


BOOK REVIEW

Law, Policy and Climate Change: The Regulation of Systemic Risks

by Darel De Sousa, Abingdon, Routledge, 2022, 286 pp.

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Darel De Sousa's monograph, based on her PhD thesis, takes a novel, targeted approach to a pervading, wide-reaching issue: it focuses specifically on the regulation of systemic risks caused by climate change in four different jurisdictions – the European Union (EU), the UK, the USA and Australia – and asks whether and how these risks can be regulated effectively to promote resilience in systems (such as ecosystems, infrastructure or financial systems) and avoid catastrophe.

To this end, De Sousa examines the intersection between regulation (essentially the management of risk), risk and governance, with a view to unpacking the shortcomings of the traditional approach to regulating risks based on a linear relationship between risk and regulation. Drawing on the concept of “risk governance”, she argues that a holistic, interdisciplinary approach is more appropriate, given the inherent complexity associated with risks of this nature. She identifies “building blocks” by interpreting relevant aspects of the International Risk Governance Council's (IRGC) Framework¹ – a risk governance framework designed specifically for systemic risks – in a regulatory context to devise how to design an effective system using an approach that is grounded in risk governance as opposed to the traditional approach to risk regulation. In positing her approach to regulating “systemic risks” caused by climate change, she answers Fisher's call² – made in this journal – for greater “imagination” in the domain of risk regulation.³ She does this across twelve generally short but analysis-dense chapters.

The first chapter introduces the concepts of “systemic risks” and “climate change”, as well as contextualising “systems thinking” and a “systems approach to regulation”. “Systemic risks” are illustrated through references to the coronavirus pandemic, the 2008 financial crash and “Brexit” – while the examples at first sight may appear disconnected, their unifying feature is that an unexpected event with pernicious consequences jeopardises an entire system. “Systemic risks” caused by climate change are illustrated with reference to examples including atypically frigid conditions in southern parts of the USA during the winter of 2021 – the coldest on record for thirty years. It caused gas, electricity, transportation and water infrastructure failures, resulting in hundreds of deaths, not least due to the compounding of these failures through the systems' interconnectedness. However, the real value in this

¹ <<https://irgc.org/risk-governance/irgc-risk-governance-framework/>> (last accessed 8 June 2023).

² E Fisher, “Framing risk regulation: a critical reflection” (2013) 4(2) *European Journal of Risk Regulation* 125–32.

³ D De Sousa, *Law, Policy and Climate Change: The Regulation of Systemic Risks* (Abingdon, Routledge 2022) p 252.

chapter lies in introducing the idea that by focusing on the particular *system* at risk, as opposed to the *causes* and *consequences* of the risks, the idiosyncrasies of that particular system are highlighted. These can thereby inform a nuanced response to the risk, which promotes the system's resilience. The challenge lies, then, not only in constructing a nuanced response, but in promoting this school of thought amongst policymakers.

Chapter 2 examines the rise of systemic risks in detail. Here, the precise meaning of a "risk" is helpfully unpacked for non-expert readers, before De Sousa moves on to elaborate on the "distinctive features of systemic risks", where definitions of "systemic risk" are put forward. It may have been beneficial to have combined elements of Chapters 1 and 2 in pursuit of a more streamlined approach; for example, to have set out the meaning of a "risk", defined a "systemic risk" and contextualised these with reference to examples and their distinctive features before providing an overview of a systems approach to regulation. However, as formulated, the gradual introduction of these concepts over two chapters ensures the book's accessibility for both experts and those new to the concepts.

This accessible approach continues in Chapter 3, "Systemic Risks and Climate Change". After a brief introduction to the anthropogenic causes of climate change, De Sousa explores adaptive actions to manage the risks to human and natural systems caused by climate change – a table helpfully maps public and private measures, breaking them down into anticipatory measures and reactive measures and aiding visualisation. She highlights that any system will face risks due to endogenous factors (ie those associated with the complexity of said system), which are compounded by risks exogenous to the system; and where the source of these exogenous risks is climate change, this adds another layer of complexity to responding to the risks, which makes it difficult for a broad spectrum of stakeholders to construct a cohesive response. As discussed in Chapter 4, "The Challenges of Regulating Systemic Risks", a system's stressors are impossible to separate out from other stressors such as demographic changes. Therefore, a holistic approach would be desirable to take account of this plethora of factors. As De Sousa concedes, however, it would be extremely difficult to design – much less to implement – a holistic regulatory approach, due to both the nuances it would entail and the impossibility of being able to rely upon predictions. Consequently, the balance to be struck is between over- and under-regulation.

Chapters 5–7 see the evolution of De Sousa's theoretical approach. She expertly outlines the traditional approach to regulating risk in Chapter 5, before detailing a governance approach in Chapter 6, where she defines "risk governance" and outlines the IRGC's risk governance model in detail. De Sousa uses these chapters as a springboard for Chapter 7, "A New Paradigm for Regulating Systemic Risks", which is the thrust of her contribution to the literature. As such, it is a lengthy yet highly focused and impressive chapter, which lays out the foundational components and justifications for her "risk governance" approach. "Building blocks", used in a metaphorical sense to refer to the units from which a structure is constructed, was first used as a concept in the context of energy utilities and economic regulation⁴ – the allowed total revenue of a regulated utility is based on underlying building blocks that assist in determining the total cost of service of the utility.⁵ In a similar sense, the "building blocks" concept helpfully explains that the hallmark of a regulatory regime is a "bottom-up approach" – in a regulatory context, "building blocks" reflect the core attributes of the regime, together describing the regulatory ideal established under it.⁶ While a

⁴ *ibid*, 92: "The concept of a 'building block' model was coined by the Australian Competition and Consumer Commission when determining the total revenue requirement for a regulated gas pipeline: J. Dimasi, 'Rethinking utility regulation in Australia', *Monash Business Policy Forum* (Monash Business School, 2015) p. 13 accessible at: https://www.monash.edu/_data/assets/pdf_file/0005/906971/rethinking-utility-regulation-in-australia-final.pdf."

⁵ *ibid*, 91.

⁶ *ibid*, 91.

“building blocks” approach has been advanced in the context of addressing climate change mitigation,⁷ to do so for climate change *adaptation* is novel, and the use of visual aids throughout this chapter greatly assists in conveying De Sousa’s ideas.⁸

The subsequent four chapters may be of particular interest to experts in climate change or the risks caused by the phenomenon. Essentially, each is a case study exploring the extent to which the system adequately regulates systemic risks of this nature and is amenable to the risk governance approach advanced. Chapter 8 focuses on regulating climate change risks to EU ecosystems, Chapter 9 on the UK health system, Chapter 10 on the US financial system and Chapter 11 on Australian infrastructure systems. For example, the US regulatory regime appears to align well with this approach, at least in theory.⁹ In contrast, the current statutory regime that governs the National Health Service (NHS) in the UK¹⁰ is not framed in terms of risks caused by climate change and is not amenable to this approach, although the Secretary of State for Health and Social Care is able to take appropriate action to ensure the NHS is resilient to climate change risks, which may offer a way forward insofar as it has the duty, powers and functions to ensure risks to the system are addressed effectively. Together, these chapters help test and elucidate the application of De Sousa’s theoretical framework, highlighting its broad applicability and significance.

In summary, De Sousa’s monograph expertly combines her wealth of practical experience as a legal consultant advising government clients with scholarly research. It probably will find a wide readership; it will be of interest not only to legal scholars more generally, but also to others working at the intersection between law and policy in the fields of regulation, governance and climate change. Its main premise is to demonstrate that it is early days yet for working out how to effectively manage systemic risks caused by climate change, but that the risk governance approach advanced is a more nuanced and holistic approach that offers a way forward. It is a publication that is likely to be central to the debate for many years to come, not only as the risks caused by climate change become more pronounced, but also because, in having laid bare the gulf between risk and regulatory theory and practice in the context of systemic risks caused by climate change, other scholars are provided with a solid foundation upon which to contribute to the literature – its biggest success may lie in kick-starting further “imaginative” responses in the domain of risk regulation.

⁷ *ibid.*, 92: “R. Falkner, H. Stephan, & J. Vogler, ‘International climate policy after Copenhagen: Towards a “building blocks” approach’ (2010) 1(3) *Global Policy*, pp. 252–62; R.B. Stewart, M. Oppenheimer, & B. Rudyk, ‘Building blocks for global climate protection’ (2013) 32(2) *Stanford Environmental Law Journal*; E. Waters, ‘Why the world should act like children: Using the building blocks method to combat climate change, beginning with methane’ (2017) 51(4) *University of Richmond Law Review*, pp. S27–42.”

⁸ *ibid.*, 92.

⁹ *ibid.*, 225.

¹⁰ National Health Service Act 2006.