## BOOK REVIEWS

Governing Climate Change: Global Cities and Transnational Lawmaking, by Jolene Lin Cambridge University Press, 2018, 222 pp, £74.99 hb, £24.99 pb, £21.50 e-bk ISBN 9781108424851 hb, 9781108440981 pb, 9781108620963 e-bk

Today, more than 8,000 cities and municipalities in 128 countries are taking action to address climate change. To share information, build capacity and spread best practices, these cities participate in transnational governance networks – cross-border alliances which rely on voluntary cooperation among members. By providing an evidence base for decision makers and establishing peer-to-peer learning mechanisms, these networks have the potential to enable city-level climate action. However, research indicates that, as a result of limited mitigation ambition and weak monitoring processes, transnational city networks may make a less significant contribution to global climate governance than is generally assumed. Even so, supporters of urban climate action argue that cities can and should play a central role in addressing climate change.

Jolene Lin's Governing Climate Change: Global Cities and Transnational Lawmaking adds to the debate on whether cities and their transnational governance networks help in addressing climate change. Answering in the affirmative, Lin argues that city networks spread practices and voluntary standards, which eventually develop into 'norms' – reference points of appropriate behaviour which possess 'a quality of "oughtness" that sets them apart from other kinds of rules' (p. 127). Referring to these norms as 'urban climate law' (p. 128), Lin concludes that they positively contribute to global climate governance by complementing and reinforcing the international climate regime that has evolved under the United Nations Framework Convention on Climate Change (UNFCCC)<sup>6</sup> (pp. 150–8).

A. Hsu et al., Global Climate Action from Cities, Regions and Businesses (Data Driven Yale, New-Climate Institute & PBL Netherlands Environmental Assessment Agency, 2018), p. 19, available at: http://datadriven.yale.edu/wp-content/uploads/2018/08/YALE-NCI-PBL\_Global\_climate\_action.pdf.

<sup>&</sup>lt;sup>2</sup> See L.N. Andonova, M. Betsill & H. Bulkeley, 'Transnational Climate Governance' (2009) 9(2) Global Environmental Politics, pp. 52–73, at 59–61; see also A. Hsu et al., 'Bridging the Gap: The Role of Non-State and Subnational Actors', in United Nations Environment Programme (UNEP), Emissions Gap Report 2018 (UNEP, 2018), pp. 29–42, at 33–6, available at: http://wedocs.unep.org/bitstream/handle/20.500.11822/26895/EGR2018\_FullReport\_EN.pdf?sequence=1&isAllowed=y.

<sup>3</sup> C. Rosenzweig & W. Solecki, 'Action Pathways for Transforming Cities' (2018) 8(9) Nature Climate Change, pp. 756–9, at 758.

<sup>&</sup>lt;sup>4</sup> J.S. Bansard, P.H. Pattberg & O. Widerberg, 'Cities to the Rescue? Assessing the Performance of Transnational Municipal Networks in Global Climate Governance' (2017) 17(2) International Environmental Agreements: Politics, Law and Economics, pp. 229–46, at 237–41.

<sup>5</sup> See, e.g., M. Bloomberg & C. Pope, Climate of Hope: How Cities, Businesses, and Citizens Can Save the Planet (St Martin's Press, 2017), pp. 255–8.

<sup>6</sup> New York, NY (US), 9 May 1992, in force 21 Mar. 1994, available at: https://unfccc.int/resource/docs/convkp/conveng.pdf.

To develop her argument, Lin divides the book into eight chapters. The first three chapters set out her theoretical and analytical framework. Chapters 4 and 5 provide rich descriptive accounts of the efforts of individual cities to address climate change and the role that transnational networks play in this context. The main contribution of the book is contained in Chapters 6 and 7, where Lin argues that cities have become transnational lawmakers that make a positive contribution to global climate governance. Chapter 8 concludes by summarizing the research findings and pointing towards avenues for future research.

Synthesizing perspectives from the political sciences, law, international relations, and sociology, Chapter 2 gives an overview of the various theories upon which Lin draws. These include regime complex<sup>7</sup> and orchestration theories,<sup>8</sup> the notion of transnational law,<sup>9</sup> as well as perspectives on transgovernmental networks<sup>10</sup> and global cities.<sup>11</sup> Describing her interdisciplinary theoretical approach as 'analytical eclecticism', Lin convincingly argues that an interdisciplinary perspective is necessary to prevent 'excessive simplification that can arise when one tries to apply a single theoretical lens to explain messy real-world situations' (p. 21).

Chapter 3 reflects on the role of cities in international affairs. Examining how cities have taken on roles which traditionally were associated with national governments, the chapter explores how urban administrations directly implement international agreements, how cities engage in international politics, and how they address global risks, such as terrorism, at the local level. Consequently, Chapter 3 shows how the World Bank and the United Nations (UN), through their investment policies and political programmes, have created a global urban agenda that has enabled cities to emerge as actors in international affairs. In so doing, Lin demonstrates that today states and international organizations are not the only actors that contribute to addressing global problems, including climate change.

Building on Chapter 3, the following chapter reviews local efforts to address climate change across five global cities. Covering London (United Kingdom), Mexico City (Mexico), New York City (United States), Rotterdam (the Netherlands), and

See K. Raustiala & D.G. Victor, 'The Regime Complex for Plant Genetic Resources' (2004) 58(2) International Organization, pp. 277–309, at 279; A. Orsini, J.-F. Morin & O. Young, 'Regime Complexes: A Buzz, a Boom, or a Boost for Global Governance?' (2013) 19(1) Global Governance, pp. 27–39; K.W. Abbott, 'The Transnational Regime Complex for Climate Change' (2012) 30(4) Environment and Planning C: Government and Policy, pp. 571–90.

See K.W. Abbott & D. Snidal, 'Strengthening International Regulation through Transnational New Governance: Overcoming the Orchestration Deficit' (2009) 42 Vanderbilt Journal of Transnational Law, pp. 501–78; K.W. Abbott et al., 'Orchestration: Global Governance through Intermediaries', in K.W. Abbott et al. (eds.), International Organizations as Orchestrators (Cambridge University Press, 2015), pp. 3–36, at 3–19.

<sup>&</sup>lt;sup>9</sup> See P. Jessup, Transnational Law (Yale University Press, 1956); H.H. Koh, 'Transnational Legal Process' (1996) 75(1) Nebraska Law Review, pp. 181–207; see also P. Zumbansen, 'Transnational Law, Evolving', in J. Smits (ed.), Encyclopedia of Comparative Law (Edward Elgar, 2012), pp. 899–925.

<sup>&</sup>lt;sup>10</sup> See R.O. Keohane & J.S. Nye, 'Transgovernmental Relations and International Organizations' (1974) 27(1) World Politics, pp. 39–62; A.-M. Slaughter, A New World Order (Princeton University Press, 2005).

<sup>&</sup>lt;sup>11</sup> See S. Sassen, The Global City: New York, London, Tokyo (Princeton University Press, 1991); M. Acuto, Global Cities, Governance and Diplomacy: The Urban Link (Routledge, 2013).

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Seoul (Korea), Chapter 4 provides detailed overviews of each city's climate practices, policies, and strategies. Lin identifies a number of factors that have been key to enabling these cities to emerge as urban climate leaders, which include the presence of local politicians who follow a vision for a low-carbon future and secure support from administrative agencies, the private sector, and other stakeholders; engagement with transnational networks; and public support for creating a more sustainable urban environment (p. 71). Further, the availability of administrative and financial resources, and political pressure to address urban problems such as air pollution, are key to successfully implementing climate policies at the city level. While not designed as in-depth case studies, Lin's empirical work draws on interviews conducted with city officials and other experts as well as relevant documents, such as the cities' climate strategies, press coverage, and policy reports. As such, Chapter 4 provides valuable insights into the opportunities and barriers that cities may face in addressing climate change.

Chapter 5 shifts the focus from individual cities to transnational networks. Taking the C40 Cities Climate Leadership Group (C40) as an example, the chapter starts by giving an overview of the network's history as well as its organizational structures and activities. It then moves to examine how C40 uses partnering opportunities with private consultancies, businesses, philanthropic foundations, global institutions, and other transnational networks to directly connect cities with actors who provide expertise, funding, and strategic partnerships. Lin concludes that C40 allows cities to learn from each other and develop standards and practices that require members to address climate change (p. 126).

Chapter 6 explores the role of cities as transnational lawmakers. Lin theorizes law as a social phenomenon that forms part of broader normative processes of decision making and application (p. 7). She thus eschews a binary 'law vs non-law' distinction and rejects views that argue against the notion of 'soft law'. Instead, Lin conceptualizes 'legal normativity as a sliding scale of varying degrees of normativity' (p. 7). This allows her to recognize the practices and voluntary standards, which are generated by cities and transmitted through transnational networks, as 'normative products' that clarify common interests and guide behaviour (p. 7). Applying her 'sliding scale' approach, Lin argues that, by setting voluntary standards, cities have evolved as makers of 'urban climate law' (p. 128). However, it remains open to debate whether the argument that cities produce 'urban climate law' is helpful and convincing. It seems that rather than enhancing Lin's argument, the label distracts from the important observation that, outside the interstate UN climate regime, there exist forms of normativity (practices and voluntary standards) that directly impact upon the behaviour and expectations of a key constituency (cities). Arguably, deciding whether these forms of normativity are law is less important than understanding how they relate to the international climate regime that has evolved under the UNFCCC.

Before returning to this question, Lin seeks to set out how urban climate law leads to cities addressing climate change. Firstly, Lin argues that urban climate law prompts cities to reflect on the ways in which they address climate change and, where appropriate, make adjustments. Drawing on reflexive law theory – which holds that law can enable self-regulation by determining procedural and organizational rules – Lin refers to this first 'pathway of influence' of urban climate law as 'reflexivity' (pp. 138–40). Secondly, Lin explains that urban climate law 'diffuses' through transnational networks through learning, competition, and imitation (pp. 140–8). She explains that norms spread until they reach a 'tipping point', after which they 'cascade' through the network and lead to climate action (p. 129). Lin argues that these two pathways demonstrate how urban climate law steers the behaviour of cities towards low-carbon development (p. 159).

The remainder of the book (Chapters 6 and 7) explores the relationship between urban climate law and the rules and principles contained in the UN climate regime. Lin argues that urban climate law borrows legitimacy from the UN climate regime by mirroring some of the regime's principles (such as the principle of common but differentiated responsibilities and respective capabilities (CBDR-RC)) and reporting practices (pp. 165-6), while allowing for experimentation and knowledge generation. Here, the analysis could have been enhanced by taking a more critical stance. While Lin observes correctly that the international and the transnational sphere of engagement have the potential to mutually reinforce each other, it is high time to explore which mechanisms could actually lead to mutual reinforcement. 12 Given that states' Nationally Determined Contributions (NDCs) alone are not sufficient<sup>13</sup> to reach the temperature goals of the Paris Agreement, 14 we urgently need to understand what is required to maximize the effectiveness of transnational climate action. In this respect, Lin is correct to state that the Non-State Actor Zone for Climate Action (NAZCA), an online database of subnational and non-state climate actions, has the potential to enable 'climate change governance actors to learn about potential opportunities' and 'enhance synergistic collaboration cooperation complementary action' (p. 166). However, she does not mention the shortcomings of current reporting processes, such as limitations in data availability, inconsistent metrics, the absence of verification procedures, and the lack of in-built mechanisms that help actors to identify implementation gaps. <sup>15</sup> Nonetheless, Lin's observations regarding synergies between international and transnational climate governance provide a valuable starting point to further refine an interdisciplinary research agenda that examines the nature and role of the various forms of governance on which the global community relies in the effort to address climate change.

Importantly, Governing Climate Change: Global Cities and Transnational Lawmaking calls on legal scholarship to recognize that it is not sufficient to focus exclusively on rules that govern the rights and obligations of states. Instead, Lin

<sup>&</sup>lt;sup>12</sup> See, e.g., S. Chan et al., 'Reinvigorating International Climate Policy: A Comprehensive Framework for Effective Nonstate Action' (2015) 6(4) Global Policy, pp. 466–73, at 468–71.

<sup>&</sup>lt;sup>13</sup> Z. Vrontisi et al., 'Enhancing Global Climate Policy Ambition Towards a 1.5°C Stabilization: A Short-term Multi-model Assessment' (2018) 13(4) Environmental Research Letters, pp. 1–15, at 12.

Paris (France), 12 Dec. 2015, in force 4 Nov. 2016, available at: https://unfccc.int/sites/default/files/english\_paris\_agreement.pdf.

<sup>15</sup> See A. Hsu et al., 'Track Climate Pledges of Cities and Companies' (2016) 532(7599) Nature, pp. 303-6.

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argues that the 'crafting of creative solutions to our global collective action problems' requires legal thought to acknowledge 'the importance of multilevel governance and enlist the participation of multiple governance actors' (p. 179), including subnational and non-state actors. Further, Lin's work exemplifies that this will require legal scholarship to go beyond strict doctrinal approaches and combine theoretical insights with empirical research methods. The next step should be to analyze the climate governance practices developed by actors other than cities – such as businesses, investors, and civil society groups. A better understanding of the activities of the various constituencies that seek to contribute to the global response to climate change is required to design a post-Paris governance architecture that builds on optimal partnerships between states, subnational, and non-state actors.

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Climate Engineering and the Law, edited by Michael B. Gerrard and Tracy Hester Cambridge University Press, 2018, 360 pp, £81.99 hb, \$92 e-bk ISBN 9781107157279 hb, 9781108663397 e-bk

Climate engineering is the 'deliberate large-scale manipulation of the planetary environment to counteract anthropogenic climate change'. Climate engineering technologies can be divided into two broad categories: carbon dioxide removal (CDR), and solar radiation management (SRM). CDR aims to remove heat-trapping carbon dioxide (CO<sub>2</sub>) directly from the atmosphere and store it in terrestrial or oceanic sinks. SRM aims to reflect a portion of sunlight away from the Earth to cool global temperatures. In its October 2018 special report on limiting global warming to 1.5°C above pre-industrial levels, the Intergovernmental Panel on Climate Change (IPCC) indicated that CDR will have an important role to play in limiting the risk and severity of climate change impacts. According to the IPCC, '[a]ll pathways that limit global warming to 1.5°C with limited or no overshoot project the use of [CDR] on the order of 100–1000 GtCO<sub>2</sub> [gigatonnes CO<sub>2</sub>] over the 21<sup>st</sup> century'. The IPCC

L. Mai, 'The Growing Recognition of Transnational Climate Governance Initiatives in the UN Climate Regime: Implications for Legal Scholarship' (2018) 8(3–4) Climate Law, pp. 183–94, at 192–3.

J. Shepherd et al., Geoengineering the Climate: Science, Governance and Uncertainty (The Royal Society, 2009), p. 1, available at: https://royalsociety.org/~/media/royal\_society\_content/policy/publications/2009/8693.pdf.

<sup>&</sup>lt;sup>2</sup> IPCC, Global Warming of 1.5°C (IPCC, 2018), available at: http://www.ipcc.ch/report/sr15.

<sup>&</sup>lt;sup>3</sup> M. Allen et al., 'Summary for Policymakers', in IPCC, ibid., p. 23.