Place-based climate commissions: embracing messy governmentality

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Abstract

The role of the 'place' in delivering climate action is vital, however much action on climate change locally is fragmented. Independent place-based climate commissions are a novel structure of climate governance developing at the subnational level across cities, regions and counties in the UK. Little is known about these emerging forms of local climate governance and their experiences of navigating 'mess' in governance practices and processes. Building on Castán Broto's framework of messy governmentalities, this paper seeks to assess the capacity of climate commissions to affect meaningful climate mitigation and adaptation action, to understand how they interact with existing climate governance structures and to consider their longer-term sustainability. This paper examines the nature and impact climate commissions have had on local climate action, drawing on qualitative interviews with chairs, commissioners, members of the secretariat and associated local authorities of the Edinburgh, Belfast, Leeds, Surrey, Yorkshire and Humber, and Lincoln commissions in the UK. Analysing the journeys of the commissions through a lens of messy governmentalities, and a focus on bodies, strategies and knowledges within them, we draw out insights on how climate commissions came about, their function and role, their impact and influence, and how they have evolved.

Keywords Climate commission · Climate governance · Messy governmentality · Climate action · Place

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1 Introduction

The UK, long considered a pioneer in climate governance, has failed to enact domestic policy to meet the ambitious targets it has set on the international scale (CCC 2023; Bulkeley et al. 2016). Civic movements for environmental and climate justice have increasingly put pressure on decision-makers to take action and have been a key factor in local authorities making Climate Emergency Declarations (Howarth et al. 2021; Dyson and Harvey-Scholes 2022). Place-based climate action can be situated within a growing recognition of the importance of attending to the social and cultural specificity of local contexts in climate adaptation and mitigation (Creasy et al. 2021; Murtagh and Lane 2022). Urban climate action has increasingly become standard in much of the world, most notably in the Global North (Bernstein and Hoffmann 2018), with municipal climate plans and transnational city networks identified as playing an important role in the global governance of climate change up to 20 years ago (Betsill and Bulkeley 2004). Academic interest has tended to focus on such large-scale initiatives in exemplary cities deemed 'globally relevant' for their transformative potential (Castan Broto et al. 2018). However, low carbon action in 'ordinary cities' (Robinson 2006) as well as regions, counties and other subnational units of governance, remains vital to implementing the widespread socio-economic transformations required to reduce reliance on fossil fuels, limit greenhouse gas emissions and adapt to our rapidly changing climate.

Climate commissions are a recent innovation in place-based, multi-stakeholder governance in the UK, being piloted first in the cities of Belfast, Edinburgh and Leeds, with further city commissions developing in York and Lincoln. Interestingly, they have begun to emerge beyond the city level, in the borough in Kirklees, within the counties of Essex and Surrey, whilst Yorkshire and Humber Climate commission exists at the highest level of local government, the region. These lace-based climate commissions are localised institutions for climate action best described as independent advisory bodies which bring together stakeholders from public, private and third sectors and community groups to 'drive, guide, support and track' action on climate change (PCAN 2019) within a defined geographical area. They developed through the Place-Based Climate Action Network (PCAN), a 5-year network funded by the UK Economic and Social Research Council (ESRC) which brought researchers and local decision-makers together to translate climate policy into action 'on the ground'. A small but growing body of literature charts the development of climate commissions within PCAN (Creasy et al. 2019, 2021; Yuille et al. 2021; Harvey-Crawford and Creasy 2022; Howarth et al. 2022; Russell and Christie 2022; Slevin et al. 2022), whilst climate commissions have begun to emerge independently of the initial network and funding.

Climate commissions are a contemporary iteration of place-based environmental governance strategies which, in the UK, can be traced to the Swansea Environmental Forum in 1985 (ibid), however such initiatives remained marginal to the developing policy discourse and structures of environmental governance at an international level (Hajer 1997), in which nation states were considered to be the primary actors (Bernstein and Hoffmann 2018). Since the mid-2000s however, there has been a proliferation of place-based collaborative climate action across the UK (Creasy et al. 2019) and beyond (van der Heijden 2018; Castán Broto 2020). Climate commissions have developed alongside and in relation to already existing collaborative partnerships for place-based climate action, however they are novel for the way in which they bring together 'academics, policymakers, civil society and private

sector actors, to facilitate, explore, and circulate 'new knowledges' (Bulkeley 2019b) in urban climate' (Creasy et al. 2019). A combination of ineffective action at the international scale and formal recognition of the value of climate governance beyond the state has provided the conditions for experimental modes of governance to emerge 'from the ground up' (Dorsch and Flachsland 2017; Bernstein and Hoffmann 2018) within wider shifts to more fragmented modes of climate governance (Abbott 2012; Zelli and van Asselt 2013).

Climate governance is increasingly characterised by this mode of experimentation, in which a multiplicity of actors is involved in implementing new initiatives across a range of scales within a shift to more polycentric governance arrangements (Huitema et al 2018, Bernstein and Hoffmann 2018). Experimentation here is understood as the purposive implementation of new institutional arrangements, which aim to generate social and political learning and to trigger transformation on a wider scale (Huitema et al 2018). Such experimental climate governance often takes place at the subnational level, involving public-private partnerships, NGOs, businesses, and other societal actors (Huitema et al 2018). Rather than 'filling the gap' between national (in)action and globally agreed emissions targets, subnational actors and actions are increasingly recognised as central to climate governance assemblages which characterise this seismic shift away from a global climate regime (Bernstein and Hoffmann 2018). As the sites and forms of climate action are increasingly dispersed, the widespread nature of experiments in governance practices have created a condition in which experimental initiatives are becoming a mode of governance in themselves (Karvonen 2018; Bulkeley 2021). Identifying and understanding what experiments in climate governance do and have the potential to effect, in a world 'awash in climate policies, emission reduction plans, low-carbon pilot projects, among other efforts to combat or adapt to climate change' (Bernstein and Hoffmann 2018) remains a challenge. Nevertheless, it remains vital to evaluate emerging attempts to govern people in relation to climate, in order to address questions of power – how is climate governance being enacted, by who and for whom – as well as considering the wider consequences (Bulkeley 2021).

Place-based climate commissions offer a discrete unit of analysis which have been consciously formulated as an experimental initiative, designed explicitly with the desire to learn from practice and with the potential to provide a blueprint for scaling up (Ansell and Bartenberger 2016, Bernstein and Hoffmann 2018). In this paper we provide a detailed, empirical analysis of climate commissions that emerged independently of the original PCAN project, based on the 'blueprint', to better understand what the scaling up of emergent governance models means for the actors involved, the authority they attempt to establish and the knowledges they seek to normalise. Drawing on interviews with 38 members of 6 climate commissions established across the UK, we apply Castán Broto's conceptual framework of messy governmentalities in an evaluation of what climate commissions do; the ways in which they open up and engage sites for political contestation, seek to create new climate publics and appropriate, construct and mobilise particular climate knowledges in local contexts.

2 Literature review

2.1 Situating climate commissions: global, national and local catalysts

Climate commissions have entered the arena of climate governance at a time when the possibility for novel action at the subnational level has been enlarged through the ineffectiveness of traditional governance on the global scale, a broadening of the responsibilities of local authorities within national domestic policy and increasing pressure to take climate action from the civic sphere (Kythreotis et al. 2021). The growth of voluntary climate action initiatives beyond the state is partly a result of frustration with a gridlocked global regime, in which national pledges continue to fall short of internationally agreed targets required to keep global warming within 2 °C (Chan et al. 2015). Although not intended to directly design or deliver projects, climate commissions aim to make 'a tangible difference in the delivery of climate action' (Bulkeley 2021) through convening diverse actors and knowledges, and appropriating the rationalities of climate governance for local contexts and populations. Attending to the experiences of governing through and within climate commissions offers an opportunity to reconsider what successes might look like beyond measurable outcomes and consider the range of consequences and impacts might be in attempts to establish new governance arrangements (Bulkeley 2021; Howarth et al. 2024). Whilst measurable outcomes allow for comparative analysis and attempt to demonstrate impact in material terms, they fail to capture the wider political potential of governance structures which are emerging in the UK amidst significant constraints in terms of local resource and national policy.

Whilst historically, successive UK Governments have set ambitious climate mitigation targets, strong domestic policy responses have been relatively weak (Bulkeley 2019a). Where there has been progress on climate policy this has been undermined by policy withdrawals or inconsistencies across different areas of policymaking (Pitt and Congreve 2017), in what can be described as 'a paradox of slow progress' (Owens 2010, p. 354). The 2008 Climate Change Act, for example, saw the introduction of a legally binding target to reduce national greenhouse gas emissions to 80% below 1990 levels by 2050. At the same time, it placed new requirements upon local authorities to take proactive measures to mitigate and adapt to climate change within their local remit (UK Government 2008). Whilst the instruments of climate governance have come to encompass a "complex array of sites and practices from infrastructure to the conduct of citizens" (Creasy et al. 2019, p. 9) there is a lack of a framework at the subnational level for implementing these consistently within longer term and national level climate adaptation and mitigation targets (Russell and Christie 2021). For these reasons, climate governance at the city, county, and regional levels 'is largely *compensatory* and *improvisatory*' (ibid, p. 17), characterised by a sense of urgency, the commitment and activity of local wilful actors and a frustration with what is considered ineffective governance nationally. Climate commissions can be considered within this picture as an example of experimental climate governance which emerges from the contradiction between a national policy imperative and a national-local policy vacuum (ibid).

Whilst climate commissions aim to be independent of any single organisation, city councils and combined authorities play a key role in their initiation and often offer ongoing support through (co-)chairing the commission or staffing a secretariat to carry out its administrative tasks. To some extent this reflects local voluntary commitments and the energy and enthusiasm of particular 'wilful actors' to take matters into their own hands (Russell

and Christie 2021). However, it can also be viewed as a result of the combined pressures of austerity cuts to local services and council budgets with the increasing expectation on local authorities to deliver a range of public services and goods, such as social care (van der Heijden 2018; Russell and Christie 2021). The pressures on capacity and funding within local councils, combined with weak climate policy from the national government leaves most local councils with little experience of what works in climate governance, with limited resources and capacity to take meaningful action (van der Heijden 2018). The initiation e of climate commissions from within local authorities can thus be viewed as both a pragmatic and necessary strategy to draw on the expertise, resource and capacity of private and civil society actors to develop new instruments of climate governance (ibid). Their capacity to effect meaningful climate action is framed within the gridlock of global climate governance, lack of sub-national policy and the need to draw in expertise, resource and capacity of actors beyond the state. However, the development of each climate commission is differentiated by their location in socio-material and temporal place (Creasy et al. 2021), with their political potential shaped directly by the interactions between members of the commission, the strategies of governance employed and the knowledges they draw on and (co)produce (Castán Broto 2020).

2.2 Messy governmentalities: applying a novel framework of evaluation

The proliferation and mobility of sometimes contested framings of climate change together with the emergence of different kinds of climate publics is starting to pervade the governance of cities and subnational regions. At the same time, profound shifts in the socio-material orders which have come to be known as Anthropocene are also reshaping emerging governance practices (Bulkeley 2021), particularly those materialising 'from the bottom up'. An analysis of experimental mechanisms for climate governance needs to be able to grapple with this shifting terrain, in which the unruly socio-materialities of climate change are beginning to fray the eco-modernist tenets which have underpinned climate governance for the last 30 years (Bulkeley 2023). Governmentality theory, which tends to emphasize deliberate 'mechanisms for organisation and control' (Castán Broto 2020: 248), can obscure both the ways in which governance unfolds in practice as a 'messy process that depends on multiple random connections between technologies, discourses and actions' (ibid, 240) as well as the excessive socionatures they seek to govern. An analytic of messiness better grapples with questions of 'what kinds of governance practices are emerging amidst these shifts, with what consequences, for whom?', paying attention to the embodied relations between actors and the objects they seek to govern. Alongside diagnoses of climate governance which seek to identify measurable, quantitative outcomes, attending to the embodied and interpersonal experiences of establishing new governance models, such as climate commissions, opens up a wider range of ways to consider what success, or otherwise might like, amidst the continual recasting of climate problem and an expansion in the sites and means for intervention (Bulkeley 2021).

Drawing attention to messiness in that which appears 'ordinary' or unremarkable in climate governance demonstrates where and how resistances, openings and negotiations might open up e the potential for different modes of response (Castán Broto 2020). Top-down policies, tools and techniques are reshaped as they are interpreted and mobilised at different scales in different places, such place-based climate commissions. As strategies for

responding to climate change move across scales, the logics, techniques and knowledges which underpin them become entangled with localised concerns, political and economic constraints and other dynamics which extend beyond climate. Instruments such as Net-Zero Roadmaps or city Climate Action Plans develop through a process of navigating local interests, as well as the creative appropriation of governance tools to meet varied place-specific needs (Long and Rice 2021). Attending to how this messiness is navigated in practice is vital to understanding where and how the problem of climate is being recast and how the sites of intervention proliferate. As new forms of urban climate governance emerge on continually shifting terrain, it becomes important to understand such interventions not only in terms of quantitative success, such as net emissions reduction but to attend to the wider range of impacts they have on different people in particular places (Bulkeley 2021). Whilst this question goes beyond the scope of this paper, putting an analytic of messiness to work in the evaluation of Climate Commissions demonstrates its potential to recast our understanding of what success or otherwise might look like in place-based climate responses.

A messy governmentalities framework brings theories of messiness, which emphasise how the dynamic and emergent character of socio-natures always exceeds rational or calculative ordering together with governmentality theory to understand attempts to orchestrate mess as central to any attempt to govern. From a Foucaldian governmentality perspective, governance is understood as the orchestration of power for particular ends, where power is understood to be mutually and relationally constituted in the relations between people and the objects of governance (Bulkeley et al. 2015). This involves defining and enrolling individuals and publics as subjects, whose conduct is regulated in part through consent and self management (the conduct of conduct) as well as the construction of the object of governance through calculative knowledge practices, in this case, climate. Governmentalities, rationalities of government, emerge from the desire to build authority and legitimacy over a particular space or population; this requires strategic forms of calculation and the production and mobilisation of certain forms of knowledge. One of the dominant ways in which climate is rendered governable is through the rationality of carbon accounting, in which stocks and flows of carbon are constructed as an object of governance through giving them a calculative value which allows them to be managed, exchanged and measured (Lövbrand and Stripple 2011). However, climate governmentalities, like all governmentalities, are continually evolving assemblages; they are not designed and imposed as top down structures, rather they emerge through relational interactions which can involve contestation, resistance and struggles for power. As such they are inherently unstable and have to be continually constructed and (re)produced.

The fragmentation of climate governance has created a 'mosaic of climate governmentalities' (Jackson et al. 2023), in which multiple governmentalities, climate and other, overlap with one another, in arrangements which can be mutually reinforcing or which can be destabilising. A multiple governmentalities framework is applied to analyse the complex interactions between different approaches to governing climate and environment (Fletcher, 2107), however this differs from messy governmentalities approach, in which it is recognised that 'the art of governing depends on messy experiences with the world (messy or not), the ability to harness mess ultimately determines which strategies, calculations and bodies become important in the act of governing climate change' (Castán Broto 2020). It offers a distinctly feminist lens to draw attention to how everyday, situated interactions shape how climate rationalities are mobilised, reworked, resisted and creatively appropri-

ated by different people, in diverse contexts in order to fulfil multiple ends. Here, knowledge is understood to be positioned and partial; bodies are recognised as embodied, interdependent, and emotional; and socio-natures such as climate change are recognised as fundamentally excessive to attempts to enforce order (ibid). The attention to the messy interactions between bodies, knowledges and strategies maps directly onto governmentality theory, as illustrated in the table below.

Within the context of fragmented, dynamic and emerging forms of climate governance (Zelli and van Asselt 2013) and the challenge of translating climate change discourse to a local context (Castán Broto 2017), political actors often describe their experiences of governing in terms of 'muddling through' (Marsden et al. 2014). Such messy, interpersonal experiences of governing in practice powerfully shape how spaces, people and objects are rendered governable in relation to a particular construction of climate (Hulme 2009; Lövbrand and Stripple 2011) and are instrumental in the 'production and deployment of new climate rationalities' (Castán Broto 2017, p. 1). The scope and possible impacts of climate action is restricted in the interactions between bodies, rationalities and knowledges, yet it is here too that the moments of political potential are generated (Bhabha 1994; Castán Broto 2020). An 'analytic of messiness' (Dodds 2020, p. 1) reveals how conditions which enable change are generated at a local level as it 'reimagines alternatives to hegemonic governmentalities' (Castán Broto 2020). Building on Castán Broto's (2020) reflections on messy governmentalities, we explore the characteristics and interactions of relevant bodies, knowledges and strategies to analyse the ways in which messy governmentalities are manifested in our data. In so doing, we explore whether commissions are able to exploit and coordinate the different aspects of messiness whilst also addressing some of the challenges of dealing with messiness. Table 1 provides more detail on how we understand these three tenets in the context of the functioning of climate commissions.

3 Methodology

The aim of this paper is to examine climate commissions through an analysis of (the three tenets of) messy governmentalities (see Table 1). We draw on semi-structured interviews with key stakeholders directly and indirectly involved in the establishment and operationalisation of six different climate commissions in the UK, where they fulfilled one of the following roles: climate commission Chairs, Commissioners (which could include representatives of Local Authorities associated with the Commissions), and Members of the commission's secretariat (Table 2). To guarantee anonymity, interviewees were assigned individual codes according to their predefined category: Chair/Co-Chair (Chair1, Chair2 etc.), Commissioner (Com1, Com2, etc.), and Secretariat (Sec1, Sec2, etc.). Appendix 1 provides an overview of the characteristics of the Commissions we analyse.

Individuals were approached by direct email using the membership list of the Place-based Climate Action's Network (PCAN). The interviews were conducted on-line, audio-recorded and transcribed using intelligent verbatim transcription. A quality assurance process was applied whereby each interview was checked by the interviewer and validated by the interviewee. Transcripts were cleaned, formatted and imported into NVivo 11 for analysis and coding using a combination of inductive and deductive thematic approach.

Table 1 Contextualising three tenets of messy governmentalities (strategies, knowledges, bodies; Castán Broto 2020), in relation to place-based climate commissions in the UK

Strategies (the 'how')	'Strategies' refers to how governance is achieved through desire and intent to build authority over a certain domain. In the UK, Climate subjects have emerged through a combination of informing, persuading and the mobilisation of future and planetary imaginaries (Hinchliffe 1996; Paterson and Stripple 2010; Bulkeley 2019a; Castán Broto 2020). Understanding the mobilising factors which have brought climate commissions into being requires attending to their development in relation to the wider PCAN project and research funding landscape (explored above) as well as the aims, objectives and governance structures of each commission. This includes attending to the desires and motivations of individual members on climate commissions (Bulkeley et al. 2016; Russell and Christie 2021) – what value do they see in establishing a commission and what would they consider a success in responding to climate change? At the same time it asks the question, what do climate commissions do, what activities do they engage in, in particular considering their role in convening knowledges and bridging knowledge boundaries (Cash et al. 2003)
Knowledges (the 'what')	The (re)production and mobilisation of knowledge(s) is deeply entangled with the rationalities through which authority is established in which information must be perceived as salient, credible and legitimate (Cash et al. 2003). This means asking questions about what knowledges climate commissions draw on, including the forms of knowledge which inform and arise from the governance tools and technologies employed (Soneryd and Uggla 2015) but also about the experiential knowledge and skills of actors involved. Considering knowledge as contingent and situated means recognising that understanding and experiences are inseparable, that is lived experience, embodied knowledge and felt sensations, including emotion, inform how we come to know and act in the world. This draws attention to the skills, expertise and backgrounds of actors involved in climate commissions, but also to the socio-material context of all data, analysis and calculation which are drawn upon and (re) produce to render climate governable in a local context, such as policy documents, action plans and other outputs
Bodies (the 'who')	The body, as a site of both knowledge and discipline is central to governance projects. Here bodies may be considered as individual climate subjects, motivated by affects, experiences, attachments, and imaginaries (Ahmed 2004; Davoudi and Machen 2021), as well as climate publics assembled by and through attempts to govern climate (Paterson 2014; Bulkeley 2019a). A focus on the body centres the everyday and more mundane aspects of climate governance, including the decisions, activities and practices that constitute climate commissions and their impacts on daily life in a local context (Bee et al. 2015). It opens up questions about who is involved in decision-making and deliberation on local climate action (Paterson 2014), which organisations, communities and individuals have engaged with the commission's work and how. Looking to the intersections between strategies, knowledges, and bodies enables questions to be asked about how climate comes to matter in particular places, how publics are convened around climate as a matter of (local) concern (Latour 2005), and how climate commission create spaces of dialogue, dissent and intersubjective learning (Bulkeley 2019a) – that is how they enable new climate politics to emerge

Table 2 Overview of interviewees

Interviewees by climate commission	Interviewees by role
Belfast; 12	Chair/Co-Chair; 8
Edinburgh; 7	Commissioner; 17
Leeds; 5	Secretariat; 6
Lincoln; 4	Local Authority; 7
Surrey; 4	
Yorkshire and Humber; 6	

Interviews were semi-structured and explored a variety of topics including: (i) the operation and effectiveness of the commissions, (ii) where the commission sits within the local climate policy landscape, (iii) impacts and influence of the commission, (iv) challenges and areas of tension, and (v) the replicability of the climate commission model. The full Interview Guide is available in Appendix 2.

4 Analysis

We frame the analysis of our data according to Castan Broto's 'strategies, knowledges, bodies' themes (see Section 2.3) and incorporate throughout the series of challenges that were raised by the interviewees relating to setting up and running a climate commission (Table 3). We analyse the data by in the context of these themes by first exploring the voluntary nature of commissions and what this implies (Section 4.1.), the process of establishing a commission (Section 4.2), the development of an 'ideal' Commissioner (Section 4.3), how climate change is understood and incorporated in commissions' theories of change (Section 4.4), the value of climate commissions (Section 4.5), and finally we discuss what this means for commissions working across different temporalities (Section 4.6).

4.1 Voluntary bodies: desires, capacity and sustaining momentum

Commissions which are predominantly made up of volunteers are fundamentally shaped by the different capacities, desires and access to resources that each member of a commission has. A very small number of commissions such as the Yorkshire and Humber (Y&H) climate commission have a number of paid staff, whilst the majority of other commissions rely primarily on a voluntary membership made up of stakeholders from public, private and third sector organisations, with some also opening up membership to local community and activist groups (Harvey-Crawford and Creasy 2022). This over-reliance on volunteers means that activity of a commission becomes dependent upon the interests and the desires of those who are most able to commit significant time and energy to it. Interviewees highlighted the importance of particular individuals who were the '*driving force*' behind commissions; passionate, knowledgeable members who 'live and breathe the thing' [Comm1]. They also shared deep concerns about the sustainability of commissions relying on the energies of a small number of people, many of whom were doing this work on top of a full-time job.

> *"People around the Commission put a lot of extra time in above and beyond their day jobs to make this happen, and you can't rely on that forever."* [Com14]

Table 3 Summary of challenges by interviewees when establishing and running a climate commission (for the underlying empirical data, see Appendix 3)

Covid-19	Not met in person ($N=2$); excuse for inaction ($N=1$); hampered relationship building ($N=6$)
Resources	Funding ($N=5$); Staff/secretariat ($N=5$); research capacity ($N=2$); capacity for delivery ($N=3$); people's time ($N=12$)
Influence	Power & leadership ($N=5$); vision & direction ($N=8$); culture clashes ($N=5$); Disconnect from the council ($N=2$)
Delivery	Sustaining momentum ($N=4$); Political context ($N=3$); engagement and learning ($N=4$)

"We need to think about making sure we're doing things year by year that help to re-energise – and quite a lot of people have left, actually" [Sec5]

A reliance on volunteers means that successful commissions need to harness the motivation and momentum generated by members by ensuring the activity of the Commission is able to meet and sustain the interests and desires of its members. However, for most Commissions, there are few quick wins, and commissioners often expressed a level of anxiety or concern about whether their energies were worthwhile. Their impacts can be difficult to quantify, particularly in the short term.

"*The only thing that worries me is how we monitor how effective we are as a Commission.*" [Com9]
"*My role was to move the conversations and influence people and it's sometimes difficult because you go have I actually made a difference?*" [Sec4]

At the same time, the voluntary commitment to commissions can provide distance from organisational cultures and ways of working which structure professional activity and decision-making, creating space for experimentation, collective risk taking and the potential for novel relations to emerge.

"*That's its main advantage… it allows us to think about solutions in different ways, you're not confined by this particular board is set up to do this particular thing therefore we've got to think within that particular aim. Our aim is how do we tackle climate change and how do we use the instruments we have…visioning to look at things in a different way.*" [Com19]
"*I think it's like that collective responsibility, isn't it? So no one organisation is going to take the blame or all the success of achieving it. We take it together and we deal with the criticism together.*" [Com14]

This means commissions can sustain their momentum and fulfil the desires of their members through providing an experimental space for dialogue across different perspectives, and as an opportunity to engage in novel modes of responding to climate change. They can be unique to a particular place in their attempts to bring together diverse stakeholders that wouldn't otherwise meet to deliberate on how to bring about social and political change locally.

"*We'd never actually tried to convene on a kind of platform basis, people from different sectors all coming together with a shared vision of what the art of the possible might be.. It was hugely powerful.*" [Com7]
"*The beauty of the commission is that it's independent, we might question independence versus resource, but only the commission joins up the public, the private, and the voluntary sector in the way that it does. No other organisation can do that.*" [Chair2]

Whilst climate commissions can open up novel space for developing a shared vision of the art of the possible; they do so within multiple constraints which go beyond the lack of

resource and an over reliance on voluntary bodies. Nevertheless this demonstrates what is possible despite financial, resource and staffing constraints, and particularly when responsibility and vision are shared by the members of a commission. This means developing an agenda which meets the desires and interests of voluntary members whilst working through possible divergent aspirations and goals of those members, and evaluating the impact of the work undertaken.

4.2 Bodies-strategies: establishing a commission

Commissions manage the tensions between individual commitments and organisational representation differently, for example the Terms of Reference (ToR) of Surrey Climate commission states *'Members shall represent a significant organisation or sector, and should engage with their organisation to promote the work of the commission'.* On the other hand, the ToR of Y&H Climate Commission explicitly states that members are involved as individuals, not as representatives of their organisation. Within both approaches, the politics of representation and implicit power dynamics between and within organisations, for example in relation to who has access to resources or the power to make key decisions, structures social interactions within commissions. This means the open-ended nature of establishing a climate commission as a process of forging new ways of working across diverse stakeholders is challenging. It involves managing uncertainty about the direction, vision, and strategy of an emerging governing assemblage, developing a common understanding of where and how a commission can direct its energies in a particular place as well as cultural clashes between the expectations and assumptions held by different commissioners.

> *"one of the challenges is the composition of the commission... where you get people coming from policy backgrounds from transactional backgrounds, from industry backgrounds, from charity backgrounds. Their priorities are very different in the way they go about things is very, very different."* [Com7]

For the most part, there was a recognition that climate commissions were involved in attempting to bring about shifts and changes that would take time, recognising the value in approaching local climate governance as a slow process.

> *"The reality is that's what you have to do because you can't just deliver, particularly an infrastructure project, overnight. So, yes, I think in hindsight, taking our time was really helpful, getting the funding in place, getting the right people lined up, just approaching it through a slower process, we've benefitted from that."* [Com14]

Nevertheless, an appreciation of both the time it takes for climate commissions to become established and their role in delivering slow change was set against a backdrop of uncertainty about their durability over time in terms of staff and volunteer capacity (see Section 4.1), continually having to apply for funding. The potential generated through the slow process of establishing a legitimate and authoritative commission can only be fully realised where climate commissions are financially stable in the longer term. This would be dependent on whether a particular commission's aim is to deliver action itself, enable others to deliver action, and/or to draw attention to those who are already delivering. This would

extend their capacity to develop and mobilise longer term activity, whilst also freeing capacity and time spent on funding applications and other time-consuming tasks related to developing financial sustainability.

4.3 Bodies-knowledges: constructing the 'ideal' commissioner

Key to the development of climate commissions has been trust in the inherent value of bringing multiple stakeholders together across organisational sectors to deliver holistic climate action. Climate commissions aim to bring together diverse perspectives, skills and expertise to participate in the development of local climate mitigation and adaptation initiatives and in doing so, are able to overcome some of the messiness involved in local climate governance. Almost all the interviewees discussed the value of climate commissions in terms of their ability to convene people from a variety of backgrounds. However, the process of recruitment varied across commissions, with the selection criteria for inclusion or exclusion at times seeming ad-hoc, contingent on personal connections, or too heavily weighted to a person's expertise or level of authority. The chair and/or local council often played an important role in the initial recruitment and selection of commission members. For example, for the Edinburgh Climate Commission this was done on an informal basis by personal invitation, whilst Leeds Climate Commission had a formal application process with specific criteria. In both instances, assumptions are made about what constitutes an 'ideal' commissioner which may or may not line up with commitment of energy and time required to establish a climate commission.

> *"We have some of the big people in the room, but do we have all of the right people in the room would be a question…"it's good that we've got high level people, but it also means they don't have a lot of time to necessarily deliver." [Com3]*
> *"So I think the ambition is there but they have – they're probably starting to realise now that it's having the right people, not just the right organisations on that commission." [Com16]*

Commissions attempt to secure participation in direction-setting through consensus decision-making. In some cases, this was more consultative, in that the Chair or Secretariat would put plans and decisions out for consultation of the wider membership [Com1, Com2, Com6, Com4]. Here members were less clear about whether there were formal mechanisms of decision-making in place but felt that decision-making was rarely contentious. Other interviewees discussed more participatory agenda setting informed by extensive discussions where agreement was sometimes difficult to reach. Although most commissions were involved in managing tensions on either side of politically contentious local issues, such as the expansion of local airports or applications for fracking licences, interviewees expressed faith in consensus decision-making underpinned by an assumption that those who volunteered their time to commissions were generally like-minded [Com15,16] or on the same team. Both the recruitment and decision-making processes adopted for climate commissions is dependent on the makeup and approach taken by each individual commission, often reflecting and directly addressing the messy nature of governmentality which has led to the need for the establishment of a commission in the first place.

4.4 Strategies-knowledges: the problem of climate and theories of change

Climate commissions have often been involved in developing place-based frameworks for climate action, providing a focal point for their activity, and a foundation for commissions to establish their legitimacy and authority (Lövbrand and Stripple 2011). Lincoln Climate Commission and Y&H Climate Commission have produced local Climate Action Plans, which include specific recommendations for action. Climate Action Plans and other knowledge outputs offer structure and a shared vision for a climate commission, however interviewees expressed divergent, fragmented, and multiple understandings of climate change. How we come to know climate is bound up with personal experience and emotion, cultural imaginaries, climate science and a discursive international climate consensus (Hulme 2016). It is therefore important to attend to the ways in which climate change is understood and defined within commissions and by their members as the (co)construction of climate change as problem works to define the parameters of what counts as legitimate climate action (Bulkeley 2019a) and at what scale is it most effective to address such 'super messiness' vis-à-vis the individual, the household, the neighbourhood, the community and so forth.

> *"The key point was not just the 2030 date, but also we're no longer looking at 1.5 degrees rise. We're looking at something much closer to 2.5... the reality of what that looks like for each person in this city is so horrendous to contemplate. Nobody wants to talk about it" [Com1]*

Interviewees drew on a range of different theories of change in relation to effective climate adaptation and mitigation strategies; some felt the role of the commission was to engage in more creative public engagement either to enhance participation within the activity of the commission or as part of encouraging wider cultural or behavioural shifts; others felt this activity was well covered by others in their area and wanted to focus more on bringing about change through local infrastructure projects, policy-making and planning.

> *"But I think it's making people think about the policy infrastructure that we have, can we deliver what we need to deliver and what do we need to change. Because all the solutions aren't technological, all the solutions aren't behavioural, all the solutions aren't framed by the legislation and what we can and can't do, there might be need for changes within all of that" [Com19]*

Climate commissions bring together diverse knowledges and different ideas about what climate change means and requires for stakeholders located across sectors and organisations. In developing an agenda, they come to a particular construction of climate change articulated as a local problem and work to embed different theories of change into place-based responses. More attention could be paid to the ways in which aspects of 'the climate change problem' conforms within climate commissions whilst other aspects are ignored or obscured, and what this means for the potential of climate commissions to pursue transformational change.

"It would have been lovely to have a one day session where we identified opportunities...where we would have explored all these issues in depth and been guided through by someone who understood the theory of change and...identified what our unique contribution would be, what we could do...linking activities to outputs to outcomes" [Com5].

4.5 Bodies-strategies-knowledges: developing a framework of value

Climate commissions aim to 'work collaboratively to help drive, guide, support and track climate action' (PCAN 2019). The role of climate commissions as conveners, knowledge brokers and 'critical friends' intended to provide constructive input, develop networks and support local climate action is difficult to evaluate within a simplified calculus of impacts or outputs. Interviewees expressed concern about evidencing the activity of their commission in a way which would also account for the limits of their scope;

"People from different sectors have been saying, well, what can you actually achieve? You know, is it at risk of being a bit of a talking shop? You're bringing people together, but if you haven't got money to throw at things or you haven't got powers to, you know, enforce some kind of changes, how much can you achieve?" [Sec3]

In contrast to this widespread concern, almost all interviewees felt that climate commissions did bring something unique and valuable to their area, and wanted the commission to be able to continue either in its current form or with some changes. Interviewees in smaller commissions also expressed a desire for their commission to expand geographically to a wider area, as well as a hope that even if their commission was decommissioned that it would have left a positive legacy. Interviewees felt strongly that what had been learned through experience of establishing a governance structure and a set of activities that engaged multiple stakeholders in relation to place-specific climate matters should not be lost or wasted. It is important to note that the COVID-19 pandemic significantly disrupted fledgling commissions, with early meetings often taking place virtually during lockdowns and an extended period of social distancing. One Commissioner reflected that this slower pace had been positive, because although it meant a lot of planned activity, for example holding citizen assemblies took over two years to arrange, they were able to deliver them from a much stronger position of leadership, and in relation to a clearer agenda.

"the reality is...you can't just deliver, particularly an infrastructure project, overnight. So, yes, I think in hindsight, taking our time was really helpful, getting the funding in place, getting the right people lined up, just approaching it through a slower process, we've benefitted from that." [Com14]

As interviewees sought to articulate the contributions that climate commissions had made locally, one of the key tensions that emerged was between a concern that climate commissions would simply be seen as or become a 'talking shop' rather than being involved in taking tangible action.

"My frustration was there was quite a lot of talking and less action than I would have liked. And that's purely because of my background" [Com7]
"a need for the capacity to be able to deliver the work of the Commission so that it doesn't just become a talking shop, "Because otherwise people will drop off " [Com3]

Yet interviewees consistently referred to the value of dialogue between stakeholders, the spaces that commissions had created for open and constructive discussion – including around locally contentious environmental issues – and the ways in which talk allowed commission members to explore commonalities and "*connect the dots*" [Com8] between multiple issues. Establishing legitimacy and authority as part of governance processes requires that relations be made between actors and the object of governance, in this case climate (Bulkeley 2019a). Talk is a vital part of both establishing (social) relations and of navigating messiness between different interests, desires and values held by diverse. Such dialogue is required to cut through some of the messiness that exists and disentangle some of the complexities that emerge, but nevertheless this need for dialogue is often resisted.

4.6 Working with(in) conflicting temporalities

The processes of experiential learning and the slow establishment of legitimacy, authority and participation in place-based climate commissions are also reflected in the speed of change that they contribute to. Interviewees highlighted the "*soft role*" [Com5] that commissions played in encouraging, influencing, lobbying and bridging which had contributed to shifts in institutional and local climate knowledges and ways of working.

"it's about climate action plans and deadlines and structures of administration such as climate offices and just transition commissions…. I think it made it easier for those issues to be politically palatable within the executive cause, they've gone through the rounds of councils.."" [Com5]
"We made a contribution to the sustainability strategy, responded to the consultation, we challenged people from varying perspectives to listen to the responses that we said and how we wanted them to shape their sustainability strategy…so we've had an influence there."" [Com7]

Sustaining momentum within climate commissions involves being able to point to their value to account for the time and energy committed, often voluntarily, by their members as well as to support funding applications and other justifications for their longer-term viability. Recognising the role they play in shifting how climate comes to be known, imagined and acted upon locally, as well as how this contributes to wider systemic, institutional and cultural shifts is vital. Equally, climate commissions need to be able to retain an openness and flexibility as they continue to develop in order to generate transformative potential through experimentation. This requires leadership which is comfortable with messy processes, uncertainty, and the slow temporalities of climate urgency.

5 Discussion

In this paper we developed Castán Broto's messy governmentality framework as a heuristic tool to gain deeper insights into the workings of local climate commissions. In our effort to successfully deploy this framework, to capture, structure and synthesise the (messy) ways in which these climate commissions came about and sought to function (i.e. to progress local climate action), we were drawn to examine in particular what happened at the intersections of the three tenets. For the build-up of the overall narrative, we felt it was useful to first introduce the bodies (the 'who', as a key locus of agency), and then to examine the nexus between two tenets in turn; bodies-strategies, bodies-knowledges and then strategies-knowledges, finishing with a section on the nexus of the three tenets together. This is summarised in Fig. 1. This approach helped us to recognise new and important patterns in the 'mess', and to structure a coherent narrative from a wide range of contextual observations and reflexive interviews with individuals who played a diverse set of roles across local climate commissions at different points in their development and functioning.

This nexus approach worked well because we found the individual tenets to be relevant. Attending to messiness in governing as it evolves in practice provides a critical framework for evaluating the effectiveness of place-based climate commissions through drawing out the interactions which enable or constrain effective climate action in a specific yet dynamic context. This is important for recognising what they have achieved in a short time with limited resources, pointing towards how they have opened up possibilities for action through convening knowledges and publics (Knuth 2010; Bulkeley 2019a). Whilst the development
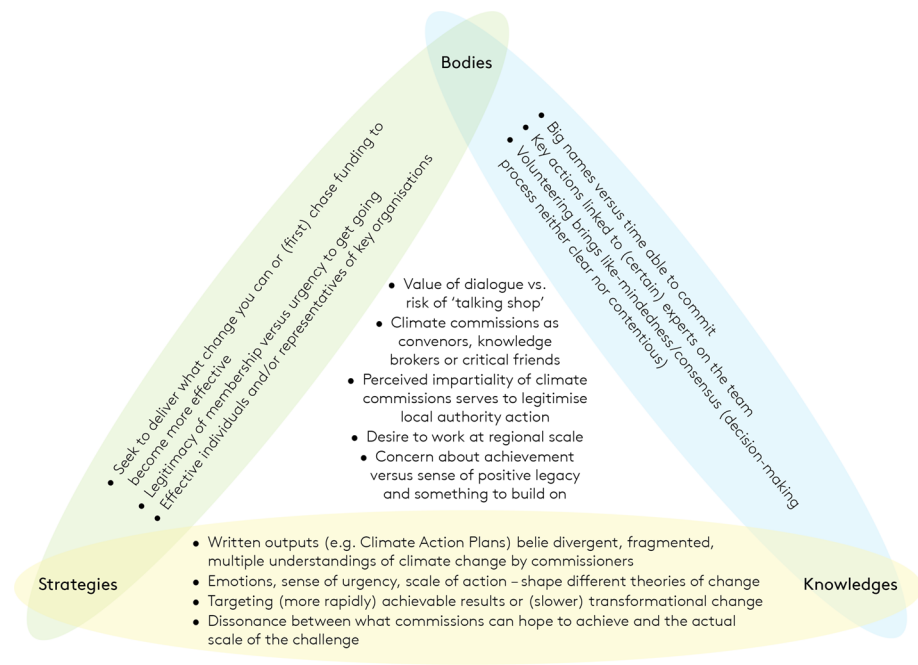

Fig. 1 Summary of the nexus of the three tenets deployed from Castán Broto's messy governmentality framework

of each commission is contingent upon local socio-material context, as well as the constellation of actors and knowledges involved, attending to messiness draws attention to how local politics of climate change are shaped and made manifest (Allen 2004; Castán Broto 2017). This is particularly true when considering the governance strategies employed by climate commissions which, viewed in isolation, can appear to reproduce problematics associated with climate governance at other scales, such as carbon myopia or an overreliance on hegemonic knowledge traditions (Harvey-Crawford and Creasy 2022) underscored by the logic of eco-modernism (Bulkeley 2021). However, by drawing together the complex and messy interactions between embodied experiences of governing, the rationalities which structure climate commissions and the experiences, skills and knowledges which inform their activity; a more nuanced understanding can be gained about where climate commissions fit within wider climate governance processes. More importantly, a critical account of how and where these interactions intersect demonstrates how Climate commissions open up and engage in sites of political contestation and dialogue (Bulkeley 2019b), and thus are actively (re)making local climate politics.

Considering climate commissions to be made up of *bodies* suggests a need to attend to the emotional and experiential aspects of attempts to govern. These include anxieties, frustrations, enthusiasm, desires, hopes and at the limits of the body, exhaustion. When a climate commission brings people together, it brings bodies with diverse capacities, motivations and desires, people whose knowledges are situated in their experiences and the affordances of their multiple positionalities. This makes the setting up of a commission a messy process which is somewhat ad-hoc; enacting certain exclusions and inclusions which considerably delimit what is possible within a particular climate commission (Harvey-Crawford and Creasy 2022).

The (re)production and mobilisation of *knowledge*(s) is central to attempts to generate authority and legitimacy over a particular area and its public. A messy governmentalities approach expands the understanding of knowledges to engage with the material contexts in which knowledge is produced, broadening the concept of knowledge to account for how the experiential and embodied shapes how we come to know and act in the world, attending to 'the contingencies of knowledge-making encounters' (Castán Broto 2020:251). In this sense, we can consider the ways in which climate commissions both draw on and mobilise rationalities and technologies of climate governance, such as net-zero plans and carbon accounting, but also work to produce (other) ways of knowing climate (Hulme 2016; Bulkeley 2019b). These include experiencing climate commissions as a process of learning in which new modes of understanding and socio-ecological relations develop over time, as well as the production of local climate knowledges, where carbon accounting and other ways of knowing climate are adapted and (re)produced to fit a particular place (Russell and Christie 2022).

Climate commissions can be considered both as a *strategy* of governance in and of themselves, as well as enacting particular place-based strategies in attempts to develop legitimacy and authority to intervene in climate change locally. It is important to consider the contingent and diverse strategies that different commissions have developed and deployed in particular places, as well as attending to how climate commissions have sought to establish themselves as authoritative and legitimate bodies.

By analysing the value of experiments in meso-scale climate governance through a messiness lens, we suggest that Castan Broto's outline of a messy governmentalities framework

could be productively extended to include an explicit consideration of the conflicting temporalities which are perceived, experienced and acted upon to bring about transformation through climate action (for a similar approach, see Haarstad et al. 2023). Thematic interpretive analysis of interviews with commission members, which began from the overarching themes of 'bodies' (institutional, individual and public), knowledges (embodied expertise, skills and knowledge objects such as Net Zero roadmaps) and strategies (the mobilising of bodies and knowledges to create order) demonstrated how the intersections between these aspects of governance not only take place in a particular space–time, but also in relation to different relationships between people, objects of governance *and* time. For example, the mismatch between the urgency of local 'Climate Emergency' declarations which in many cases were a catalyst in the creation of climate commissions (Howarth et al. 2021), the time it takes for climate commissions to become established and uncertainty over the longer-term future of commissions are examples of three ways in which climate commissions unfold in relation to different temporal dimensions. How these conflicting temporalities are experienced and acted upon by commissions and their members fundamentally shapes and addresses the messy interactions between knowledges, bodies and places which come to characterise a particular climate commission and shape its agenda for action. This, alongside spatial scales of commissions can become areas of tension when trying to coordinate and organise the messiness local to climate action.

Evaluating the activity of climate commissions requires moving away from a language of immediacy, emergency and a desire for measurable change to better account for a 'slow politics of climate urgency' (Haarstad et al. 2023). Different relations between actors and objects *and time* fundamentally shape how climate commissions unfold through processes of navigating messy interactions between bodies, strategies and knowledges. As summarised above, the capacities of voluntary and employed bodies to commit time to climate commissions are constrained by other professional and personal commitments as well as physical limits (e.g. exhaustion, burn out). As experiments in multi-stakeholder governance, climate commissions should aim to remain open to dynamic processes of mutual adjustment between and across stakeholders (Thiel 2016). This takes time and involves sustaining relations in the process through dialogue, experiential learning and developing new ways of working cross-sectorally. These are slow, cumulative processes, which can feel frustrating from within climate commissions formed in relation to local Climate Emergency Declarations and in response to the urgency expressed by climate publics (Mccann 2023). However, appeals to urgency and emergency are problematic within climate governance (Anderson 2017; Hulme 2019; Howarth et al. 2021; Haarstad et al. 2023), creating space for authoritarian forms of governance aimed at maintaining the status quo to flourish, reproducing existing social inequalities and compounding oppressions (Adey and Anderson 2012). Emergency governance thus runs counter to the principles of climate commissions, which are founded on multi-stakeholder participation, rely on consensus decision-making and often seek to assemble new climate publics.

6 Conclusion

Climate commissions offer examples of ordinary climate governance in practice not only because they generate change but also because they have emerged in places which shift the focus to small and mid-sized municipalities, as opposed to capital and other major cities (Robinson 2006; Haupt et al. 2022). Many activities of climate commissions cannot be easily captured through simple measures of output or impact. There is a need for more comprehensive frameworks to recognise both the constraining factors around mobilising climate action at a local level, and the potentialities that arise in attempts to govern climate change within a specific city, county or region. Evaluating climate commissions through the lens of messiness highlights the ways in which they provide space for possibilities beyond the constraints of commissioners' 'day jobs' or the limits of established institutions for dialogue across multiple perspectives. Whilst clearly constrained in other ways, including lack of resource, over-reliance on the voluntary capacity of particular bodies and the limits of subnational political power, our interviewees illustrate that they are engaged in producing place-based climate knowledges, and contributing to cultural and institutional shifts in how climate change is imagined, understood and acted upon in particular places.

Whether or not climate commissions can be considered novel or unique in relation to other environmental and climate governance structures or not, their function in convening diverse bodies and knowledges within specific place-based boundaries is perceived as unique by their members. As new formations within a particular place, they have inevitably involved processes of learning through experience, with many interviewees noting that their commission had been on a journey involving openness to new ways of working and experimenting with different governance techniques, including workshops, roadshows, exhibitions, school quizzes and accreditation schemes. Although not easy to capture, the learning, establishing of (new) relations and dialogue which have taken place within and as a result of climate commissions are contributing to shifts in local councils, businesses and other organisations. Developing constructive multi-stakeholder dialogue and local shifts in ways of working is vital to sustaining experiments in place-based, multi-stakeholder climate governance.

Declarations

Ethical approval Ethical approval was obtained from the LSE Ethics Committee in 2022.

Consent to participate Written, signed consent was obtained by all research participants.

Consent to publish Consent to publish obtained by research participants.

Competing interests The authors declare no competing interests.

References

Abbott KW (2012) The transnational regime complex for climate change. Environ Plan C: Gov Policy 30(4):571–590. https://doi.org/10.1068/c11127

Adey P, Anderson B (2012) Anticipating emergencies: technologies of preparedness and the matter of security. Secur Dialogue 43(2):99–117

Ahmed S (2004) Affective economies. Soc Text 22(2):117–139. https://doi.org/10.1215/01642472-22-2_79-117

Allen J (2004) The whereabouts of power: politics, government and space. Geogr Ann: Ser B Hum Geogr 86(1):19–32. https://doi.org/10.1111/j.0435-3684.2004.00151.x

Anderson B (2017) Emergency futures: exception, urgency, interval, hope. Sociol Rev 65(3):463–477. https://doi.org/10.1111/1467-954X.12447

Ansell CK, Bartenberger M (2016) Varieties of experimentalism. Ecol Econ 130:64–73

Bee BA, Rice J, Trauger A (2015) A feminist approach to climate change governance: everyday and intimate politics. Geogr Compass 9(6):339–350. https://doi.org/10.1111/gec3.12218

Bernstein S, Hoffmann M (2018) The politics of decarbonization and the catalytic impact of subnational climate experiments. Policy Sci 51(2):189–211. https://doi.org/10.1007/s11077-018-9314-8

Betsill MM, Bulkeley H (2004) Transnational networks and global environmental governance: the cities for climate protection program. Int Stud Q 48(2):471–493. https://doi.org/10.1111/j.0020-8833.2004.00310.x

Bhabha HK (1994) The location of culture. Routledge, London; New York

Bulkeley H (2019a) Accomplishing climate governance. Cambridge University Press, Cambridge New York, NY Melbourne New Delhi Singapore

Bulkeley H (2019b) Reflections on navigating climate's human geographies. Dialogues Hum Geogr 9(1):38–42. https://doi.org/10.1177/2043820619829934

Bulkeley H (2021) Climate changed urban futures: environmental politics in the anthropocene city. Environ Polit 30(1–2):266–284. https://doi.org/10.1080/09644016.2021.1880713

Bulkeley H (2023) The condition of urban climate experimentation. Sustainability: Sci Pract Policy 19(1). https://doi.org/10.1080/15487733.2023.2188726

Bulkeley H, Castán Broto V, Edwards GAS (2015) An urban politics of climate change: experimentation and the governing of socio-technical transitions. Routledge, Taylor & Francis Group, London

Bulkeley H, Paterson M, Stripple J (2016) Introduction. In: Bulkeley H, Paterson M, Stripple J (eds) Towards a cultural politics of climate change, 1st edn. Cambridge University Press, pp 1–23. https://doi.org/10.1017/CBO9781316694473.001

Cash et al (2003) Salience, credibility, legitimacy and boundaries: linking research, assessment and decision making. SSRN Electron J [Preprint]https://doi.org/10.2139/ssrn.372280

Castán Broto V (2017) Urban governance and the politics of climate change. World Dev 93:1–15. https://doi.org/10.1016/j.worlddev.2016.12.031

Castán Broto V (2020) Climate change politics and the urban contexts of messy governmentalities. Territory Polit Gov 8(2):241–258. https://doi.org/10.1080/21622671.2019.1632220

Castan Broto V, Trencher G, Iwaszuk E, Westman L (2018) Transformative capacity and local action for urban sustainability. Ambio 1–14. https://doi.org/10.1007/s13280-018-1086-z

Chan S et al (2015) Reinvigorating international climate policy: a comprehensive framework for effective nonstate action. Glob Policy 6(4):466–473. https://doi.org/10.1111/1758-5899.12294

Climate Change Committee (2023) Progress in reducing emissions. 2023 Report to Parliament. Climate Change Committee. Available at: https://shorturl.at/GHPQ3

Creasy A et al (2021) 'Representing "Place": city climate commissions and the institutionalisation of experimental governance in Edinburgh. Polit Gov 9(2):64–75. https://doi.org/10.17645/pag.v9i2.3794

Creasy A, Lane M, Harvey-Crawford R (2019) Climate commissions as stimulus for place-based action: evidence synthesis from existing UK case studies. Place-Based Climate Action Network. Available at: https://pcancities.org.uk/sites/default/files/Climate%20Commission%20Report.pdf

Davoudi S, Machen R (2021) Climate imaginaries and the mattering of the medium. Geoforum S0016718521002943. https://doi.org/10.1016/j.geoforum.2021.11.003

Dodds K (2020) Staying with trouble. Territory Polit Gov 8(2):139–143. https://doi.org/10.1080/21622671.2020.1737446

Dorsch MJ, Flachsland C (2017) A polycentric approach to global climate governance. Glob Environ Polit 17(2):45–64. https://doi.org/10.1162/GLEP_a_00400

Dyson J, Harvey-Scholes C (2022) How have climate emergency declarations helped local government action to decarbonise? In: Howarth C, Lane M, Slevin A (eds) Addressing the climate crisis local action in theory and practice. Palgrave McMillan, pp 51–61

Haarstad H et al (eds) (2023) Haste the slow politics of climate urgency. S.l.: UCL Press

Hajer MA (1997) The politics of environmental discourse: ecological modernization and the policy process. Reprinted. Clarendon Press, Oxford

Harvey-Crawford R, Creasy A (2022) Power in practice: reflecting on the first year of the Edinburgh climate commission. Addressing the climate crisis: local action in theory and practice. Palgrave Macmillan, pp 73–82

Haupt W, Eckersley P, Kern K (2022) 'How can "ordinary" cities become climate pioneers? In: Howarth C, Lane M, Slevin A (eds) Addressing the climate crisis: local action in theory and practice. Springer International Publishing, Cham. https://doi.org/10.1007/978-3-030-79739-3

Hinchliffe S (1996) Helping the earth begins at home the social construction of socio-environmental responsibilities. Glob Environ Chang 6(1):53–62. https://doi.org/10.1016/0959-3780(95)00113-1

Howarth C, Lane M, Fankhauser S (2021) What next for local government climate emergency declarations? The gap between rhetoric and action. Clim Chang 167(3):27. https://doi.org/10.1007/s10584-021-03147-4

Howarth C, Brogan J, Bryant S, Curran B, Duncan A, Fankhauser S et al (2024) The importance of place in climate action. PLOS Clim 3(6):e0000425. https://doi.org/10.1371/journal.pclm.0000425

Howarth C, Lane M, Slevin A (eds) (2022) Addressing the climate crisis: local action in theory and practice. Springer International Publishing, Cham. https://doi.org/10.1007/978-3-030-79739-3

Huitema D et al (2018) Policy experimentation: core concepts, political dynamics, governance and impacts. Policy Sci 51(2):143–159. https://doi.org/10.1007/s11077-018-9321-9

Hulme M (2009) Why we disagree about climate change: understanding controversy, inaction and opportunity. Cambridge University Press, Cambridge. https://doi.org/10.1017/CBO9780511841200

Hulme M (2019) Climate emergency politics is dangerous. Issues Sci Technol 36(1):23–25

Hulme M (2016) Weathered: cultures of climate. SAGE Publications, London, United Kingdom. Available at: http://ebookcentral.proquest.com/lib/durham/detail.action?docID=4723264. Accessed 7 Oct 2021

Jackson G, N'Guetta A, De Rosa SP, Scown M, Dorkenoo K, Chaffin B, Boyd E (2023) An emerging governmentality of climate change loss and damage. Prog Environ Geogr 2(1–2):33–57. https://doi.org/10.1177/27539687221148748

Karvonen A (2018) The city of permanent experiments? In: Turnheim B, Kivimaa P, Burkhout F (eds) Innovating climate governance: moving beyond experiments. Cambridge University Press, Cambridge, pp 201–215

Knuth SE (2010) Addressing place in climate change mitigation: reducing emissions in a suburban landscape. Appl Geogr 30(4):518–531. https://doi.org/10.1016/j.apgeog.2010.01.001

Kythreotis AP, Howarth C, Mercer TG, Awcock H, Jonas EG (2021) Re-evaluating the changing geographies of climate activism and the state in the post-climate emergency era in the build-up to COP26. J Br Acad 9(s5):69–93

Latour B (2005) From realpolitik to dingpolitik– an introduction to making things public. In: Latour B, Weibel P (eds) Making things public: atmospheres of democracy. MIT Press; ZKM/Center for Art and Media in Karlsruhe, Cambridge, Mass: [Karlsruhe, Germany]

Long J, Rice JL (2021) Climate urbanism: crisis, capitalism, and intervention. Urban Geogr 42(6):721–727. https://doi.org/10.1080/02723638.2020.1841470

Lövbrand E, Stripple J (2011) Making climate change governable: accounting for carbon as sinks, credits and personal budgets. Crit Policy Stud 5(2):187–200. https://doi.org/10.1080/19460171.2011.576531

Marsden G et al (2014) Muddling through with climate change targets: a multi-level governance perspective on the transport sector. Clim Policy 14(5):617–636. https://doi.org/10.1080/14693062.2014.905823

Mccann E (2023) "Right here, right now": immediacy, space and publicness in the politics of climate crisis. In: Haarstad H et al (eds) Haste the slow politics of climate urgency. UCL Press, S.l., pp 73–82

Murtagh E, Lane M (2022) Putting the "Place" in place-based climate action: insights from climate adaptation initiatives across Scotland. In: Howarth C, Lane M, Slevin A (eds) Addressing the climate crisis: local action in theory and practice. Springer International Publishing, Cham, pp 15–26. https://doi.org/10.1007/978-3-030-79739-3

Owens S (2010) Learning across levels of governance: Expert advice and the adoption of carbon dioxide emissions reduction targets in the UK. Glob Environ Chang 20(3):394–401. https://doi.org/10.1016/j.gloenvcha.2009.11.001

Paterson M (2014) Climate re-public: practicing public space in conditions of extreme complexity. In: Gheciu A, Best J (eds) The return of the public in global governance. Cambridge University Press, Cambridge, pp 149–172. https://doi.org/10.1017/CBO9781107281837.010

Paterson M, Stripple J (2010) My space: governing individuals' carbon emissions. Environ Plan D: Soc Space 28(2):341–362. https://doi.org/10.1068/d4109

PCAN (2019) What is a local climate commission?| Place Based Climate Action Network, Place-Based Climate Action Network. Available at: https://pcancities.org.uk/what-local-climate-commission. Accessed 13 Dec 2022

Pitt D, Congreve A (2017) Collaborative approaches to local climate change and clean energy initiatives in the USA and England. Local Environ 22(9):1124–1141. https://doi.org/10.1080/13549839.2015.1120277

Robinson J (2006) Ordinary cities: between modernity and development. Routledge (Questioning cities), London; New York

Russell E, Christie I (2021) The remaking of institutions for local climate governance? Towards understanding climate governance in a multi-level UK local government area: a micro-local case study. Sustainability 13(24):13817. https://doi.org/10.3390/su132413817

Russell E, Christie I (2022) Developing a carbon baseline to support multi-stakeholder, multi-level climate governance at county level. In: Howarth C, Lane M, Slevin A (eds) Addressing the climate crisis: local action in theory and practice. Springer International Publishing, Cham. https://doi.org/10.1007/978-3-030-79739-3

Slevin A et al (2022) Local climate praxis in practice: community climate action in Belfast. In: Howarth C, Lane M, Slevin A (eds) Addressing the climate crisis: local action in theory and practice. Springer International Publishing, Cham, pp 3–13. https://doi.org/10.1007/978-3-030-79739-3_1

Soneryd L, Uggla Y (2015) Green governmentality and responsibilization: new forms of governance and responses to "consumer responsibility." Environ Polit 24(6):913–931. https://doi.org/10.1080/09644016.2015.1055885

Thiel A (2016) The polycentricity approach and the research challenges confronting environmental governance. THESys Discussion Paper No. 2016–1. Humboldt-Universität zu Berlin, Berlin, pp 1-27

UK Government (2008) Climate Change Act 2008. Statute Law Database. Available at: https://www.legislation.gov.uk/ukpga/2008/27/contents. Accessed 13 Dec 2022

van der Heijden J (2018) City and subnational governance: high ambitions, innovative instruments and polycentric collaborations? In: Jordan A, Huitema D, van Asselt H, Forster J (eds) Governing climate change, 1st edn. Cambridge University Press, pp 81–96. https://doi.org/10.1017/9781108284646.006

Yuille A, Tyfield D, Willis R (2021) Implementing rapid climate action: learning from the "practical wisdom" of local decision-makers. Sustainability 13(10):5687. https://doi.org/10.3390/su13105687

Zelli F, van Asselt H (2013) Introduction: the institutional fragmentation of global environmental governance: causes, consequences, and responses. Glob Environ Polit 13(3):1–13. https://doi.org/10.1162/GLEP_a_00180