Journal of the British Academy
Volume 13, Issue 1
Article a09

THEMATIC ARTICLE

The critical role of governance for decarbonisation at pace: learning the lessons from SHAPE research—Introduction

Sarah Birch, Hilary Graham, Andrew Jordan*, Tim O'Riordan and Henry Richards

ABSTRACT

This article introduces the thematic collection, 'The critical role of governance for decarbonisation at pace: learning the lessons from SHAPE research', edited by Sarah Birch, Hilary Graham, Andrew Jordan, Tim O'Riordan, and Henry Richards. With confirmation that global average temperatures in 2024 exceeded 1.5° above pre-industrial levels, and near continuous news of extreme weather events around the world, there seems little to dispute the characterisation of UN Secretary-General, António Guterres, that 'every country must deliver and play their rightful part'. Guterres and many others point to the urgency of action, even though it is palpably sluggish. In the collection, we argue that SHAPE (Social Science, Humanities, and the Arts for People, Economy and environment) research provides the essential lynchpin for policymakers to understand people, societies, economies, and cultures and what works in practice to bring about the transformative changes needed to respond to this challenge. The common thread of this collection is governance. Governance provides the political and civic mechanisms to deliberate and make inclusive decisions based on evidence and collective judgements about our shared future. The collection features crucial policy insights drawn from SHAPE research to advance the principles and practices of consensual governance, and to help navigate 'an exit off the highway to climate hell'.

Keywords governance, net zero, SHAPE, inclusive, deliberative, shared future

The EU's Copernicus Climate Change Service (2024) has confirmed that the average global temperature in 2024 was 1.5 °C above pre-industrial levels and the World Meteorological Organization (WMO) (2025) reported that this was the warmest year on record. This accelerated heating is already having drastic consequences for the entire planet. We can nowadays confidently attribute unprecedented extreme weather events all around the world to the increasing emissions of greenhouse gases from human activity (World Weather Attribution n.d). The need for rapid action to reduce these emissions to 'net zero'[1] has never been clearer. But reducing these is proving desperately elusive, and insufficient attention has been given to understandings readily available from SHAPE

[1] 'Net zero' is the target set out in the Climate Change Act (2008) (as amended) to reduce UK net greenhouse gas emissions by at least 100 per cent by 2050 compared to 1990 levels.

Published: 20 March 2025

* Corresponding author. E-mail: a.jordan@uea.ac.uk

Citation
Birch, S., Graham, H., Jordan, A., O'Riordan, T. & Richards, H. (2025), 'The critical role of governance for decarbonisation at pace: learning the lessons from SHAPE research—Introduction', *Journal of the British Academy*, 13(1): a09 https://doi.org/10.5871/jba/013.a09

Published by The British Academy.

(Social Science, Humanities, and the Arts for People, Economy and environment) research as to the causes. Emissions arise from a myriad of interconnected and interdependent activities that underpin modern human societies, economies, and cultures (Intergovernmental Panel on Climate Change 2023). 'Net zero policy' cannot, therefore, be considered as an isolated question of converting the energy system to low-carbon alternatives. It is more meaningful to understand net zero as a *parameter* for every decision and every policy at every level of national and international government, and indeed in the private and civic sectors, and in all components of individual consumption and behaviour.

High-income countries have a critical role to play in halting the increase in global emissions (annual per capita CO_2 emissions are over thirty times greater than in low-income countries) (Ritchie *et al.* 2023). Responding to this challenge, in 2008, the UK became the first country to set a legally binding target to reduce greenhouse gas emissions, a target made more ambitious in 2019 (Climate Change Act 2008; Hirst *et al.* 2019). In the UK's multi-tiered structure of government, the leaders of the national UK government, the devolved governments of Scotland, Wales, and Northern Ireland, and local governments are elected and, therefore, accountable to their voters. They have varying degrees of leverage over major drivers of greenhouse gas emissions, including energy use by road transport and in residential buildings (Gudde *et al.* 2021; MacKinnon 2015; UK Government 2022; UK Research and Innovation 2022). Some success has been seen in reducing emissions, the UK having met all its targets so far; but it is not on track (Climate Change Committee 2024). Understandings and insights from SHAPE research provide the essential lynchpin for these governments to accelerate to net zero by 2050 and to help navigate 'an exit off the highway to climate hell' (*United Nations News* 2024).

Against this backdrop, the British Academy's (2024) policy report (Governance for Net Zero) focused on the role of governance in connecting leaders with all manner of publics. As this report argues, 'Without significant attention on governance … progress towards net zero targets will be severely constrained.' It is increasingly clear that grappling with climate change as a governance policy arena requires the incorporation of the SHAPE approach. In many ways the relevant climate science is well travelled, as are the technical opportunities for reducing or removing global warming gases. What is now in the forefront of policy delivery is the social acceptance of the dramatic changes in lifestyles and consumption practices that will become necessary. In a politically divided and culturally disrupted world, where inequality and injustice reign ever more prominently, the SHAPE mix is becoming vital as a central component of good governance for reaching net zero.

Following the British Academy's (2024) report and building on a growing and increasingly diverse SHAPE evidence base, the four articles in this collection dig deeper into both the problems that stem from poor governance and the solutions and opportunities to accelerate delivery brought by good governance. Each article offers fresh perspectives on the roles of people and

leaders, what connects them, and how decisions are made, to offer lessons for policymakers looking to deliver on their net zero commitments.

The articles in this collection do not contain any magic bullets—no promise of a new technology that will make this problem go away, and no promise of ways to trigger a wave of altruistic behaviour change. But they do highlight that SHAPE research helps us to better understand the complex human systems driving emissions, the tools and approaches that are working to make decisions which result in emissions falling, and what lessons we might learn when and where they are not working. Indeed, the lessons emanating from this collection show that, unless SHAPE-informed approaches to governance are pursued, there can be no democratic and consensual way to reach a low-carbon society and economy.

Why focus on governance?

This collection, and the British Academy's (n.d.) umbrella project, uses SHAPE research and insights to inform policymaking with a particular focus on democratic governance. With this focus on the practical challenges of policymaking, we take governance to relate primarily to the ways organisations, including governments, make, oversee, scrutinise, and are held accountable for decisions (International Standards Organisation n.d.). Within the overarching framework of international commitments, leaders direct, and design accountability for, any organisation's (including government departments and public bodies) net zero commitments, and create an enabling environment for private and third sectors to support those efforts. Leaders are accountable to publics (including individuals, communities, and groups), and crucially, these publics are influenced by and participate in the transformative changes to societies, economies, and cultures associated with the net zero transition. Governance, therefore, provides mechanisms for people collectively to navigate challenging and increasingly political questions about how to address very complex challenges, such as reaching net zero.

Governance encompasses a diverse range of devices, tools, and approaches. Our work has highlighted some of these practicalities: institutional trustworthiness, clarity of roles and responsibilities, consistent leadership, sustained investment and resourcing, good coordination, and a principled focus and delivery on inclusion, justice, and fairness. Where these governance elements come together, the resulting action supports an acceleration towards net zero or discovers solutions to problems that might otherwise slow progress. However, when they do not, governance can have the opposite effect: creating problems, encouraging delay, and failing to offer solutions. Despite some significant progress, many of the most challenging choices, which most likely will not be taken by national governments on their own, remain to be made.

The current state of net zero governance in the UK is certainly dynamic. The UK's Climate Change Committee (2024) highlights the achievement of reducing territorial emissions by more than half, but warns that 'only a third of the

emissions reductions required to achieve the 2030 target are currently covered by credible plans'. The High Court has also ruled the last two rounds of government strategies unlawful.[2] Cost-of-living pressures, intersecting with a growing list of other crises centred around lack of investment and regulatory coordination, are putting net zero policies under pressure, although opinion research tends to show sustained public support for these policies (Watson 2022). In the face of such pressures and the sense of political fatigue that they bring, it is even more important to double down on the insights from SHAPE disciplines that help us understand how people, societies, and cultures work out what is achievable to mitigate the overwhelmingly huge risks from rising global temperatures. By providing a brief introduction to each of the four papers included in this collection, we illustrate the important contribution SHAPE disciplines can make, while also drawing out valuable lessons for policy and policymaking on seeking to achieve net zero.

Better understanding of people, societies, and cultures from SHAPE disciplines that offer insights for policy

In our first contribution, Hall *et al.* (2025) use *relational economic sociology* based on the work of Zelizer (2012) to challenge mainstream assumptions within governance systems regarding how people behave in energy markets. Crucially, the authors depart from the typical assumptions about how people make choices and decisions, finding in a relational approach a way of understanding what they observe in their study of energy markets. Their argument is not to prescribe how people should behave, but to argue for an evidence-based approach to better understand people's decisions and actions. The authors argue that markets are constitutive of social relations: relations of trust, friendship, power, and dependence, which have moral and emotional qualities. Shifting our understanding of people, societies, and cultures in this way, they argue, would have far-reaching consequences for the approaches taken to inform better governance in the energy markets, and the design of policies that result, with positive implications for the net zero transition.

While the Hall *et al.* paper deals with consumer energy markets, Shibe and Gibbs (2025) consider the impact of the zero-carbon energy transition on skilled workers in high-carbon industries. The authors examine the recent history of the Grangemouth refinery, which has seen efforts to bring about a just transition for displaced employees fail as the international corporate owner announced its closure in 2024. They seek to understand the effects on people (particularly skilled workers) of power imbalances and competing interests—whether global corporate owners and investors, the devolved Scottish Government, or the national UK Government. Drawing on lessons from our understanding of deindustrialisation in the past, the authors demonstrate the difficulty of

[2] *Friends of the Earth Ltd & Ors v Secretary of State for Business, Energy and Industrial Strategy* (18 July 2022), *Friends of the Earth & Ors v Secretary of State for Energy Security and Net Zero* (3 May 2024).

achieving fair and just transitions in replacing skilled jobs in a refinery with equivalent jobs when public control is second to corporate decision-making. As they highlight, motivations and incentives of employers, particularly international employers, are often at odds with stated government priorities at the local level. Understanding these realities is crucial to shaping a response. This paper shows just how important it is for governance systems and decision-makers to identify all of the social and cultural bonds which unite communities with very long histories in particular industries. From a SHAPE perspective, what is at stake is the rapid disintegration of complex webs of communal connections and support arrangements for strengthening social cohesion. Pulling long-serving employees out of a long-established industry brings about a cascade of failed supporting businesses and social solidarities.

SHAPE disciplines can also help us understand the shift to net zero in different places and scales—a crucial consideration for place-based governance. Looking more closely at the subnational level, Smith's (2025) paper uses a case study of a project to shift to hydrogen-powered public transport in Aberdeen to explore the challenges facing local actors—in particular, local authorities—competing for investment. The author highlights three particular problems with this competitive approach: the economic framing has diminished the scope for socially and environmentally just approaches; the requirement to collaborate in regional clusters has bypassed local-scale civic action; and divergence in capabilities has favoured those already best placed to progress initiatives. The author concludes that with limited in-house capabilities, many local authorities are likely to be better positioned as intermediaries and coordinators, facilitating collaboration among stakeholders to drive collective action.

An understanding of deliberative democracy informs the fourth paper from Ainscough *et al*. (2025). It focuses on an institutional innovation aiming to narrow the gap between leaders and publics—namely, deliberative mini-publics. This covers a family of methods, with the most common being citizens' assemblies (or 'climate assemblies' in the context of climate action). These methods tend to have four aims: providing knowledge, demonstrating a mandate for action, increasing trust, and providing oversight and accountability. The authors dig deeper into the application of the methodological insights arising from research and practice into these approaches. They seek to identify potential uses of deliberative democracy that have been under-exploited in the UK context, including agenda-setting and oversight. Such innovative approaches could be of great value in guiding the devolving of power relationships discussed by Connor Smith, if their full potential was realised along the lines adumbrated by Ainscough and colleagues. Getting to net zero will require and fashion new approaches to collective governance which take account of local cultures and economic histories.

These four papers only scratch the surface of the diversity of SHAPE insights available to policymakers to help understand the links between people and policy. Crucially, each of the papers also considers the extension of these ideas to pick out some of the lessons from the case studies they bring forward.

Examples of mechanisms, tools, and approaches that work—or don't work—to bring about the needed progress on net zero

Given the practical challenges and the urgency of the response, SHAPE insights on what works (or doesn't) is proving crucial. All four papers offer informative and revealing examples.

For example, Hall *et al.* (2025) consider how central government might structure its approach to net zero: Mission Led or Radical Incrementalism. The authors acknowledge that this may be a false distinction. They deploy it to highlight different features of policymaking in consumer energy markets, from which we can learn and apply them more generally. They examine two policy case studies: solar panels for flats to illustrate Radical Incrementalism, and universal basic energy to illustrate a Mission Led approach. In the case of the former, they describe the modest changes to system regulation that could open up opportunities to adopt solar energy for residents in the UK's 5.4 million flats. The case study of a successful trial of such a change illustrates where an inclusive approach that understands social relations can bring a broader range of people on board for the net zero transition. The authors conclude with three specific, current proposals for the UK Government's as yet unpublished Local Power Plan.[3] These are: closing data gaps, targeting left-behind geographies and socio-demographic communities, and designing energy policy around a relational understanding of people's choices. This will require much more emphasis in governance systems on coordination between national polities, local realities and flexibilities, and regulatory accommodation.

The case study presented by Shibe and Gibbs (2025) highlights the dissonance between government plans to safeguard employees and the priorities and incentives of the international plant owners. These are colliding: ultimately undermining sincere efforts to preserve skilled employment in the area. The authors settle on three headline lessons on how to approach governance in situations of significant competing interests. First is coordination among policymakers. In the context of Grangemouth, different approaches from the Scottish Government and the national UK Government fractured efforts to secure the outcome. Second is transparency. While acknowledging the challenges when dealing with global companies with minimal accountability within the UK, the authors demonstrate that transparency is essential for retaining support from the workforce. Finally, the authors point to long-term anticipatory planning, emphasising the particular circumstances around large industrial sites which enjoy a high degree of worker loyalty. This last point is crucial. It highlights interview findings set out in the paper, which show a willingness to transition and to retrain for local low-carbon jobs, but that this support is conditional on comparable pay and conditions. Good governance for net zero must be trustworthy, and continually but openly adaptable.

[3]The Local Power Plan is part of the remit of Great British Energy and is yet to be published.

Smith's (2025) paper brings a place and scale lens to highlight the enabling conditions supporting the successful scheme to introduce hydrogen-fuelled vehicles in Aberdeen. The starting point is a consortium approach to the investment and collective purchasing, driven by an EU Horizon funding mechanism. The same collaborative approach encouraged learning, data and practice sharing, and trialling. An interesting feature of the case study is the role played by the team driving the project, which worked despite a lack of signalling or direct support from the Scottish or UK Governments. As Connor Smith illustrates, this team co-developed, adapted, and found ways to sustain their projects. They also built relationships and worked to align interests across departments, services, and external stakeholders. The authors draw an important transferable conclusion on the nature of leadership, which can be understood as a collective and dynamic endeavour which amplifies the contributions of individuals.

The detailed research set out in the Ainscough *et al.* (2025) paper provides valuable insights into how deliberative mini-publics perform against expectations and how deliberation can be embedded in net zero governance. They emphasise the success of climate assemblies in helping policymakers understand which policies work for people, which policies they want, and which are seen as acceptable. The picture is more mixed on whether climate assemblies directly impact specific policies, with the added value appearing to centre on their giving confidence to leaders to act on pre-existing plans. Equally, climate assemblies can increase trust in decision-making for those taking part, but there are risks around poor follow-up and inaction, and loss of trust among non-participants. The authors make four recommendations around the use of these methods in institutional settings: design climate assemblies and their institutional linkages with a view to achieving specific objectives; move towards climate assemblies focused on specific aspects of the net zero challenge; consider diversity of political worldviews in the ways in which climate assemblies are designed and framed; and develop in-house expertise. The potential for innovations in approaches to deliberative democracy are far from exhausted, and the paper draws on a range of examples of both well-studied and newer formats, which provide valuable templates for policymakers to consider.

Conclusion

This collection prompts us to reconsider the ways we understand how people relate to various monetary and non-monetary markets, and to take more care in understanding how competing interests may block good plans. It highlights the value of thinking differently about how collaboration can drive successful investment and questions our assumptions about how people and leaders are linked through mechanisms that allow for effective collective decision-making. It combines these fresh insights with examples of what works (or doesn't work) in practice, demonstrating that good and accountable governance can support accelerated delivery of outcomes around net zero, while poor practices can fail and leave even more people behind.

None of this is to say there are easy answers offered in this collection. We started with the evidence that 2024 was the warmest year on record and saw global average temperatures exceed the 1.5° threshold. This daunting position is at risk of becoming paralysing. Why, then, is SHAPE so important? In the four papers which compose this collection, the authors have brought together a rich diversity of approaches to gathering knowledge, widening understanding, and deepening participation. They have applied evidence-based methods with innovative approaches to people-centred analyses and have offered moral and ethical interpretations of why we behave as we do. Drawing these strands together provides some scope for optimism that people, societies, and cultures can collectively and pluralistically navigate the complex challenges we have created with these exciting insights and tools.

Beyond this set of papers, we are optimistic about the potential for SHAPE to provide a variety means for imagining positive futures, drawing on the swirling energies of human innovation and creativity. Climate action at local, national, and international levels is inextricably linked to the interests, actions, and cultural aspirations of a wide range of actors. More than ever, we need to understand how to bring collective and civic approaches to solve problems with universal pride in our surroundings, identities, and localities. SHAPE opens up the boundaries of discovery, of analysis, and of remedy, to foster collective, pluralistic, and accountable pathways to the positive futures in which we can flourish. We call on all interested parties to join us by deepening SHAPE research and unleashing imagination to inform and guide good practice in governance on net zero.

Acknowledgements

The authors would like to thank the Tuisku (Snow) Curtis-Kolu for her invaluable reviews which have helped improve all the papers included in this collection.

References

Ainscough, J., Killeen, L., Lewis, P., Shepherd, A. & Willis, R. (2025), 'Citizen deliberation in Net Zero governance: learning lessons and looking forward', *Journal of the British Academy*, 13(1): a13. https://doi.org/10.5871/jba/013.a13

British Academy (n.d.), 'Net zero governance'. https://www.thebritishacademy.ac.uk/programmes/net-zero-policy-programme/ (Accessed 23 January 2025).

British Academy (2024), 'Governance for net zero'. https://www.thebritishacademy.ac.uk/publications/governance-for-net-zero/

Climate Change Act (2008), https://www.legislation.gov.uk/ukpga/2008/27/section/1 (Accessed 21 January 2025).

Climate Change Committee (2024), 'Progress in reducing emissions 2024'. https://www.theccc.org.uk/publication/progress-in-reducing-emissions-2024-report-to-parliament/

Copernicus Climate Change Service (C3S) (2024), 'Global climate highlights 2024'. https://climate.copernicus.eu/global-climate-highlights-2024 (Accessed 10 January 2025).

Friends of the Earth & Ors v Secretary of State for Energy Security and Net Zero (3 May 2024), The National Archives. https://caselaw.nationalarchives.gov.uk/ewhc/admin/2024/995?query=net+zero+strategy&from_date=2020-01-01&to_date=2024-12-31

Friends of the Earth Ltd & Ors v Secretary of State for Business, Energy and Industrial Strategy (18 July 2022), The National Archives. https://caselaw.nationalarchives.gov.uk/ewhc/admin/2022/1841?query=net+zero+strategy&from_date=2020-01-01&to_date=2024-12-31 (Accessed 23 January 2025).

Gudde, P., Oakes, J., Cochrane, P., Caldwell, N. & Bury, N. (2021), 'The role of UK local government in delivering on net zero carbon commitments: you've declared a climate emergency, so what's the plan?', *Energy Policy*, 154: 112245. https://doi.org/10.1016/j.enpol.2021.112245

Hall, S., Owen, A., Middlemiss, L., Davis, M. & Bookbinder, R. (2025), ''Mission-led government or radical incrementalism for electricity and Net Zero?'', *Journal of the British Academy*, 13(1): a10. https://doi.org/10.5871/jba/013.a10

Hirst, D., Bolton, P. & Priestley, S. (2019), 'Net zero in the UK'. House of commons library. https://commonslibrary.parliament.uk/research-briefings/cbp-8590/

Intergovernmental Panel on Climate Change (2023), 'AR6 synthesis report: Climate change 2023 — IPCC'. https://www.ipcc.ch/report/sixth-assessment-report-cycle/ (Accessed 21 January 2025).

International Standards Organisation (ISO) (n.d.), 'ISO 37000 Governance of organizations - guidance'. https://committee.iso.org/ISO_37000_Governance (Accessed 27 May 2022).

MacKinnon, D. (2015), 'Devolution, state restructuring and policy divergence in the UK', *The Geographical Journal*, 181(1): 47–56. https://doi.org/10.1111/geoj.12057

Ritchie, H., Rosado, P. & Roser, M. (2023), 'CO_2 and greenhouse gas emissions', *Our World in Data*. https://ourworldindata.org/co2-and-greenhouse-gas-emissions

Shibe, R. & Gibbs, E. (2025), 'The grangemouth oil refinery closure: lessons for "Just Transition" governance', *Journal of the British Academy*, 13(1): a11. https://doi.org/10.5871/jba/013.a11

Smith, C. (2025), 'Guiding principles for subnational investment in the age of Climate Emergency', *Journal of the British Academy*, 13(1): a12. https://doi.org/10.5871/jba/013.a12

UK Government (2022), 'Mission zero: independent review of net zero'. https://www.gov.uk/government/publications/review-of-net-zero

UK Research and Innovation (UKRI) (2022), 'Accelerating net zero delivery'. https://www.ukri.org/publications/accelerating-net-zero-delivery/

United Nations News (2024), 'There is an exit off "the highway to climate hell", Guterres insists'. https://news.un.org/en/story/2024/06/1150661

Watson, K. (2022), 'Cost of living crisis hasn't dented public support for climate policies… and there are some policies which are almost universally supported'. cast.ac.uk. https://cast.ac.uk/cost-of-living-crisis-hasnt-dented-public-support-for-climate-policies-and-there-are-some-policies-which-are-almost-universally-supported/

World Meteorological Organization (2025), 'WMO confirms 2024 as warmest year on record at about 1.55 °C above Pre-Industrial Level'. https://wmo.int/news/media-centre/wmo-confirms-2024-warmest-year-record-about-155degc-above-pre-industrial-level

World Weather Attribution (n.d.), 'Methods'. https://www.worldweatherattribution.org/methods/ (Accessed 10 January 2025).

Zelizer, V.A. (2012), 'How I became a relational economic sociologist and what does that mean?', *Politics & Society*, 40(2): 145–74. https://doi.org/10.1177/0032329212441591

About the authors

Sarah Birch is Professor of Political Science in the Department of Political Economy at King's College London. Her research interests include the political effects of extreme weather events and the institutionalisation of enlightened foresight in democratic processes as a means of addressing climate change. E-mail: sarah.birch@kcl.ac.uk

Hilary Graham is Professor of Health Science at the University of York. Her current research focuses on the implications of climate change for people's health and everyday lives. From 2014 to 2023, Hilary Graham was part of the Lancet Countdown on health and climate change, leading work tracking public and political engagement. She undertakes research in this area as a co-investigator in the NIHR Public Health Policy Research Unit. She is a Fellow of the British Academy.

Andrew Jordan is Professor of Environmental Policy at the School of Environmental Sciences, University of East Anglia in Norwich and an Associate Director of the ESRC CAST Centre. His research centres on the political challenges which arise when attempts are made to govern environmental problems such as climate change. He is a Fellow of the British Academy.

Tim O'Riordan is Professor Emeritus in the School of Environmental Sciences, University of East Anglia. He is involved with three British Academy initiatives: Net Zero Governance, Where we Live Now, and the Interdisciplinary programme of the Early Career Researcher Network. He is a Fellow of the British Academy.

Henry Richards is Senior Futures Lead at the British Academy, and has led public policy research and practice programmes at the Academy since 2018. E-mail: h.richards@thebritishacademy.ac.uk