Routledge
Taylor & Francis Group

Journal of Environmental Planning and Management

ISSN: 0964-0568 (Print) 1360-0559 (Online) Journal homepage: https://www.tandfonline.com/loi/cjep20

Special section: advancing the role of cities in climate governance – promise, limits, politics

Jeroen van der Heijden, James Patterson, Sirkku Juhola & Marc Wolfram

To cite this article: Jeroen van der Heijden, James Patterson, Sirkku Juhola & Marc Wolfram (2019) Special section: advancing the role of cities in climate governance – promise, limits, politics, Journal of Environmental Planning and Management, 62:3, 365-373, DOI: 10.1080/09640568.2018.1513832

To link to this article: https://doi.org/10.1080/09640568.2018.1513832

Journal of Environmental Planning and Management, 2019
Vol. 62, No. 3, 365–373, https://doi.org/10.1080/09640568.2018.1513832

Special section: advancing the role of cities in climate governance – promise, limits, politics

Jeroen van der Heijden[a,b]*, James Patterson[c,d], Sirkku Juhola[e] and Marc Wolfram[f]

[a]*School of Government, Victoria University of Wellington, Wellington, New Zealand;* [b]*School of Regulation and Global Governance, Australian National University, Canberra, Australia;* [c]*Sustainability and Environment, Open University, Heerlen, the Netherlands;* [d]*Department of Environmental Policy Analysis, VU University, Amsterdam, the Netherlands;* [e]*Department of Environmental Sciences, University of Helsinki, Helsinki, Finland;* [f]*Architecture Department, Sungkyunkwan University. Seoul, Korea.*

(*Received 19 July 2017; final version received 20 April 2018*)

This special issue contributes to scholarly debates about the role of cities in global climate governance, reflecting on the promise, limits, and politics of cities as agents of change. It takes an empirically-informed approach drawing on multiple diverse geographical and political contexts. Overall, the special issue aims to stimulate reflection and debate about where understanding and practice needs improvement to advance the role of cities in global climate governance. Key questions that are addressed in the special issue include: To what extent do real world experiences confirm or disconfirm the high expectations of cities as agents and sites of change in addressing global climate change as expressed in urban climate governance literature? In what ways do internal political dynamics of cities enable or constrain urban climate governance? How is climate governance in cities enabled and constrained by interactions with broader governance levels? In what ways can climate governance in cities be advanced through critical attention to the previous issues?

Keywords: Cities; climate governance; governance experiments; multi-level governance

1. Introduction

Over the last two decades, a burgeoning literature has emerged on the role of cities in climate governance. This literature has identified compelling possibilities for innovative urban climate governance through experimentation and novel forms of agency at the city level, which hold promise for advancing global climate governance, despite political stagnation at national and international levels (Betsill and Bulkeley 2006; Bulkeley and Betsill 2013; Bulkeley, Castan Broto, and Edwards 2015; Evans *et al*. 2006; Hoffmann 2011; Rosenzweig *et al*. 2018; van der Heijden 2014). Yet, despite the widespread hope being invested in cities as agents and sites of change in addressing global climate change, there remains a worrying lack of robust evidence for their effectiveness and ability to fulfill this role (Bansard, Pattberg, and Widerberg 2017; Bulkeley *et al*. 2014; Johnson 2018; van der Heijden 2017). In similar vein, there remains a worrying lack of assessment of whether the current urban elites involved in reshaping (local) climate change governance have a substantive interest in global

*Corresponding author. Email: j.j.vanderheijden@anu.edu.au

climate change and transformation since dominant discourses are rather about resource security, green growth, smart cities, and so on (Hayden 2014; Hodson and Marvin 2014).

What is urgently required is a critical reflection on the role of cities in climate governance, particularly to increase our understanding as to whether city involvement in global climate governance lives up to the high normative expectations expressed. Such reflection is important for understanding how the potential of cities as agents of change in global climate governance can be more fully realized, not only in theoretical terms but also in terms of the day-to-day practicalities that cities experience. This is the aim of this special section: to critically reflect on the notion of cities as agents of change in addressing climate change.

This special section presents four papers produced in the EU COST program (European Cooperation in Science and Technology) "Innovations in Climate Governance" (INOGOV; www.inogov.eu). The INOGOV program aims to identify innovative forms of policy and governance for climate change, where and how these have emerged, and how they are diffused across time, space and different modes and levels of governing. The program particularly seeks to build a stronger evaluation capacity to assess the actual impacts and effects of such policy and governance innovations. The four papers are part of an INOGOV workshop held at the University of Amsterdam on 22 and 23 September 2016. The workshop sought to map, explore and interrogate examples of innovative and experimental urban climate governance across the globe.

2. Framing the issue

The potential for cities to act and organize in innovative ways is well-established. For example, it has been argued that urban experimentation has the potential to reconfigure wider governance arrangements through actions that shift relations between actors, creating possibilities to be institutionalized on a broader scale (Hodson and Marvin 2010; Hoffmann 2011; Sassen 2015). Other scholars have argued that especially urban leaders from the private sector and civil society can play a key role in creating and promoting new innovative practices (Loorbach *et al*. 2016; Sassen 2015). Overall, cities are now widely viewed as having a key role in climate governance, both within and outside of formal international diplomacy, a role which may become even more crucial within increasingly unstable geopolitical contexts that threaten to delay or even roll back international climate change action (Andonova, Hale, and Roger 2017).

Yet, it is also important to recognize that cities are not divorced from the broader multi-level governance systems and political contexts in which they are embedded (Bulkeley and Betsill 2005, 2013; Franziska *et al*. 2017). Current scholarly literature therefore partly risks over-romanticizing the potential of cities and underplaying key challenges when it promotes cities (implicitly or explicitly) as an ideal scale for addressing global climate change (for critiques to such over-romanticising, see among others Davies and Imbroscio (2009); Evans, Karvonen, and Raven (2016); Johnson (2018); Johnson, Toly, and Schroeder (2015); van der Heijden (2018b)). For example, counter to the common implication that cities are "natural" sites for innovative and experimental climate action in a progressive direction (Evans, Karvonen, and Raven 2016), they may equally work in much more conservative or even opposite ways (Ansell and Bartenberger 2016; Hodson and Marvin 2014). This issue has, however, had limited attention in the urban climate governance literature.

Governing cities involves constellations of actors across multiple policy sectors and jurisdictional levels. This is particularly true when it comes to urban climate governance, which has come to refer to "the ways in which public, private, and civil society actors

and institutions articulate climate goals, exercise influence and authority, and manage urban climate planning and implementation processes" (Anguelovski and Carmin 2011, 169). Decision-making in cities occurs across diverse policy sectors (e.g. water, energy, urban planning, and transport), which may be fragmented and involve many other public and private actors (e.g. civil society, small and large industry) (Agyeman and Angus 2003; Dent *et al*. 2016; Knieling 2016; Luque-Ayala, Marvin, and Bulkeley 2018). Moreover, especially larger cities usually comprise multiple municipalities within a metropolitan region; for example, metropolitan Santiago, Chile contains 34 municipalities, all of which have their own mayors and administrations. Thus, 'cities' are not singular, homogenous entities that act in one particular way or another; instead they are complex and dynamic sites of contested interests, concerns, and powers. When considering cities as potential agents of change, it is important not to black-box them, but to be mindful of their fragmented internal politics (Hughes 2017; Taylor 2016).

Cities are also clearly influenced by actors and arrangements at multiple levels of governance (e.g. state/provincial, national, and international). They can, at times, act autonomously, but often remain dependent on higher-level authorities, non-governmental actors, or both (Dent *et al.* 2016; Hughes, Chu, and Mason 2018; Knieling 2016; van der Heijden 2018a). For example, in Australia municipalities are products of state governments, who devolve a certain set of regulation-making authorities to a local level, yet states remain the ultimate sources of jurisdictional authority. The powers and boundaries of municipalities can be re-shaped by states, and state policy and planning decisions are typically binding for municipalities (Brenner 2004). Politically, municipalities have "soft power" to influence state-level decision-making through mobilizing constituencies of citizens and organizational actors. On the other hand, municipalities may benefit from robust policies and plans at state/provincial or national governments that provide legitimacy and resources for climate action. Hence, cities are not entirely autonomous, and can either be hindered or benefit from activity at higher jurisdictional levels.

From a democratic perspective, there may indeed be unexpected tensions involved with an emphasis on cities taking up new roles in climate governance (van der Heijden 2017). Typically, cities are assumed to empower citizens and minority groups in climate governance (e.g., Transition Towns, citizen participation in municipal plan development). This is assumed to particularly help in achieving social sustainability, and to balance social goals with environmental and economic ones because of the relatively short distance between municipalities and citizens compared to other levels of government (Evans 2011). But, at the same time, if decision-making responsibility for large and contested societal issues is shifted to cities to ostensibly avoid inertia and controversy at higher levels of government, it would be vital to ensure that democratic processes are not undermined (Enright and Rossi 2018; Jayne and Ward 2017). For example, cities may not be well equipped to handle intense political and industrial lobbying which may descend on them, while also broader participatory processes for citizens beyond the territory of the central municipality are often not available. Paradoxically, a growing emphasis on the agency of cities could potentially undermine their own autonomy, if increasing interest-led contestation and manipulation hinders their previous freedom to act boldly 'under the radar'.

3. The papers in this special section

The papers in this special section contribute to scholarly debates about the role of cities in global climate governance, reflecting on the promise, limits, and politics of cities as agents of change. In sketching out the issues above, there are many potential

questions raised about the promise, limits, and politics of cities. We have asked contributors to this special section to move beyond normative expectations on the role of cities in global climate governance and focus on the day-to-day practicalities experienced by real world cities. The papers make visible and critically reflect on the role of cities in climate governance and the problems they face in practice, thus providing new insights about the changing role of cities in global climate governance. The contributions explore a variety of angles, and all build on novel empirical data.

As such, this special section contributes to broader scholarly debates on *polycentric climate governance* (Jordan *et al*. 2015) through a focus on cities as agents of change within wider climate governance systems. More broadly, it also contributes to emerging debates about the *role of the state* within the complex and the dispersed nature of contemporary governance e.g. via devolved authority from state/provincial or national levels to municipalities, and via multi-level interplay between cities and higher-level jurisdictions (Bell and Hindmoor 2009; Duit, Feindt, and Meadowcroft 2016), where urban climate governance provides a case in point.

The first paper, by Patterson and Huitema (forthcoming), looks at urban water governance in Santiago, Chile. The case is explored to better understand institutional innovation for adapting to climate change in urban governance. The authors argue that adaptability in urban governance is needed to deal with the uncertainties, dynamics, and disruptions of climate change in cities. They are particularly interested in understanding how institutional innovation can overcome rigidity and path-dependence, and identify a lack of conceptual understanding regarding such institutional innovation that undermines systematic scholarly investigation, as well as innovation efforts in practice. The authors introduce a three-level heuristic for analyzing institutional innovation: the visible changes in institutional arrangements, the changes in underlying rules, and the relationship to broader governance dilemmas. Their empirical analysis indicates that Santiago had to find ways to productively link existing systems of water resource management with urban climate change adaptation. The analysis further shows how national policies and political power structures limit the capacity of the city in bringing about institutional innovations in their urban governance systems to adapt to climate change. The paper opens up new avenues for critical reflection on claims about climate governance innovation in cities.

The second paper, by Bernardo and D'Alessandro (forthcoming), addresses the potential impact of Sustainable Energy Action Plans (SEAPs) through a case study of Cascina Municipality, Italy. SEAPs are plans that accurately describe measures and activities to fulfill the commitment of the Covenant of Mayors (CoM), an international city-to-city network where local authorities commit to reduce carbon emissions by 20% before 2020. The paper empirically illustrates how, and to what extent, local plans, such as SEAPs, can be a powerful tool for achieving the high ambitions of city-to-city network initiatives for climate governance, and provide a means to cities and city networks to effectuate the potential they hold as agents of change. The authors develop an urban dynamic model to analyze the social implication of the SEAP at local community level by applying a two-stage methodology. The first stage elaborates qualitative participatory systems mapping to grasp the critical causal relationships and feedback processes among a selected set of variables and indicators. The second stage applies a tailored system dynamic micro-macro model (SD3M) to quantitatively assess the impact of policies and initiatives on the social economic and environmental dimensions by processing data gathered from a wide range of sources. In directly working with local politicians and administrative staff, Bernardo and D'Alessandro (forthcoming)

show that a system analysis approach can support them to increase the effectiveness of the plan by selecting the most effective measures, and especially by generating collective learning on the systemic implications of the SEAP. Besides presenting theoretically relevant insights, the paper illustrates the potential of participatory research in urban climate governance for building the capacities required to assess transparently and respond collectively.

The third paper, by Frey and Calderón Ramírez (forthcoming), studies the Metropolitan Region of the Aburra Valley and particularly the city of Medellin, Colombia, as an example of multi-level climate risk governance. Cities have increasingly been confronted with climate change related disasters. Traditional technocratic top-down approaches have proved inadequate to face disaster risks in urban agglomerations. As a result, expectations have risen that through novel multi-level governance arrangements, metropolitan regions could become more resilient by joining forces across scales and sectors, and are also more capable to implement collective adaptation strategies. Under the leadership of the city of Medellin, and integrated in the national risk governance system of Colombia, such a governance arrangement has been established in the Metropolitan Area of the Aburra Valley: *Red Riesgos*. Applying Social Network Analysis, Frey and Calderón Ramírez (forthcoming) identify, characterize and analyze the institutional relations within this new governance arrangement. They demonstrate that its effectiveness depends principally on the protagonism of local governments and on their abilities to involve local communities and citizens, but equally to interact constantly with the higher-level authorities in the implementation process, thus putting the 'agency of cities' into perspective. Comparable to the paper by Bernardo and D'Alessandro (forthcoming), this paper provides insight into how cities can practically act as agents of change in addressing climate change.

The fourth and final paper, by van der Heijden (forthcoming), questions whether and how city governments should be involved in the development and implementation of voluntary urban climate governance programs. Voluntary urban climate governance has been posed to overcome shortfalls with mandatory, top-down, state-led government interventions to address climate change risks. It seeks a commitment from households and the private sector to improve their climate performance, but without the force of law. It is suggested that rather than forcing them to act, and penalizing them for non-compliance, they need to be incentivized to freely take action and be rewarded for doing so. City governments are highly active in voluntary urban climate governance, and particularly in the development and implementation of voluntary programs for urban climate action. There is little evidence, however, on whether their own involvement positively affects voluntary program performance, or not. Through a qualitative comparative analysis (QCA) of 26 voluntary programs from cities in Australia, the Netherlands and the US, van der Heijden illustrates that the city governments have had little impact on the programs' performance. The author argues, however, that this does not mean city governments should simply abandon their involvement, or that they should stop using voluntary urban climate programs. Rather, the paper points out that city governments may wish to rethink the way in which they are involved, and identifies several possibilities to change this.

4. Concluding remarks and outlook

The papers in this special section emphasize the need for a more critical reflection on the role of cities in climate governance. On normative grounds, high hopes have been

expressed of the capacity of cities - and particularly city governments and other local actors - to take climate action, where governments and other organizations at national and international level show stagnation. The four papers in this special section partially support, but also challenge, these hopes and expectations building on examples from the Global North (cities in Australia, Italy, the Netherlands, and the United States) and the Global South (cities in Chile, Columbia, and South Africa).

As indicated by the four papers, as agents of change for global sustainability problems, cities - and particularly city governments - are ideally suited to translate abstract national and international requirements to local circumstances. The papers by Frey and Calderón Ramírez (forthcoming), and Bernardo and D'Alessandro (forthcoming), for example, stress the critical role of city governments in stimulating local actors to become involved in climate governance and take climate action. Bernardo and D'Alessandro (forthcoming) further illustrate how, in collaboration with local actors, city governments can help to achieve ambitions set by international city-to-city networks. In turn, Frey and Calderón Ramírez (forthcoming) highlight the critical role of the city government in accomplishing regional and national climate governance ambitions. Yet, both papers also indicate that it asks for considerable effort on the part of city governments to get local and higher tier actors involved, and both papers indicate the fragile nature of the collaborations. Once collaborations have been established, it cannot be taken for granted that they will endure - either because local actors leave or because a new (city) government takes a different policy course. The detailed case studies by Frey and Calderón Ramírez (forthcoming), and Bernardo and D'Alessandro (forthcoming) thus also underline the need for a more temporal understanding of climate governance trajectories at city level: a good practice today may be no more tomorrow.

The papers by Patterson and Huitema (forthcoming), and van der Heijden (forthcoming) extend these insights. Patterson and Huitema (forthcoming) question whether and how urban climate governance innovations become institutionalized and bring about enduring change. Their case studies illustrate climate governance innovations occurring in urban water governance in Cape Town and Santiago, but also question whether these innovations have brought about enduring change in the urban governance system. Van der Heijden's findings can be read in a similar light. Whilst his paper identifies a range of voluntary urban climate governance programs, it finds that only a few have resulted in enduring and large-scale change. Comparable with the first two papers, these papers reflect the active roles played by city governments and other local actors, but also the many complications faced by them in accelerating climate action at the local level. They particularly stress the relevance of a comparative focus on climate governance at the city level. What is a good practice in one city will by no means yield similar results in another city. Whilst this is, at first glance, an obvious insight, the urban climate governance literature is still devoid of systematic comparative studies (Jayne and Ward 2017; Luque-Ayala, Marvin, and Bulkeley 2018; Rosenzweig *et al*. 2018). Specifically, the van der Heijden paper (forthcoming) indicates how a systematic comparative study not only helps to better understand the role of cities in urban climate governance, but how it may also help to generate hands-on lessons for city governments and other local actors to strengthen their roles in, and impact on, urban climate action.

From a methodological perspective, the papers in this special issue have illustrated how alternative methods and research designs help to open up new pathways for urban

climate scholarship. Patterson and Huitema (forthcoming) point to the relevance of comparative case studies if we wish to better understand the role of cities as agents of change in urban climate governance. Frey and Calderón Ramírez (forthcoming) illustrate the value of Social Network Analysis (SNA), particularly to understand the emergence of new coordination patterns in multilevel climate governance. SNA helps them identify and discuss the various functions performed by actors in the Metropolitan Region of the Aburra Valley, Colombia, as well as making conjectures with other factors that affect the performance of the *Red Riesgos* network. Bernardo and D'Allesandro (forthcoming) illustrate the value of Participatory System Mapping (PSM) - the co-development of a qualitative model of climate governance together with the policy makers and stakeholders involved. This qualitative model informs a next step in their research, which applies a System Dynamic Mico-Marco Model (SD3M) to assess the impact of policies and initiatives on a range of social economic and environmental dimensions. As illustrated by the authors, this research approach not only resulted in relevant lessons for academia and policy in general, but has also helped policymakers and stakeholders in Cascina Municipality, Italy. Van der Heijden illustrates the value of Qualitative Comparative Analysis (QCA) for studying a medium set of voluntary urban climate programs. In applying this method, van der Heijden is capable of drawing detailed lessons on the roles of city governments in voluntary climate governance, and how their roles affect local climate action.

Altogether, the four papers urge nuance and detention before jumping to quick conclusions about the role of cities in global climate governance. On normative grounds, there is much to say for (more) city involvement in climate governance: Cities are the level closest to the citizens; it is in cities where the rubber of national policies and international agreements hit the ground, and cities have a certain room for manoeuvre to walk new pathways. Yet, as the four papers have illustrated, city action is not necessarily straightforward, or likely to be a panacea for inaction at other levels. They point to a need for rigorous, critical, and systematic studies on the role of cities - large and small, in the Global North and South - as a priority area for further research on global climate governance.

Acknowledgements

On behalf of all participants to the INOGOV workshop we wish to thank Professor Rob Imrie (Goldsmits, University of London), Professor Kristine Kern (University of Potsdam), and Professor Jonathan Davies (De Montfoort University) for active participation during the workshop and for providing essential feedback to earlier versions of the papers included in this special section. We also thank the INOGOV organisation for support.

Disclosure statement

No potential conflict of interest was reported by the authors.

References

Agyeman, J., and B. Angus. 2003. "The Role of Civic Environmentalism in the Pursuit of Sustainable Communities." *Journal of Environmental Planning and Management* 46 (3): 345–363.

Andonova, L., T. Hale, and C. Roger. 2017. "National Policy and Transnational Governance of Climate Change: Substitutes or Complements?" *International Studies Quarterly* 61 (2): 153–267.

Anguelovski, I., and J. Carmin. 2011. "Something Borrowed, Everything New: Innovation and Institutionalization in Urban Climate Governance." *Current Opinion in Environmental Sustainability* 3 (3): 169–175.

Ansell, C., and M. Bartenberger. 2016. "Varieties of Experimentatlism." *Ecological Economics* 130: 64–73.

Bansard, J., P. Pattberg, and O. Widerberg. 2017. "Cities to the Rescue? Assessing the Performance of Transnational Municipal Networks in Global Climate Governance." *International Environmental Agreements: Politics, Law and Economics* 17 (2): 229–246. doi:10.1007/s10784-016-9318-9

Bell, S., and A. Hindmoor. 2009. *Rethinking Governance*. Cambridge: Cambridge University Press.

Bernardo, G., and S. D'Alessandro. Forthcoming. "Societal Implications of Sustainable Energy Action Plans: From Energy Modelling to Stakeholder Learning." *Journal of Environmental Planning and Management*.

Betsill, M., and H. Bulkeley. 2006. "Cities and the Multilevel Governance of Global Climate Change." *Global Governance* 12 (2): 141–159.

Brenner, N. 2004. *New State Spaces: Urban Governance and the Rescaling of Statehood*. Oxford: Oxford University Press.

Bulkeley, H., L. B. Andonova, M. Betsill, D. Compagnion, T. Hale, M. J. Hoffmann, P. Newell, et al. 2014. *Transnational Climate Change Governance*. Cambridge: Cambridge University Press.

Bulkeley, H., and M. Betsill. 2005. "Rethinking Sustainable Cities: Multilevel Governance and the 'Urban' Politics of Climate Change." *Environmental Politics* 14 (1): 42–63.

Bulkeley, H., and M. Betsill. 2013. "Revisiting the Urban Politics of Climate Change." *Environmental Politics* 22 (1): 136–154.

Bulkeley, H., V. Castan Broto, and G. Edwards. 2015. *An Urban Politics of Climate Change: Experimentation and the Governing of Socio-Technical Transitions*. Abingdon: Routledge.

Davies, J., and D. Imbroscio. 2009. *Theories of Urban Politics*. London: Sage.

Dent, C., C. Bale, Z. Wadud, and H. Voss. 2016. "Cities, Energy and Climate Change Mitigation." *Cities* 54: 1–3.

Duit, A., P. Feindt, and J. Meadowcroft. 2016. "Greening Leviathan: The Rise of the Environmental State?" *Environmental Politics* 25 (1): 1–23.

Enright, T., and U. Rossi, eds. 2018. *The Urban Political: Ambivalent Spaces of Late Neoliberalism*. Cham: Palgrave Macmillan.

Evans, B., M. Joas, S. Sundback, and K. Theobald. 2006. "Governing Local Sustainability." *Journal of Environmental Planning and Management* 49 (6): 849–867.

Evans, J. 2011. "Resilience, Ecology and Adaptation in the Experimental City." *Transactions of the Institute of British Geographers* 36 (2): 223–237.

Evans, J., A. Karvonen, and R. Raven, eds. 2016. *The Experimental City*. London: Routledge.

Franziska, E., K. Florian, B. Sara, G. Leen, M. Steffen, and E. Markus. 2017. "Urban Sustainability Transitions in a Context of Multi-Level Governance: A Comparison of Four European States." *Environmental Innovation and Societal Transitions* 26: 101–116.

Frey, K. and D. R. Calderón Ramírez. Forthcoming. "Multi-Level Network Governance of Disaster Risks: The Case of the Metropolitan Region of the Aburra Valley (Medellin, Colombia)." *Journal of Environmental Planning and Management*. doi:10.1080/09640568.2018.1470968

Hayden, A. 2014. *When Green Growth Is Not Enough: Climate Change, Ecological Modernization, and Sufficiency*. Quebec: McGill-Queen's University Press.

Hodson, M., and S. Marvin. 2010. "Can Cities Shape Socio-Technical Transitions and How Would We Know If They Were?" *Research Policy* 39 (4): 477–485.

Hodson, M., and S. Marvin. 2014. *After Sustainable Cities*? Hoboken: Taylor and Francis.

Hoffmann, M. 2011. *Climate Governance at the Crossroads*. Oxford: Oxford University Press.

Hughes, S. 2017. "The Politics of Urban Climate Change Policy: Toward a Research Agenda." *Urban Affairs Review* 53 (2): 362–380.

Hughes, S., E. Chu, and S. Mason, eds. 2018. *Climate Change in Cities: Innovations in Multi-Level Governance*. Cham: Springer.

Jayne, M., and K. Ward, eds. 2017. *Urban Theory: New Critical Perspectives*. London: Routledge.

Johnson, C. 2018. *The Power of Cities in Global Climate Politics: Saviours, Supplicants or Agents of Change*? London: Palgrave Macmillan.

Johnson, C., Toly, N., and Schroeder, H., eds. 2015. *The Urban Climate Challenge*. Abingdon: Routledge.

Jordan, A. J., D. Huitema, M. Hildén, H. van Asselt, T. J. Rayner, J. J. Schoenefeld, J. Tosun, J. Forster, and E. L. Boasson. 2015. "Emergence of Polycentric Climate Governance and Its Future Prospects." *Nature Climate Change* 5 (11): 977–982.

Knieling, J., ed. 2016. *Climate Adaptation in Cities and Regions*. Oxford: Wiley Blackwell.

Loorbach, D., J. Wittmayer, H. Shiroyama, J. Fujina, and S. Mizuguchi, eds. 2016. *Governance of Urban Sustainability Transitions*. Tokyo: Springer.

Luque-Ayala, A., S. Marvin, and H. Bulkeley, eds. 2018. *Rethinking Urban Transitions*. London: Routledge.

Patterson, J. J., and D. Huitema. Forthcoming. "Institutional Innovation in Urban Governance: The Case of Climate Change Adaptation." *Journal of Environmental Planning and Management*.

Rosenzweig, C., W. Solecki, P. Romero-Lankao, S. Mehrotra, S. Dhakal, and S. Ali Ibrahim. 2018. *Climate Change and Cities: Second Assessment Report of the Urban Climate Change Research Network*. Cambridge: Cambridge University Press.

Sassen, S. 2015. Bringing Cities into the Global Climate Framework. In *The Urban Climate Challenge*, edited by C. Johnson, N. Toly, and H. Schroeder, 24–36. London: Routledge.

Taylor, A. 2016. "Institutional Inertia in a Changing Climate: Climate Adaptation Planning in Cape Town." *International Journal of Climate Change Strategies and Management* 8 (2): 194–211.

van der Heijden, J. 2014. *Governance for Urban Sustainability and Resilience: Responding to Climate Change and the Relevance of the Built Environment*. Cheltenham: Edward Elgar.

van der Heijden, J. 2017. *Innovations in Urban Climate Governance: Voluntary Programs for Low Carbon Buildings and Cities*. Cambridge: Cambridge University Press.

van der Heijden, J. 2018a. "Cities and Sub-National Governance: High Ambitions, Innovative Instruments and Polycentric Collaborations." In *Policentricity in Action*, edited by A. Jordan, and D. Huitema, 81–96. Oxford: Oxford University Press.

van der Heijden, J. 2018b. "The Limits of Voluntary Programs for Low-Carbon Buildings for Staying under 1.5 °C." *COSUST* 30: 59–66.

van der Heijden, J. Forthcoming. "Voluntary Urban Climate Programmes: Should Ciity Governments Be Involved and, If So, How?" *Journal of Environmental Planning and Management*. doi:10.1080/09640568.2017.1406344