16. What are the prospects of a just transition towards sustainable climate change policies? The search for practical lessons from policy studies

Paul Cairney, Irina Timonina and Hannes Stephan

INTRODUCTION

One feature of post pandemic recovery could be the truism that crises are never felt equally. Any policy problem involves multiple forms of inequality, such as in relation to recognitional, procedural, and distributive justice: whose knowledge or insights are deemed relevant to the problem, who gets to participate in policy deliberation and choice, and who wins and loses from the outcomes? The previous book (Bryson et al., 2021) showed that COVID-19 exhibited key aspects of these problems. Internationally, it exposed the concentration of resources, in a small number of countries, to provide vaccinations and deal with the social and economic consequences of pandemics. Domestically, in countries like the UK, it exposed a reliance by policymakers on a narrow range of expertise to inform policy, and a tendency to present a 'we are all in this together' story despite the evidence of unequal exposure to viruses and vulnerability to diseases (which reflected existing health inequalities and their 'social determinants' - Bambra et al., 2021; Cairney, 2021. In this book, we explore parallels with a crisis with a longer fuse (climate change) and the prospect of more equitable processes and outcomes (climate justice).

Although climate change is a slow-onset emergency and COVID-19 is a rapid-onset crisis, the impacts of both processes often pose the greatest challenge to low-income groups and the most vulnerable in society. For COVID-19, it proved possible to design recovery policies that assisted such groups, and lessons could be drawn from significant interventions that governments made during the pandemic, such as increased social security payments (McCulloch, 2023). For climate change, the initial focus lies on resilience

and adaptation measures that allow societies to withstand or 'bounce back' from extreme weather events which will occur with increasing strength and frequency. Both resilience to, and recovery from, such expected disasters can be planned in ways that generate positive outcomes for the most vulnerable groups. Further, policy design could give special attention to synergies between the two areas, such as subsidised energy efficiency measures or public transport infrastructure (Hepburn et al., 2020), which have a triple benefit of enhancing affordability of basic energy needs, boosting resilience to extreme weather conditions, and helping to reduce greenhouse gas emissions.

There are numerous other parallels between COVID-19 and climate change, including in relation to the 'super wicked' nature of such policy problems. Rittel and Webber (1973: 161–7) had coined the term 'wicked problems' to challenge rationalist approaches to policy analysis which did not recognise the extent to which: (1) the definition of policy problems is highly contested; (2) there is continuously high uncertainty about the cause of the problem and effectiveness of potential solutions; and (3) there is limited room for experimentation or trial-and-error learning, since any policy error will have major social and economic consequences.

In addition, Levin et al. (2012: 127–8) and Auld et al. (2021) identify further attributes of 'super wicked' problems such as COVID-19 and climate change, characterised by: a great sense of urgency and time 'running out'; the absence of a single 'central authority' to make policy (since the problem transcends state boundaries); the irony that those countries or governments seeking to solve the problem are also exacerbating it; and the tendency of policy actors to 'irrationally discount the future' and treat the longer term as less important than current priorities. They also predict 'tragedy' unless policymakers across the world can produce a credible and binding collective commitment to address climate change, then 'lock in' new behaviour to make sure that the benefits of maintaining – and costs of reversing – policies increase over time (Levin et al., 2012: 135–6). Further, if we add the likelihood of *unjust transitions towards environmental sustainability* (including to meet 'net zero' targets) we are engaging with an exceptional policy problem that goes beyond 'super wicked'.

In that context, we ask: to what extent will a post pandemic recovery period be conducive to government action to address the unequal impacts of climate crisis or prevent the further marginalisation of vulnerable populations? To that end, we reflect on the multiple insights generated by our qualitative systematic review of climate justice research (Cairney et al., 2023). Our review finds that most articles contribute to a common narrative. First, they identify the urgent need to address climate change and its unequal impact, while ensuring just policy processes and an equitable distribution of the costs and benefits of policy (a 'just transition' towards environmental sustainability, securing equitable processes and outcomes). Second, they identify the contestation

to define what climate justice means: they coalesce around a social justice approach built on recognitional, procedural, and distributional forms of justice, and contrast it with a more dominant neoliberal approach that prioritises economic growth and favours markets over state responsibility (generally at the expense of equitable outcomes). Third, they identify the changes to policy and policymaking that are required to foster climate change mitigation (to prevent worsening climate impacts) and adaptation (to adjust to climate impacts) and ensure social justice, including 'mainstreaming' environmentalism across policy sectors. Fourth, they identify a dispiriting gap between these aims and actual practices and outcomes. In other words, the experience of past policy responses to climate emergencies reveals they are rarely successful in promoting climate mitigation and wider environmental sustainability. Fifth, most struggle to use policy theories effectively to generate practical lessons on how to explain and address this gap. In that context, we describe what a greater body of policy theory-informed research would look like, and how it would help to bridge this divide between research, policy, and practice.

METHOD

Our climate justice research forms part of a collection of reviews of inequalities research in relation (so far) to health, education, and gender mainstreaming policies (Cairney et al., 2021; Cairney and Kippin, 2022, Cairney et al., 2022). We examine how '(a) policy actors compete to define the policy problem of equity or justice in relation to inequalities', and (b) 'identify priorities in relation to factors such as geography, gender, class, race, ethnicity, and disability' (Cairney and Kippin, 2022: 5). Each review's guiding question is How does equity research use policy theory to understand policymaking? and we identify the studies that provide a non-trivial reference to policymaking concepts or theories (while setting a very low inclusion bar to maximise the scope of the review) (see Cairney et al., 2023 for a full account of methods). We searched three databases (Web of Science, Scopus, and Proquest) to identify texts including 'climate change' and 'policy' plus 'justice' or 'equity'. Timonina conducted a manual search of the full text to find all articles that made at least one reference to an established policy theory or concept, then Cairney performed a further inclusion check, identifying those to double check for exclusion, and Cairney and Stephan excluded borderline cases, leaving 108 included texts (107 articles, 1 book chapter). We only included texts written in English, which skewed authorship towards Western countries (especially the UK, the US, Australia, and Canada), albeit while having an international focus or comparing processes in over 50 countries. Our specific focus on climate justice (rather than the wider climate change policy literature) also likely skews the included data somewhat (for example, if most engagement with policy theories

is in the wider climate change policy literature). Surveying the texts, 58% of articles were primarily qualitative, 24% were literature reviews, 10% quantitative (surveys), 5% mixed, and 3% were policy analyses. We used an inductive qualitative approach to analyse each text and generate the following overview.

KEY THEMES IN CLIMATE JUSTICE AND POLICYMAKING RESEARCH

First, researchers identify disproportionately low policymaker attention (and academic, media, and public attention) to the urgency and importance of climate justice. Climate injustice relates to the multiple, mutually reinforcing, and unfair impacts of: social and economic inequalities; climate change; and the attempts by international organisations and governments to foster climate mitigation and adaption. While the IPCC (Intergovernmental Panel on Climate Change) has an authoritative role in assessing the evidence for climate change, its role in addressing climate justice is less pronounced. While the UNFCCC (United Nations Framework Convention on Climate Change) has become increasingly adept at coordinating an international response – via the annual COP (Conference of the Parties) meetings – it has been relatively vague and non-committal in relation to international agreements on fair procedures and outcomes. While many governments have set ambitious climate change targets, they have pursued less ambitious attempts to foster inclusive processes with equitable outcomes (Audet, 2013; Mills-Novoa and Liverman, 2019; Rosen, 2015).

Second, researchers describe a battle of ideas to define the climate justice problem and identify solutions. Most describe variants of their preferred social justice approach, which relates to *recognitional* (whose lives, wellbeing, or knowledge are valued as policy relevant?), *procedural* (who makes policy, and who is included in political processes?), and *distributional* (who wins and loses from policy?) justice. These elements are essential to challenge the privileging and marginalisation of voices (e.g. to favour scientific expertise and diminish Indigenous knowledge), ensure fair ways to make policy (encouraging mass participation and deliberation, not expert-led depoliticisation), and secure fair ways to pay for climate change mitigation and minimise inequalities associated with adaptation (Bennett et al., 2019; da Costa Silva, 2021; Malloy and Ashcroft, 2020; Pellegrini-Masini et al., 2020; Rootes et al., 2012).

In other words, researchers use these definitions to counter a more dominant neoliberal approach that: prioritises economic growth over climate justice, rejects high state intervention (to redistribute resources and regulate business and individual behaviour), favours policies that centre the market and relatively voluntary action (such as economic incentives to protect forests, or to create a 'carbon market'), while 'depoliticising' the issue by emphasising faith

in technological solutions and treating climate change as a problem amenable to technical solutions, drawing mostly on scientific or managerial expertise (Godden et al., 2020; Johnson, 2021; Nielsen, 2014; Riedy, 2020; Zannakis, 2015).

Third, they identify what needs to happen to ensure climate justice. Most describe the need for radical and rapid changes to policy and policymaking to foster transformational changes to the economy and society (or to socio-technical systems). This agenda includes: producing new coalitions to challenge the dominance of a neoliberal coalition; reimagining collaboration and deliberation across multi-level policy processes; 'mainstreaming' environmentalism across government and policy; reforming policymaking to ensure policy integration; and, innovative policy design to foster a coherent collection of effective and equitable policy tools (Bennett et al., 2019; Brockhaus et al., 2014; Burch et al., 2019; Huitema et al., 2016; Leck and Simon, 2018).

Fourth, they find that - in almost all cases - these requirements are not met in practice. Most studies identify the inability of social justice activists to challenge the power of actors who maintain the dominance of neoliberal approaches. From the perspective of most researchers, the result is overreliance on market-based measures (such as economic incentives) to encourage changes to individual and business behaviour, and insufficient state intervention to regulate behaviour and redistribute the benefits and costs of climate change mitigation and adaptation. At the same time, policy processes tend to be too centralised and exclusionary, further marginalising the social groups already disadvantaged by the market and climate change. While key international organisations or fora (such as the UN and UNFCCC) and governments pledge to do better, the neoliberal paradigm provides the lens through which to design policy instruments and measure progress (Okereke, 2006; 2010). Further, many elected governments and international or donor organisations co-opt the language of social justice to say the right things while maintaining the status quo, with a commitment to (say) greater participation and inclusion providing a veneer for business as usual governance (Flottum and Gjerstad, 2013; Lebel et al., 2018). Or, the lack of procedural justice is built into authoritarian government (Huang and Liu, 2021). These deliberate impediments to progress supplement the usual unintended consequences and implementation gaps that are a feature of all policies (Gerlak and Schmeier, 2014; Koch and Verholt, 2020; Naeku, 2020; Skjærseth, 2021; Sovacool et al., 2022).

Finally, some use policymaking theories or concepts to analyse the processes that constrain or facilitate transformational change. For the most part, they focus on the dominant political practices and discourses that cause climate injustice, such as to identify an unequal battle of ideas between social justice and neoliberal coalitions (or competing policy frames), in the context of generally low attention to climate injustice and high uncertainty about how to

persuade policymakers or the public about the need to foster transformations (e.g. Lebel et al., 2018; Gebara et al., 2017; Schmidt and Schäfer, 2015). In that context, some examine how activists respond, such as to treat fossil fuel companies as the enemy to signal the need for war-like action to secure radical change, or to foster coalitions of convenience and spot opportunities for a series of more modest changes (Basseches et al., 2021; da Conceição et al., 2015; Gray and Bernell, 2020; Mangat et al., 2018; Muncie, 2021). While the latter is more politically feasible, some studies suggest that the resultant policy change will be layered onto institutions that are not conducive to effective delivery (e.g. Pillai and Dubash, 2021).

WHAT WOULD POLICY THEORY-INFORMED RESEARCH LOOK LIKE?

We argue that three key insights should inform normative and empirical studies of climate justice.

1. Transformational Policy Change is Rare and Generally Defies Prediction

Many mainstream accounts of policy change identify the rarity of the kinds of policy change sought in most accounts of climate justice. First, punctuated equilibrium theory (Baumgartner et al., 2018) shows that overall policy change (in a single political system) consists of a huge number of small changes and small number of major changes (perhaps akin to the frequency distribution of earthquakes). The latter can be measured (such as via the analysis of public expenditure or legislation) far more easily than predicted or explained. A key source of explanation is 'disproportionate information processing', where policymaker attention to information about problems bears limited relation to a problem's size or the availability of information, contributing to policy responses that are not proportionate to the size of the problem. Initially, Baumgartner and Jones (1993) provided case studies in which major changes were sandwiched between several decades of continuity, partly because (1) after a brief period of high attention, then a signal by government that the problem had largely been addressed, some actors became able to monopolise the framing of policy problems and therefore limit attention to a narrow range of solutions, while (2) others felt forced to 'venue shop' to seek more sympathetic (and as powerful) audiences. More recent studies of rare transformational changes situate them in complex systems outside of anyone's control, but with some potential for a bandwagon then pressure dam effect, in which the high levels of attention required to overcome 'friction' (the well-established rules or standard operating procedures within government that are difficult to change)

may contribute to a short and profound burst of activity that creates an opportunity for change.

Second, the advocacy coalition framework (ACF) (Jenkins-Smith et al., 2018; Weible and Ingold, 2018) describes actors entering politics to turn their beliefs into policy. They cooperate within advocacy coalitions of like-minded actors, in which their deeply held beliefs provide a basis for cooperation (the glue to keep them together) and a lens through which to understand policy problems and learn about the effect of solutions. This activity takes place in policy subsystems devoted to specific issues, in policymaking environments that constrain or facilitate each coalition. ACF accounts suggest that this activity can be low salience and devoted largely to technical aspects of problems (which could make coalitions amenable to brokered agreements) or high salience and characterised by conflict (actors romanticise their own cause and demonise their opponents). In that context, policy change tends to be minimal and routine, based largely on policy-oriented learning through the lens of a dominant coalition's beliefs (or via bargaining between coalitions), while far less frequent and major changes may be prompted by 'shocks' to the subsystem and coalitions, such as when a new government is elected, a social, economic, or environmental crisis commands attention, or policy failure prompts members of a dominant coalition to revisit their beliefs.

Third, Hall's (1993) account of policy paradigms provides three categories of policy change: routine bureaucratic changes to policy instruments (first order); non-routine changes while maintaining policy goals (second order); and radical changes to policy aims and instruments (third order). The latter relates most closely to the kinds of transformations described by climate justice researchers, but real-world examples are extremely rare, such as during a crisis within government following a major policy failure that policymakers cannot solve or explain. The experience prompts a reappraisal and rejection of the dominant 'policy paradigm' (the world views or firmly held and taken for granted beliefs that underpin policy goals and action) in favour of new ideas and sources of advice.

These sources of insight help scholars to focus on the mechanics and magnitude of policy change in (democratic) political systems. They should prompt a series of questions regarding how much-needed transformations would actually happen. First, given the low levels of attention to climate justice (even when attention to climate change is high), how likely is a pressure dam effect and what would it take to happen? Second, is it possible to envisage an agreement to secure climate justice, brokered between coalitions of actors with very different beliefs? Or, is such change only possible if climate justice coalitions seek to demonise and overcome their opponents? Third, does radical policy change occur as intermittently or infrequently as Hall (1993) suggests, or can we expect equally radical changes via a series of more modest policy

and institutional changes (Studlar and Cairney, 2014)? If the latter, how would we know that a political system was on the right trajectory or not, given that so many texts describe the co-option of climate justice ideas to protect the status quo?

These questions are essential to the interpretation of both crises. For example, even major rapid-onset crises such as COVID-19 do not reliably generate fundamental policy change. Some pandemic response measures negatively impacted on the most vulnerable groups in society, for instance through a loss of employment or higher risk of infection due to poor housing conditions. And some climate innovators, such as smaller clean tech companies, were hit hard by the economic turmoil. Moreover, the ubiquitous 'building back better' motto did not translate into distinct breakthroughs in climate policy. Although unprecedented amounts of finance were earmarked for 'green' recovery programmes, they only totalled approximately 18–40% of all money committed by global stimulus packages (Lehmann et al., 2021). Instead of expanding carbon pricing policies or phasing down fossil fuel subsidies when energy prices fell dramatically, the immediate priorities of economic revival prevailed. Large amounts of funding were given to fossil fuel producers or were used to prop up fossil fuel-intensive companies, for instance airlines, that represent the old high-carbon economic paradigm (McCulloch, 2023).

2. Policymakers Ignore Most Problems and Frames

Most policy theories build their understanding on a conceptualisation of 'bounded rationality', which describes the inevitable limits on the ability of policymakers (as individuals or organisations) to process policy relevant information (Simon, 1957). Theories identify how policymakers: (1) seek to reduce their uncertainty (a perceived lack of knowledge) by gathering policy-relevant evidence from limited sources; and (2) reduce policy ambiguity (the ability to define the same problem in different ways) by framing or paying attention to one policy frame at the expense of all others (Majone, 1989: 8, 21; Zahariadis, 2007: 66; Cairney et al., 2016: 399).

Although few texts in our review use this terminology, there is an equivalent focus on (1) how policymakers restrict their sources of policy-relevant knowledge, such as by relying too much on scientific expertise and too little on more participatory, inclusive, and deliberative processes, and (2) the dominance of one frame or way of thinking (informed by neoliberal ideas) which structures environmental policy and policymaking and gets in the way of major policy change towards social justice. Again, these processes in relation to climate change are similar to the policy dynamics during COVID-19 policymaking, such as when governments used a 'guided by the science' story to narrow their

search for policy-relevant knowledge and define their response in relation to a desired return to low state intervention (Cairney, 2021).

In that context, one key unresolved issue is the negative or positive role of policy ambiguity. On the one hand, it is a source of problems, since a lack of climate justice clarity can lead to policy failure when too many actors are unable to make sense of vague ambitions (Sokołowski and Heffron, 2022). On the other hand, ambiguity is the necessary first step to procedurally just political processes, in which many actors come together to make sense of problems and design solutions, fostering a useful consensus or harnessing the ability of contestation to keep the issue high on the policy agenda (Werners et al., 2021).

3. Policymakers do Not Fully Understand or Control their Environment

The most pressing problem relates to the policy processes that constrain and facilitate major policy change but remain beyond (1) our full understanding. and (2) the control of any single policy actor or government. The first step is to conceptualise policy processes in a commonly understood way, such as in relation to two main (and often overlapping) perspectives (Cairney, 2020). First, studies of complex policymaking systems explore how policy outputs or outcomes seem to 'emerge' in the absence of single central government control. As such, they encourage a greater empirical focus on (for example) why the same policy action can have a maximal effect in one context but minimal in another, and how new policies can emerge following long periods of continuity, as well as a normative focus on central governments letting go in favour of more decentralised policymaking in multiple 'centres'. Second, studies of complex policymaking *environments* tell the same general story of many policymakers and influencers spread across multiple venues, with each venue exhibiting different informal and formal rules, networks, dominant beliefs, and responses to socio-economic conditions. Crucially, these dynamics are already features of individual political systems, prompting climate justice scholars to consider how to conceptualise an international dynamic that exacerbates a lack of governmental control over the fate of their policies.

In that context, Huitema et al. (2016: 7–8) identify the need to further study 'polycentric governance', such as via the lens of the Institutional Analysis and Development Framework (IAD) led by Elinor Ostrom. The IAD helps to explore what happens when many autonomous or semi-autonomous 'centres' seek ways to collaborate to produce and deliver common aims (2016: 7–8). For example, does polycentricity open the possibility for innovation, learning, and the co-production of policy by many actors, in ways envisaged by climate justice scholars? Similarly, when describing the 'earth system governance' framework, Burch et al. (2019) identify the need to understand the 'governance

arrangements' that prompt or support the – societal, economic, and technological – transformations necessary to address climate change, and the required transformations in climate change governance, such as moving away from top-down international approaches towards more autonomy and accountability in relation to states and substate actions and fostering the 'diversity in norms, worldviews and knowledge systems' that preclude a single agreed solution to environmental problems (2019: 6). These concepts help to highlight the unresolved tension in much of climate justice scholarship between highlighting what is necessary to secure a transformation towards sustainable environments, and what is likely (or desirable) when there exists such a large distribution of responsibilities and range of beliefs and practices across the globe (see also Cairney et al., 2021 on similar issues to transform public health policy).

CONCLUSION

Problems such as COVID-19 and climate change highlight not only existential crises but also their profoundly unequal impacts. High levels of social and economic inequalities in societies combine with new crises, and government responses, generally to exacerbate the marginalisation of social groups and the unequal distribution of costs and benefits (and one crisis, such as COVID-19 and more recently Russia's invasion of Ukraine, may prompt governments to pay less attention to another, such as climate change).

At the same time, rapid-onset crises are often accompanied by an optimistic language of renewal, in which policy actors could grasp the opportunity to transform policy and policymaking when they are faced with the dramatic effects of catastrophe. In that context, is there a realistic prospect for climate justice during the attempts by governments to respond to issues like COVID-19 and mitigate and adapt to climate change?

Our review of the climate justice literature provides two main sources of cautionary responses. First, almost all studies provide a contrast between their preferred approach to climate justice (built on recognitional, procedural, and distributional forms of justice) and the dominant (neoliberal) approach. While they seek strong state intervention to regulate behaviour and redistribute resources, they find that governments are non-committal, or explicitly prefer to foster market-based solutions and avoid redistributive efforts. While they seek recognition for marginalised groups and high levels of citizen and stakeholder inclusion in policymaking, they find rather technocratic processes that favour a small group of experts who inform centralised or top-down approaches.

These findings suggest that recovery packages will be influenced by ongoing events, not least the crisis of energy affordability, and these priorities only sometimes overlap with distributive or procedural climate justice. Some of the additional funding flowing through pandemic recovery plans may yet

yield long-term gains for climate justice objectives, but the rapid assembly and passage of stimulus packages arguably produces inferior outcomes than the larger, long-term investments in clean energy R&D and manufacturing entailed by more targeted acts of economic policymaking. It may ultimately be such long-term policies that are needed to set economies and societies on a 'just transition' trajectory.

Second, very few studies draw on the study of policymaking systems or environments to describe how to get from the current approach towards a meaningful transformation to climate justice. The latter aim requires a greater focus on how and why there are rapid and radical changes to policy, including to explore lurches of attention to new problems, information, and ideas, and to identify how climate policies are processed in a complex system containing multiple sources of policymaking authority. Without greater attention to this research agenda, climate justice scholars may be doomed to repeat the same story of aspiration (in response to new opportunities relating to pandemic and other recoveries) but despair (when reflecting on lost opportunities).

REFERENCES

- Audet, R. (2013) Climate justice and bargaining coalitions: a discourse analysis. International Environmental Agreements: Politics, Law and Economics, 13 (3), 369–386.
- Auld, G., Bernstein, S., Cashore, B. and Levin, K. (2021) Managing pandemics as super wicked problems: lessons from, and for, COVID-19 and the climate crisis. *Policy Sciences*, 54, 707–728. https://doi.org/10.1007/s11077-021-09442-2
- Bambra, C., Lynch, J. and Smith, K. (2021) *The Unequal Pandemic: COVID-19 and Health Inequalities*. Bristol: Policy Press.
- Basseches, J.A., Rubinstein, K. and Kulaga, S.M. (2021) Coalitions that clash: California's climate leadership and the perpetuation of environmental inequality. *Research in Political Sociology*, 28, 23–44.
- Baumgartner, F. and Jones, B. (1993) *Agendas and Instability in American Politics*. Chicago, IL: Chicago University Press.
- Baumgartner, F., Jones, B. and Mortensen, P. (2018) Punctuated equilibrium theory, in Weible, C. and Sabatier, P. (Eds), *Theories of the Policy Process* (4th edn, pp. 55–102). Chicago, IL: Westview Press.
- Bennett, N.J., Blythe, J., Cisneros-Montemayor, A.M., Singh, G.G. and Sumaila, U.R. (2019) Just transformations to sustainability. *Sustainability*, 11 (14), art. 3881.
- Brockhaus, M., Di Gregorio, M. and Mardiah, S. (2014) Governing, the design of national REDD plus: an analysis of the power of agency. *Forest Policy and Economics*, 49, 23–33.
- Bryson, J. Andres, L., Ersoy, A. and Reardon, L. (Eds) (2021) *Living with Pandemics: Places, People and Policy*. Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.
- Burch, S., Gupta, A., Inoue, C.Y.A., Kalfagianni, A., Persson, A., Gerlak, A.K., Ishii, A., Patterson, J., Pickering, J., Scobie, M., Van der Heijden, J., Vervoort, J., Adler, C., Bloomfield, M., Djalante, R., Dryzek, J., Galaz, V., Gordon, C., Harmon, R.,

- Jinnah, S., Kim, R.E., Olsson, L., Van Leeuwen, J., Ramasar, V., Wapner, P. and Zondervan, R. (2019) New directions in earth system governance research. *Earth System Governance*, 1, 100006.
- Cairney, P. (2020) Understanding Public Policy. London: Red Globe.
- Cairney, P. (2021) Evidence-informed COVID-19 policy: what problem was the UK government trying to solve?, in Bryson, J., Andres, L., Ersoy, A. and Reardon, L. (Eds), Living with Pandemics: Places, People and Policy (pp. 250–260). Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.
- Cairney, P. and Kippin, S. (2022) The future of education equity policy in a COVID-19 world: a qualitative systematic review of lessons from education policymaking [version 2; peer review: 2 approved]. *Open Research Europe*, 1 (78), 1–44. https://doi.org/10.12688/openreseurope.13834.2
- Cairney, P., Oliver, K. and Wellstead, A. (2016) To bridge the divide between evidence and policy: reduce ambiguity as much as uncertainty. *Public Administration Review*, 76 (3), 399–402.
- Cairney, P., St. Denny, E. and Mitchell, H. (2021) The future of public health policy-making after COVID-19: a qualitative systematic review of lessons from Health in All Policies [version 2; peer review: 2 approved]. *Open Research Europe*, 1(23). https://doi.org/10.12688/openreseurope.13178.2
- Cairney, P., St. Denny, E., Kippin, S. and Mitchell, H. (2022) Lessons from policy theories for the pursuit of equity in health, education, and gender policy. *Policy and Politics*, 50 (3), 362–383.
- Cairney, P., Timonina, I. and Stephan, H. (2023) How can policy processes foster climate justice and just transitions? A qualitative systematic review. *Open Research Europe*, holding reference.
- da Conceição, H.R., Boerner, J. and Wunder, S. (2015) Why were upscaled incentive programs for forest conservation adopted? Comparing policy choices in Brazil, Ecuador, and Peru. *Ecosystem Services*, 16, 243–252.
- da Costa Silva, G. (2011) Assessing environmental justice of community-based watershed management: a tool to build adaptive capacity in Latin America? *Local Environment*, 16 (5), 445–460.
- Flottum, K. and Gjerstad, O. (2013) The role of social justice and poverty in South Africa's National Climate Change Response White Paper. *South African Journal on Human Rights*, 29, 61–90.
- Gebara, M.F., May, P.H., Carmenta, R., Calixto, B., Brockhaus, M. and Di Gregorio, M. (2017) Framing REDD+ in the Brazilian national media: how discourses evolved amid global negotiation uncertainties. *Climatic Change*, 141 (2), 213–226.
- Gerlak, A.K. and Schmeier, S. (2014) Climate change and transboundary waters: A study of discourse in the Mekong River Commission. *Journal of Environment & Development*, 23 (3), 358–386.
- Godden, N.J., Macnish, P., Chakma, T. and Naidu, K. (2020) Feminist Participatory Action Research as a tool for climate justice. *Gender and Development*, 28 (3), 593–615.
- Gray, D. and Bernell, D. (2020) Tree-hugging utilities? The politics of phasing out coal and the unusual alliance that passed Oregon's clean energy transition law. *Energy Research & Social Science*, 59, 101288.
- Hall, P. (1993) Policy paradigms, social learning, and the state: the case of economic policymaking in Britain. *Comparative Politics*, 25 (3), 275–296.

- Hepburn, C., O'Callaghan, B., Stern, N., Stiglitz, J. and Zenghelis, D. (2020) Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change? Oxford Review of Economic Policy, 36 (S1), S359–S381.
- Huang, P. and Liu, Y. (2021) Toward just energy transitions in authoritarian regimes: indirect participation and adaptive governance. *Journal of Environmental Planning and Management*, 64 (1), 1–21.
- Huitema, D., Adger, W.N., Berkhout, F., Massey, E., Mazmanian, D., Munaretto, S., Plummer, R. and Termeer, C.C.J.A.M. (2016) The governance of adaptation: choices, reasons, and effects. Introduction to the Special Feature. *Ecology and Society*, 21 (3), art. 37.
- Jenkins-Smith, H., Nohrstedt, D., Weible, C. and Ingold, K. (2018) The advocacy coalition framework: An overview of the research program, in Weible, C. and Sabatier, P. (Eds), *Theories of the Policy Process* (pp. 145–182). Abingdon: Routledge.
- Johnson, S. (2021) Discourse and practice of REDD plus in Ghana and the expansion of state power. *Sustainability*, 13 (20), 11358.
- Koch, D. and Verholt, M. (2020) Limits to learning: the struggle to adapt to unintended effects of international payment for environmental services programmes. *International Environmental Agreements: Politics Law and Economics*, 20 (3), 507–539.
- Lebel, L., Kakonen, M., Dany, V., Lebel, P., Thuon, T. and Voladet, S. (2018) The framing and governance of climate change adaptation projects in Lao PDR and Cambodia. *International Environmental Agreements: Politics Law and Economics*, 18 (3), 429–446.
- Leck, H. and Simon, D. (2018) Local authority responses to climate change in South Africa: the challenges of transboundary governance. *Sustainability*, 10 (7), 2542.
- Lehmann, P., de Brito, M., Gawel, E., Groß, M., Haase, A., Lepenies, R., Otto, D., Schiller, J., Strunz, S. and Thrän, D. (2021) Making the COVID-19 crisis a real opportunity for environmental sustainability. Sustainability Science, 16, 2137–2145.
- Levin, K., Cashore, B., Bernstein, S. and Auld, G. (2012) Overcoming the tragedy of super wicked problems: constraining our future selves to ameliorate global climate change. *Policy Sciences*, 45 (2), 123–152.
- Majone, G. (1989) Evidence, Argument and Persuasion in the Policy Process. New Haven, CT: Yale University Press.
- Malloy, J.T. and Ashcroft, C.M. (2020) A framework for implementing socially just climate adaptation. *Climatic Change*, 160 (1), 1–14.
- Mangat, R., Dalby, S. and Paterson, M. (2018) Divestment discourse: war, justice, morality and money. *Environmental Politics*, 27 (2), 187–208.
- McCulloch, N. (2023) *Ending Fossil Fuel Subsidies: The Politics of Saving the Planet*. Rugby: Practical Action Publishing.
- Mills-Novoa, M. and Liverman, D.M. (2019) Nationally Determined Contributions: material climate commitments and discursive positioning in the NDCs. *Wiley Interdisciplinary Reviews: Climate Change*, 10 (5), e589.
- Muncie, E. (2021) Investing in climate solutions? An exploration of the discursive power and materiality of fossil fuel divestment campaigns in Scotland. *Journal of Environmental Studies and Sciences*, 11 (4), 537–547.
- Naeku, M.J. (2020) Climate change governance: an analysis of the climate change legal regime in Kenya. *Environmental Law Review*, 22 (3), 170–183.
- Nielsen, T.D. (2014) The role of discourses in governing forests to combat climate change. *International Environmental Agreements: Politics Law and Economics*, 14 (3), 265–280.

- Okereke, C. (2006) Global environmental sustainability: intragenerational equity and conceptions of justice in multilateral environmental regimes. *Geoforum*, 37 (5), 725–738.
- Okereke, C. (2010) Climate justice and the international regime. *Wiley Interdisciplinary Reviews: Climate Change*, 1 (3), 462–474.
- Pellegrini-Masini, G., Pirni, A. and Maran, S. (2020) Energy justice revisited: a critical review on the philosophical and political origins of equality. *Energy Research & Social Science*, 59, 101310.
- Pillai, A.V. and Dubash, N.K. (2021) The limits of opportunism: the uneven emergence of climate institutions in India. *Environmental Politics*, 30 (sup1), 93–117.
- Riedy, C. (2020) Discourse coalitions for sustainability transformations: common ground and conflict beyond neoliberalism. *Current Opinion in Environmental Sustainability*, 45, 100–112.
- Rittel, H. and Webber, M. (1973) Dilemmas in a general theory of planning. *Policy Sciences*, 4 (2), 155–169.
- Rootes, C., Zito, A. and Barry, J. (2012) Climate change, national politics and grass-roots action: an introduction. *Environmental Politics*, 21 (5), 677–690.
- Rosen, A.M. (2015) The wrong solution at the right time: the failure of the Kyoto Protocol on climate change. *Politics & Policy*, 43 (1), 30–58.
- Schmidt, A. and Schäfer, M.S. (2015) Constructions of climate justice in German, Indian and US media. *Climatic Change*, 133 (3), 535–549.
- Simon, H. (1957) Models of Man: Social and Rational. New York: John Wiley.
- Skjærseth, J.B. (2021) Towards a European Green Deal: the evolution of EU climate and energy policy mixes. *International Environmental Agreements: Politics, Law and Economics*, 21 (1), 25–41.
- Sokołowski, M.M. and Heffron, R.J. (2022) Defining and conceptualising energy policy failure: the when, where, why, and how. *Energy Policy*, 161, 112745.
- Sovacool, B.K., Hess, D.J., Cantoni, R., Lee, D., Claire Brisbois, M., Jakob Walnum, H., Freng Dale, R., Johnsen Rygg, B., Korsnes, M., Goswami, A., Kedia, S. and Goel, S. (2022) Conflicted transitions: exploring the actors, tactics, and outcomes of social opposition against energy infrastructure. *Global Environmental Change*, 73, 102473.
- Studlar, D. and Cairney, P. (2014) Conceptualizing punctuated and non-punctuated policy change: tobacco control in comparative perspective. *International Review of Administrative Sciences*, 80 (3), 513–531.
- Weible, C. and Ingold, K. (2018) Why advocacy coalitions matter and practical insights about them. *Policy & Politics*, 46 (2), 325–343.
- Werners, S.E., Sparkes, E., Totin, E., Abel, N., Bhadwal, S., Butler, J.R.A., Douxchamps, S., James, H., Methner, N., Siebeneck, J., Stringer, L.C., Vincent, K., Wise, R.M. and Tebboth, M.G.L. (2021) Advancing climate resilient development pathways since the IPCC's fifth assessment report. *Environmental Science & Policy*, 126, 168–176.
- Zahariadis, N. (2007) The multiple streams framework, in Sabatier, P. (Ed.), *Theories of the Policy Process* (pp. 17–54). Cambridge, MA: Westview Press.
- Zannakis, M. (2015) The blending of discourses in Sweden's 'urge to go ahead' in climate politics. *International Environmental Agreements: Politics, Law and Economics*, 15 (2), 217–236.