizens to self-organize and self-regulate including taking their own notes (Boswell *et al* 2023). Within the consumption group, citizens divided themselves into five sub-groups of up to six people each for small group table discussions. The self-selection at tables led some people to naturally gravitate to each other

⁵ page 31: <https://www.conventioncitoyennepourleclimat.fr/wp-content/uploads/2019/10/03102019-convcit-socledoc-web.pdf>

based on a shared sense of geographical connection, age or affinity built over time (Cherry *et al* 2021). This was in some cases problematic because it prevented a diversity of perspectives to be heard during the table discussions and in some cases led to a bias towards consensus due to shared outlooks. Indeed, these self-selected groups worked relatively separately on proposals, thereby limiting deliberative exchanges even within a thematic group. Coupling this observation with the previously discussed concern around block voting (i.e. citizens were not able to express their views on specific proposals, but only blocks of proposals), this raises questions to what extent the final report represents the diversity of preferences and perspectives within the whole assembly. While of course the proposals were endorsed by large majorities, this misses an opportunity to provide more nuanced insights.

Building on the critique presented in section 3.1, the consumption thematic group also struggled to consider more systemic and transformative climate solutions despite an interest to do so. Although the group tackled the topic of consumption and what role different actors can play in changing their behaviour (i.e., individuals, businesses), the process did not always support deeper deliberation on lifestyle change (i.e., the systemic conditions that shape how we live) and the implications for the economic models of development (e.g., growth versus degrowth agenda). The observation of the group deliberation and the analysis of the minutes of the meetings done by the facilitators shows there was an interest from several citizens in the group to explore those more systemic questions, but the process did not allow those conversations to happen in a structured way. For instance, in session 1 some assembly members wondered whether they would be able to suggest topics which were not part of the five themes that initially emerged or explore topics such as degrowth. In later sessions, the group re-expressed what needed to be further explored or developed, or what was still up for debate, such as the subject of 'change of the economic system' which was stated as a major problem but was also seen as 'utopian'. This framing illustrates the fact the group was grappling with the deeper systemic drivers of consumption, and the need for further exploration of the economic models, however they were not able to explore this aspect any further due to the way the process was designed.

4. Discussion

4.1. Summary of findings and implications

The analysis in this paper explores and illustrates how different approaches to climate assemblies can have important implications for the way recommendations emerge from them. Specifically, we considered the extent to which a process can open-up or close-down deliberations, e.g. what and how assembly members are supported to explore their views on climate action. Reflecting on our observations from the French and UK climate assemblies, we show that contrasting approaches were used; the former included more bottom-up features which opened-up (to some extent) deliberations and type of recommendations, while the latter used a primarily top-down approach which constrained the way in which participants were able to express their views.

This analysis has implications for those seeking to commission or organise CAs by illustrating how different approaches can inform the types of recommendations that might emerge. However, perhaps the most important implications arising from this analysis pertains to the interpretation of CA recommendations and what they can tell us about public preferences. If we consider that one of the main mechanisms through which CAs might influence policy making is through providing high quality information on informed preferences (Duvic-Paoli 2022, Boswell *et al* 2023), we must also understand to what extent the CAs are constraining or even omitting public perspectives. Indeed, both processes put forward detailed information on public preferences on a large range of topics, but the way these were arrived at differed significantly.

Starting with a positive, both CAs demonstrated remarkably high levels of support for policy proposals and climate action across a large variety of climate policy proposals. This is in line with other research that shows public concern for climate change is consistently high and that this translates into support for climate action across multiple sectors (e.g., Verfürth *et al* 2024). This high support for climate proposals goes some way towards developing a social mandate for climate action in both countries (Howarth *et al* 2020).

In terms of overall scope and remit, The CAUK could be considered relatively closed in terms of remit, focusing on a predominantly technical and solution-focused framing of climate change. Nonetheless, there were elements which allowed assembly members to express their views on wider considerations, which resulted in *fairness* emerging as a key principle for guiding net zero as part of the recommendations. The CCC's remit also focused on reducing carbon emissions but was more open from the start, including social justice and urgency framings in the guiding question. This was reflected in the content of the recommendations as well. We therefore conclude that both the CAUK and CCC had relatively closed framings around a specific policy target, but the CCC avoids the overly technical framing of climate change (and solutions), by also including elements of urgency and social justice.

In terms of deliberations and the process of arriving at recommendations, in the CAUK, recommendations consisted mostly of appraisals of future scenarios and policy options which were pre-determined by expert

advisors, and the wording of the recommendations was, for the most part, not determined by assembly members. Even in parts of the report which represented assembly members opinions, these often translated directly from wording used by expert presentations. The aspects of the process which provided more space of assembly members to propose their own ideas and recommendations was relatively constrained by time and lack of support, which meant a lack of deeper engagement with alternative proposals (Elstub *et al* 2021a). In the CCC, the process of arriving at the final recommendations was much more iterative and directed by assembly members, with input from experts and legal advisors but final wording decided by assembly members. Aspects that constraint assembly members included the voting in blocks of proposals. The hands-off approach to facilitation may also have resulted in siloed working, and potential dominance by more vocal participants, rather than deeper deliberation of key issues a wider set of participants. It should be noted that this may have been the case in the CCC especially because the recruitment process did not select by prior climate change attitude, which may have resulted in the assembly being somewhat more concerned about climate issues than the broader French population. The CAUK, in contrast, did include climate attitude in their sampling criteria which may have resulted in more diverse or balanced perspective from the outset, which may also have resulted in differences in the final recommendations. Nonetheless, both processes had a strong focus on policy solutions and therefore did not engage with the diverse experiences and realities of everyday life that might determine whether policy support translate into lifestyle changes.

Relating our findings back to the broader literature on deliberative mini-publics, we provide empirical evidence of Bussu and Fleuß's (2023) argument that what constitutes a top-down or bottom-up process is conceptually nuanced and empirically complicated to categorise. Our analysis shows that deliberative processes can be considered top-down or bottom-up on a number of dimensions and, while there may be close correlations between them (e.g. state led actors tend to design processes that are tightly controlled in terms of process), this is not always the case. The CAUK and CCC were both commissioned by state actors but, potentially due to the influence of civil society actors, ended up with somewhat different remits. However, when considering the process dimension, the two diverged markedly which also affected the way assembly members were able to deliberate and decide on key issues and as such the recommendations that emerged. To add even further nuance, our observations show that both processes contained features that closed or opened the ability for publics to articulate and express their perspectives.

4.2. Systemic and transformative perspectives are missing

It could be said that both the CAUK and CCC struggled to open-up to more systemic and structural issues and therefore recommendations of neither process engaged with truly systemic or transformative solutions to the climate crisis. Essentially this means we know little about public perspectives on these issues and there was little opportunity for assembly members to explore more innovative or creative proposals that go beyond existing policy paradigms. While the CCC had a more open remit to come up with more disruptive or transformative proposals (Hammond 2020, Pfeffer 2024), our analysis suggests that the structure of the process closed-down any serious exploration of these (e.g. alternative economic paradigms). In addition, where recommendations could be said to be more transformative these tended to be watered down or disregarded by policy makers, despite Macron's initial promise to translate recommendations in an 'unfiltered' way. For example, one of the more radical suggestions from the consumption group in the CCC was to regulate the advertising industry around high-carbon products, however the way this was included in legislation was tokenistic at best (i.e. a symbolic ban on advertising fossil fuels only; Galvan Labrador and Zografos 2023). For a more extensive discussion of the impacts of the CCC and CAUK see Galvan Labrador and Zografos (2023) and Duvic-Paoli (2022).

This finding is in line with other theorisation around deliberations. For example, Hammond (2020) discusses two types of deliberative approaches, system-supportive and system-disruptive—only the latter is likely to result in transformative solutions, e.g., those that challenge current socio-economic growth models. We can see from our analysis that CAUK included a lot of elements characteristics of the system-supportive approach—top-down, highly organised, orchestrated, controlled—and therefore it is not surprising that recommendations mostly stayed within the policy space considered appropriate and relevant by the commissioning authority (Elstub *et al* 2021a). The CCC had more system-disruptive elements such and being more organic and messy, bottom-up, and open-ended in its approach. Nonetheless, even here we can see clear constraints on the exploration and eventual take up of recommendations reflecting priorities of the political body that commissioned it. As Pfeffer (2024) notes, government are highly unlikely to set agendas that challenge themselves, and such commission CAs that intend for system disruptive recommendations to emerge and be taken up. Indeed, there are few examples to date of CAs having impacts that influence structural or systemic aspects of addressing climate change (Demski *et al* 2024, Smith 2024).

This also means we have learnt little about public preferences on difficult trade-offs or alternative and more transformative solutions to climate change. If we want to know more about public perspectives on these issues, we must design assemblies in a way that enables and supports people to think about systems, trade-offs, power and influence. This is unlikely to come from existing government authorities, and instead we may need to look at alternative actors to initiate and organise spaces for deliberation on these issues (Hammond 2020). While assemblies commissioned by government represent the dominant mode of thinking and practice, system disrupting assemblies are increasing in numbers (Mellier and Smith 2024).

Mellier and Capstick (2024) show that the Global Assembly was an initial attempt at opening-up the discussion on transformative and system solutions to climate change using a bottom-up model of engagement conceived in collaboration with social movements and supported by various actors from civil society. They go on to provide recommendations for designs of future CAs which include adding critical and systems thinking as part of the learning phase, bespoke sessions that articulate the political economy of climate change and that explicitly discuss alternative models, and acknowledgement of different forms of power that can influence climate action, facilitating emotional engagement with crises and incorporating reflective practice among participants and commissioners. For more detailed recommendations please see Mellier and Capstick (2024).

4.3. Limitations and future research

We arrive at our conclusions from the unique advantage of having been able to observe both CA processes, but this also has its limitations. We provide broad observations and illustrative examples, but future research should, if possible, collect sufficient data to trace more systematically how expert input, information framing and citizen interactions shape final recommendations within a deliberative process (e.g., Muradova *et al* 2020, van Beek *et al* 2024). This could include, for example, more systematic and quantitative analysis of how voting patterns and recommendations change over the course of an assembly and are related to demographic or other characteristics of the assembly members. This kind of data was not collected as part of the official assembly processes (as far as we are aware) and is therefore not available for analysis. While we were fortunate enough to include observations from two national-level CAs, and thus provide a comparative approach, this analysis is still limited by the fact that it is observational and retrospective. We hope our exploratory analysis results in more systematic and planned evaluations of design processes and their effect in the future. For example, by analysing the bottom-up nature of the CCC deliberations we find that a very light touch facilitation approach may have resulted in dominant voices but we were not able to collect systematic data on how and in what way this affected inclusivity and outcomes.

Another limitation is the fact that we focus part of our analysis on two specific themes in each assembly process but that these were on two different topics—travel for the CAUK and consumption for the CCC. It is therefore possible that our observations do not reflect other themes/sessions in the CAUK and CCC. Having said that, the other sector themes in the CAUK were structured similarly so we would expect similar findings if we had focused our analysis on another theme. For the other CCC themes this is more difficult to judge because of the bottom-up nature of the process, meaning dynamics may have been different in the other themes. We chose to focus on consumption because this is the main theme observed by Mellier. While we could have included further analysis of themes in both the CAUK and CCC, this would have been too lengthy for this paper and we decided to focus on broader comparative themes instead.

Another avenue for future research could further explore what different climate assemblies can tell us about public preferences on climate policies, given that information on public perspectives is one of the main pathways in which policy making is supposed to be improved. Future research could, for example, compare the types of insights that emerge from across diverse CAs at national and local levels, and how these are in line with or diverge from insights that arise from other methods such as surveys and opinion polls.

5. Conclusion

In conclusion, this paper contributed to emerging research that shows the design of CAs can have a significant influence on their outcomes. We specifically examine how recommendations of CAs are influenced by the design of the deliberations, as well as the overall scope and remit of the process and focus on the CAUK and CCC as case studies. Combining our own observations from attending both processes with analysis of openly available materials, we discuss the extent to which both processes could be considered opening-up or closing-down deliberations and what this means for the way they represent public perspectives on climate policy.

We find that both CAs had relatively closed framings around a specific policy target, but the CCC avoids the overly technical framing of climate change, by also including elements of urgency and social justice. The CAUK used a predominantly top-down approach to deliberations whereby the structure of process strongly privileged expert opinion within discussions and recommendations. The CCC used a much more bottom-up approach

with recommendations being iteratively developed by citizens. Both processes struggled to engage more deeply and with more systemic and transformative climate solutions.

Acknowledgments

Data availability statement

The data cannot be made publicly available upon publication because they are not available in a format that is sufficiently accessible or reusable by other researchers. The data that support the findings of this study are available upon reasonable request from the authors.

CRedit author statement

Christina Demski: Conceptualisation, investigation, formal analysis, writing—original draft. **Catherine Cherry:** Conceptualisation, investigation, formal analysis, writing—original draft. **Caroline Verfuert:** Conceptualisation, investigation, writing- review and editing. **Stuart Capstick:** Conceptualisation, investigation, formal analysis, writing—review & editing. **Claire Mellier:** Conceptualisation, investigation, formal analysis, writing—original draft.

Funding information

We acknowledge support from the Economic & Social Research Council (ESRC) through the Centre for Climate Change and Social Transformations (CAST), Grant Ref: ES/S012257/1.

Ethical statement

The research received ethical approval from Cardiff University School of Psychology ethics committee, EC.19.12.10.5902.

Appendix

The following tables present comparative information for the CAUK and CCC process including details about their commissioning, governance and design. Also see www.knoca.eu for summaries and further details.

Table A1. Commissioning the CAUK and CCC.

	Climate assembly UK	Convention citoyenne pour le climat
Objectives	To assess the level of support on various climate policy options and provide recommendations	To identify structuring measures that will be enacted either by a national referendum, parliamentary vote or directly turned into regulations ‘without filter’ from the Executive.
Framing question	How should the UK meet its legally binding target of net zero greenhouse gas emissions by 2050?	How can France reduce its greenhouse gas emissions by at least 40% (in relation to 1990’s levels) by 2030, in the spirit of social justice?
Commissioning body	Six Select Committees of the House of Commons	President Emmanuel Macron
Total budget	£ 560K	€ 5.4M
Participant selection	108 selected by Sortition Foundation—random stratified sampling according to 7 criteria, which included ethnicity and attitude to climate change.	150 selected by sortition by polling company Harris, using random stratified sampling according to six criteria. Ethnicity and climate change attitudes were not included.

Table A2. Governance and oversight of the CAUK and CCC.

	Climate assembly UK	Convention citoyenne pour le climat
Governance	Core team: Involve (led on process design, facilitation, project management), Sortition Foundation (led on citizen selection and recruitment), My Society (created CAUK's branding and website) and four Expert Leads (who worked closely with Involve on the assembly's design). Oversight team: The process was overseen by the Advisory Panel and Academic Panel and signed off by the House of Commons and the Parliamentary Office of Science & Technology.	Organising body: Conseil Economique Social et Environnemental Governance Committee: composed of 17 people: 15 permanent stakeholder members and 2 citizens (drawn by lot) rotating between each session of the Convention. This committee set the agenda and the rules for deliberations. Three Guarantors: independent overseers, ensuring the compliance of the process with the rules of independence and deontology.
Role of experts in shaping process	Four Expert Leads ensured that CAUK was 'balanced, accurate and comprehensive' throughout all stages of the process and that it focussed on how to achieve net zero emissions by 2050. They were supported by the advisory and academic panels.	Citizens were supported throughout the process in a number of ways: 1) an expert support group 'groupe d'appui' that assisted citizens in developing their recommendations; 2) the 'Comité légistique' that advised citizens on the legal nature of their measures to ensure their compliance with the rule of law; and 3) fact Checkers that answered citizens' technical questions in real time (via WhatsApp)
Role of citizens in shaping the process	Minimal involvement of citizens in shaping process. Following requests from assembly members, a session was added to explore the implications of Covid-19 for reaching net zero.	Citizens sat on the governance committee of the assembly and had the opportunity to suggest experts they wanted to hear from. Citizens requested to hold an additional seventh session of the assembly.
Monitoring and evaluation	An official evaluation team specialising in deliberative democracy was commissioned to produce a report focusing on: how assembly members were recruited, how expertise was presented to assembly members, how individuals' views evolved during the four week-ends, and the assembly's impact on Parliament.	There was no formal external evaluation, but the process was monitored by 40 Accredited Researchers observers. In addition, the charity 'Les 150' was created by the citizens, the partial remit of which was to monitor the future of their proposals leading to the creation of a monitoring tool to check which measures were rejected or implemented. ^a
Wider society engagement	There was no online consultation platform. Stakeholder engagement informed the design of the assembly, which included consultation with a number of prominent business, faith and civil society leaders from across UK society.	An online platform was set up to gather the contributions from the public and wider stakeholders during the process. It was managed by Open Source Politics who produced three contributions summaries during the Convention, which were reviewed and validated by the Governance Committee, and are available online.

^a <https://www.les150.fr/> for more information. Monitoring tool output is available here: <https://sansfiltre.les150.fr/>

Table A3. Content and process of the CAUK and CCC.

	Climate assembly UK	Convention citoyenne pour le climat
Duration of the process	4 months (25th January—17th May 2020)	9 months (3rd October 2019—21st June 2020) up to the voting stage and an additional 8th session in February 2021.
Length of the sessions	3 in person weekends (6 full days) + 3 online weekends	7 in person sessions (2.5 days) + 3 online weekends
Thematic content	4 thematic groups of 36 people: ‘how we travel’, ‘in the home’, ‘what we buy’ and ‘what we eat and how we use the land’ Full group of 108 people: ‘where our electricity comes from’ and ‘removing greenhouse gases from the atmosphere’	5 thematic groups of 30 people: ‘Se déplacer’ transport, ‘Se nourir’ food, ‘Consommer’ consumption, ‘Travailler et produire’ work and manufacturing, ‘Se loger’ housing
Speaker selection process	47 speakers presented evidence to the Assembly members, either as informants (who provided a range of views or options that exist on a topic) or advocates (who presented their personal or organisational opinions). Speakers were selected by the Expert Leads, who identified the core content and questions for each theme and selected a range of speakers to ensure members heard a ‘balanced, accurate and comprehensive’ view of the topic. The Academic Panel and the Advisory Panel, as well as the CAUK team at Parliament were also consulted.	140 speakers presented evidence, either in plenary sessions, in thematic groups, or during the ‘speed dating’. The speakers came from a range of sectors, including universities, journalists, civil servants, businesses, NGOs, think tanks, trade unions, and local/national government. Speakers were selected by the Governance Committee, but the citizens were able to request experts, who, where possible were invited to present to the assembly.
Voting	Votes by 36 members of thematic groups on: future scenarios for reducing emissions; and policy options for achieving those changes. Votes by all 108 assembly members on: principles underpinning the path to net zero; electricity generation and greenhouse gas removals; recommendations to Parliament; and recommendations on Covid-19 recovery and the path to net zero. Votes conducted: by secret paper ballot and secure online survey.	Votes by all assembly members on: 149 measures from 5 themes; revision of the Constitution and Governance; how to finance the transition; and response to the post-COVID recovery plan. Votes conducted: by secret electronic votes system (SMS or online).
Outputs	Over 50 recommendations—556 pages report	149 measures—460 pages report

ORCID iDs

Christina Demski  <https://orcid.org/0000-0002-9215-452X>

Catherine Cherry  <https://orcid.org/0000-0002-1443-9634>

Caroline Verfuert  <https://orcid.org/0000-0001-8115-8448>

References

- Ainscough J and Willis R 2024 Embedding deliberation: guiding the use of deliberative mini-publics in climate policy-making *Climate Policy* **24** 828–42
- Averchenkova A, Koehl A and Smith G 2024 *Policy Impact of the French Citizens’ Convention for the Climate: Untangling the fate of the Citizens’ Recommendations* https://cdn.prod.website-files.com/65b77644e6021e9021de8916/6718c39f36b6e100687aa430_DRAFT_Policy%20Impact%20on%20the%20French%20Citizens%27%20Convention%20for%20the%20Climate.pdf
- Badulovich N, Grant W and Colvin R 2020 Framing climate change for effective communication: a systematic map *Environ. Res. Lett.* **15** 123002
- Blue G 2015 Public deliberation with climate change: opening up or closing down policy options? Review of European *Comparative & International Environmental Law* **24** 152–9
- Boswell J, Dean R and Smith G 2023 Integrating citizen deliberation into climate governance: lessons on robust design from six climate assemblies *Public Administration* **101** 182–200
- Bussu S and Fleuß D 2023 Citizens’ assemblies: Top-down or bottom-up?—Both, please! *De Gruyter Handbook of Citizens’ Assemblies* ed M Reuchamps *et al* (De Gruyter) 141–55
- Capstick S, Khosla R, Wang S, van den Berg N, Ivanova D, Otto I M and Whitmarsh L 2020 *Bridging the Gap—the Role of Equitable Low-Carbon Lifestyles* (UNEP) The Emissions Gap Report. Retrieved from <https://un-ilibrary.org/content/books/9789280738124c010>
- Cherry C, Capstick S, Demski C, Mellier C, Stone L and Verfuert C 2021 *Citizens’ Climate Assemblies: Understanding public Deliberation for Climate Policy* Cardiff University <https://orca.cardiff.ac.uk/id/eprint/145771/>
- Climate Assembly UK 2021 *The Path to Net Zero* Climate assembly UK full report. Available here: <https://climateassembly.uk/report/>
- Convention Citoyenne pour le Climat 2021 *Les Propositions de la Convention Citoyenne Pour le Climat* Available here: <https://conventioncitoyennepourleclimat.fr/rapports/>
- Curato N, Farrell D M, Geissel B, Grönlund K, Mockler P, Pilet J-B, Renwick A, Rose J, Setälä M and Suiter J 2021 *Deliberative Mini-Publics: Core Design Features* (Bristol University Press)

- Demski C 2021 *Net Zero Public Engagement and Participation. A Research Note* (BEIS UK Government) Available here: <https://assets.publishing.service.gov.uk/media/604f7d6cd3bf7f1d1a836ac9/net-zero-publicengagement-participation-research-note.pdf>
- Demski C, Capstick S and Hesselund Beanland M 2024 *Impact Evaluation Framework for Climate Assemblies* (Knowledge Network on Climate Assemblies (KNOCA))
- Demski C, Butler C, Parkhill K A, Spence A and Pidgeon N F 2015 Public values for energy system change *Global Environ. Change* **34** 59–69
- Devaney L, Torney D, Brereton P and Coleman M 2020 Ireland's citizens' assembly on climate change: lessons for deliberative public engagement and communication *Environmental Communication* **14** 141–6
- Dryzek J S and Niemeyer S 2019 Deliberative democracy and climate governance *Nature Human Behaviour* **3** 411–3
- Duvic-Paoli L-A 2022 Re-imagining the making of climate law and policy in citizens' assemblies *Transnational Environmental Law* **11** 235–61
- Ejlsing M, Veng A and Papazu I 2023 Green politics beyond the state: radicalizing the democratic potentials of climate citizens' assemblies *Clim. Change* **176** 73
- Elstub S, Carrick J, Farrell D M and Mockler P 2021a The scope of climate assemblies: lessons from the Climate Assembly UK *Sustainability* **13** 11272
- Elstub S, Farrell D M, Carrick J and Mockler P 2021b *Evaluation of Climate Assembly UK* Available here: www.parliament.uk/globalassets/documents/get-involved2/climate-assembly-uk/evaluation-of-climate-assembly-uk.pdf.
- Eymard L 2020 From the French Citizens' Convention on Climate to the Conference on the Future of Europe: a participatory science and democracy perspective *European Law Journal* **26** 136–40
- Fabre A, Apouey B, Douenne T, Fourniau J M, Giraudet L G, Laslier J F and Tournus S 2021 *Who are the Citizens of the French Convention for Climate* Available at: <https://shs.hal.science/halshs-03265053/document>
- Fiorino D J 1990 Citizen participation and environmental risk: a survey of institutional mechanisms *Science, Technology, & Human Values* **15** 226–43
- Fishkin J S 2009 *When the People Speak* (Oxford University Press)
- Galván Labrador A and Zografos C 2023 Empowerment and disempowerment in climate assemblies: the French citizens' convention on climate *Environmental Policy and Governance* **4** 414–26
- Giraudet L-G, Apouey B, Arab H, Baeckelandt S, Begout P, Berghmans N, Blanc N, Boulin J-Y, Buge E, Courant D et al 2022 "Co-construction" in deliberative democracy: lessons from the French Citizens' Convention for Climate *Humanit. Soc. Sci. Commun.* **9** 207
- Goodin R E and Dryzek J S 2006 Deliberative impacts: the macro-political uptake of mini-publics *Politics & Society* **34** 219–44
- Goodin R E and Niemeyer S J 2003 When does deliberation begin? Internal reflection versus public discussion in deliberative democracy *Political Studies* **51** 627–49
- Hammond M 2020 Democratic deliberation for sustainability transformations: between constructiveness and disruption *Sustainability: Science, Practice and Policy* **16** 220–30
- Howarth C, Bryant P, Corner A, Fankhauser S, Gouldson A, Whitmarsh L and Willis R 2020 Building a social mandate for climate action: lessons from COVID-19 *Environmental and Resource Economics* **76** 1107–15
- IPCC 2023 *AR6 synthesis report* Available here: www.ipcc.ch/assessment-report/ar6/
- Krosnick J 2000 The threat of satisficing in surveys: the shortcuts respondents take in answering questions *Survey Methods Newsletter* **20** 4–8
- King M and Wilson R 2023 Local government and democratic innovations: reflections on the case of citizen assemblies on climate change *Public Money & Management* **43** 73–6
- Lewis P, Ainscough J, Coxoon R and Willis R 2023 The messy politics of local climate assemblies *Clim. Change* **176** 76
- Liu F et al *Encyclopedia of Case Study Research*. 2 (SAGE)
- Markowitz E and Guckian M 2018 Climate change communication: challenges, insights, and opportunities *Psychology and climate change* ed I S Clayton and C Manning (Academic) 35–63
- Mellier C and Capstick S 2024 *How Can Citizens' Assemblies Help Navigate the Systemic Transformations Required by the Polycrisis? Learnings and Recommendations for Practitioners, Policymakers, Researchers, and Civil Society - Cast Guidelines*. Available here: cast.ac.uk/resources/reports/
- Mellier C and Smith G 2024 *Activism and Climate Assemblies - Carnegie* <https://carnegieendowment.org/research/2024/12/climate-change-protest-activism-green-transition?lang=en#activism-and-climate-assemblies>
- Mellier C and Tilleke 2024 *Understanding the Impact of the French Climate Citizens' Convention (CCC): A Review of Existing Research* (KNOCA) https://cdn.prod.website-files.com/65b77644e6021e9021de8916/6718c8d4fee67355c566217c_DRAFT_Review.pdf
- Moore B, Verfurth C, Minas A M, Tipping C, Mander S, Lorenzoni I, Hoolohan C, Jordan A and Whitmarsh L 2021 Transformations for climate change mitigation: a systematic review of terminology, concepts, and characteristics *Wiley Interdiscip. Rev. Clim. Change* **12** e738
- Muradova L, Walker H and Colli F 2020 Climate change communication and public engagement in interpersonal deliberative settings: Evidence from the Irish citizens' assembly *Climate Policy* **20** 1322–35
- Nisbet M C 2009 Communicating climate change: why frames matter for public engagement *Environment: Science and Policy for Sustainable Development* **51** 12–23
- OECD 2020 *Innovative Citizen Participation and New Democratic Institutions: Catching the Deliberative Wave* (OECD Publishing) Available here doi: (<https://doi.org/10.1787/339306da-en>)
- Park T, Londakova K, Brennan I, Schein A, Reynolds J, Whincup E, Chan E, Pelenur M and Halpern D 2023 *How to Build a Net Zero society. Using Behavioural Insights to Decarbonise Home Energy, Transport, Food, and Material Consumption. A Guide for Policymakers and Businesses* (Behavioural Insights Team)
- Perlaviciute G 2022 Contested climate policies and the four Ds of public participation: from normative standards to what people want *Wiley Interdiscip. Rev. Clim. Change* **13** e749
- Pfeffer J 2024 Setting the agenda for climate assemblies: trade-offs and guiding principles *Climate Policy* **24** 843–58
- Shaw C, Wang S and Latter B 2021 How does the framing of climate change affect the conclusions reached in climate assemblies? KNOCA Briefing No 1. Available here: uploads-ssl.webflow.com/65b77644e6021e9021de8916/65dde797e30ad8301de6f78b_HOW-DOES-THE-FRAMING-OF-CLIMATE-CHANGE-AFFECT-THE.pdf
- Smith G 2024 *We Need To Talk About Climate: How Citizens' Assemblies Can Help Us Solve The Climate Crisis* London (University of Westminster Press)
- Sovacool B K, Burke M, Baker L, Kotikalapudi C K and Wlokas H 2017 New frontiers and conceptual frameworks for energy justice *Energy Policy* **105** 677–91

- Stirling A 2008 Opening up and closing down: power, participation, and pluralism in the social appraisal of technology *Science, Technology, & Human Values* **33** 262–94
- van Beek L, Mouter N, Pelzer P and Aupers G 2024 Experts and expertise in practices of citizen engagement in climate policy: a comparative analysis of two contrasting cases *Clim. Change* **177** 10
- Verfuerth C, Demski C, Capstick S, Whitmarsh L and Poortinga W 2023 A people-centred approach is needed to meet net zero goals *Journal of the British Academy* **11** 097
- Verfuerth C *et al* 2024 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* <https://cast.ac.uk/wp-content/uploads/2025/03/cast-the-centre-for-climate-change-and-social-transformations-key-messages-from-five-years-of-social-science-research-on-climate-change-report-1.pdf>
- Wells R, Howarth C and Brand-Correa L I 2021 Are citizen juries and assemblies on climate change driving democratic climate policymaking? An exploration of two case studies in the UK *Clim. Change* **168** 1–22
- Willis R, Curato N and Smith G 2022 Deliberative democracy and the climate crisis *Wiley Interdiscip. Rev. Clim. Change* **13** e759
- Zeitfogel C 2023 What do you mean climate change? Framings of climate change in citizens' climate assemblies *Master's Thesis* Stockholm Climate Resilience Institute