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Climate Change Litigation

Regulatory Pathways to Cleaner Energy

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Chapter

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Why climate change litigation matters

Everything is litigated, everything will be litigated. And that's the starting point and the presumption. No matter how small the rule is or how big the rule is. It's going to be litigated. And it's going to be decided by the D.C. Circuit if it's a federal rule and if it's a state rule it's going to be decided somewhere else in some court. It's just the nature of America! I mean, I am gainfully employed, likely, because of the degree to which we rely upon law to guide regulatory development as opposed to other countries, which are policy-driven.

– US Interview Participant 5

I take a long-term view [of] climate litigation. I really think we are like lawyers in Alabama in 1950 fighting for black civil rights or . . . lawyers at the early stages of cigarette and asbestos litigation, trying to establish a causal link between cigarettes and lung cancer. And, you know, you get looked at like you've got two heads and you're green by the courts to start with and you get lots of bad decisions. But the issues are so enormous and the science is so strong; it's not like the problem is going away. So I take a long-term view to these cases that we will have many losses and it's about doing the right thing. Even if at the end of the day we don't change and our society just continues on this suicidal approach of burning fossil fuels, I think we have to do what we can now, with the tools we have, to try and protect the future.

– Australian Interview Participant 4

1.1 Introduction

Courtrooms have become a key battleground in the public debate over climate change around the world. Lawsuits over climate change have been brought in eighteen countries on six continents, as well as in international tribunals.¹ In the United States alone, which has more of these cases than

¹ For details, see Richard Lord, Silke Goldberg, Lavanya Rajamani, and Jutta Brunnée (eds.), *Climate Change Liability: Transnational Law and Practice* (2011, Cambridge University Press, Cambridge); Arnold and Porter LLP, “U.S. Climate Change Litigation Chart” and

any other country, more than five hundred cases under many different laws in state and federal courts have raised climate change mitigation and adaptation issues.² These lawsuits – brought by both those supporting climate change regulation and those fighting it – and the media attention surrounding them have shaped regulation in these countries directly through mandate and indirectly through influencing corporate behavior and social norms.

The most prominent example of climate change litigation is *Massachusetts v. EPA*, the first US Supreme Court decision on climate change, which provided the basis for federal regulation by the US Environmental Protection Agency (EPA) of motor vehicle and power plant greenhouse gas emissions.³ This decision may be “the most important environmental case of the century, if ever,” issued by the US Supreme Court.⁴ For those working in the field of climate and energy law – such as the regulators, lawyers, judges, energy company representatives, planners, insurance risk managers, and environmental campaigners whom we interviewed for this book – the case is “bedrock by now.”⁵ It established that the Clean Air Act provides the US government with the authority to regulate greenhouse gas pollution, the principal contributor to global climate change.⁶ No less momentous was the US Supreme Court’s endorsement of climate change as a serious public policy issue. A decision like that “causes everybody to perk up and take notice; so, at least in the deliberations and corporate boardrooms, they say we can’t completely dismiss this anymore.”⁷

Because *Massachusetts v. EPA* was such an important decision, though, it tends to overshadow the fact that hundreds of other US cases have had a variety of impacts on the country’s regulation of climate change. Moreover, litigation has also been an important influence on climate regulation in other major developed-country greenhouse gas emitters. Australia is one such nation; it has seen an enormous growth in climate

“Non-U.S. Climate Change Litigation Chart,” www.climatecasechart.com; and Climate Justice Programme, “Cases,” www.climatelaw.org/cases.

² A comprehensive database of climate change cases filed and decided in US courts, including links to judgments, is maintained by the Columbia Climate Change Law Center. See, further, Arnold and Porter LLP, “U.S. Climate Change Litigation Chart.” Climate change “mitigation” refers to efforts to reduce greenhouse gas emissions from human sources, whereas climate change “adaptation” focuses on managing the impacts of climate change on communities, infrastructure, and the environment.

³ *Massachusetts v. EPA*, 549 U.S. 497 (2007).

⁴ In-person interview, US Participant 5 (Nov. 14, 2012). ⁵ Ibid.

⁶ The findings of the case and its subsequent impact on US climate regulation are described in depth in Chapter 3.

⁷ Telephone interview, US Participant 8 (Nov. 26, 2012).

change litigation over the past decade and has the second most climate cases in the world.⁸ As this litigation continues to expand around the globe, and particularly in these two countries, the need to understand its role in broader climate change efforts grows. This need is particularly strong in the United States and Australia because they are major carbon polluters and fossil fuel producers, disproportionately contributing to climate change. Both also face significant challenges – social, political, and economic – in their efforts to transition to cleaner energy from their currently carbon-dominated economies.

This book asks how litigation on climate change issues influences regulatory pathways to a cleaner energy future. It focuses on the United States and Australia because they have more of these lawsuits than any other countries, and enough commonalities in both their legal systems and approaches to climate change to provide useful points of comparison. The book attempts to understand the extent to which litigation in each country has affected government regulation and corporate behavior and the pathways by which these effects have occurred, and likely will occur, in the future. In this regard, we are interested in direct legal change brought about by cases and how the case law might help change social and business norms in ways that motivate action by governments and other key stakeholders.

To answer these questions, we not only examined cases and accompanying regulation but also talked with those bringing, adjudicating, and responding to these cases. Our interviewees from the United States and Australia provided valuable insights into the direct and indirect effects of the litigation. Throughout the book, we attempt to take a balanced approach that recognizes that litigation over climate change may have mixed effects on regulatory efforts. While the majority of the litigation in both the United States and Australia has been brought by pro-regulatory litigants who want to advance climate change regulation, a growing body of antiregulatory cases launched by business groups and the fossil fuel industry has emerged in response to decisions like *Massachusetts v. EPA* and the regulation it has spawned as well as proactive action by state governments.⁹ The book considers how these antiregulatory cases, and

⁸ For details of Australian climate change cases, see the database maintained by the Centre for Resources, Energy, and Environmental Law (CREEL) at Melbourne Law School: Jacqueline Peel, "Australian Climate Change Litigation," CREEL, www.law.unimelb.edu.au/creel/research/climate-change. Judgments in many of the cases are freely available online from the Austlii website: www.austlii.edu.au.

⁹ David Markell and J.B. Ruhl, "An Empirical Assessment of Climate Change in the Courts: A New Jurisprudence or Business as Usual" (2012) 64 *Fla. L. Rev.* 15.

other barriers to and backlash against litigation, might limit the progress achieved by pro-regulatory lawsuits.

This chapter sets the scene for the book's discussion of these issues. We begin by describing what we mean by climate change litigation. This is a far from straightforward question because "when you're talking about climate change litigation it's very much a broad spectrum, so it really does depend on what your focus is."¹⁰ Because the book is concerned with the regulatory significance of climate change litigation, our focus has been on cases that have the issue of climate change at the "core" and generally raise climate-specific arguments or contain judicial analysis referencing climate change.

The next part of the chapter discusses how climate change litigation fits into the broader picture of climate change governance. Climate change is a problem regulated at multiple levels – from the international to the local – that involves complex interactions among the activities of multiple actors, governmental and nongovernmental. Although climate change is a global issue in the sense that the accumulation of greenhouse gas emissions from human activities around the world causes impacts in every jurisdiction, many of the most important responses take place at the domestic level. Climate change litigation has tended to have its greatest impact at this level and is a mechanism that is especially well suited for bringing together different levels of government.

Chapter 4 introduces our two national case studies – the United States and Australia – and explains why litigation in these two countries, and the role it plays in shaping their respective regulatory paths, is particularly important in assessing domestic efforts to move toward cleaner energy. We also discuss how the common challenges that Australia and the United States face in transitioning away from fossil fuels and preparing their communities for the effects of climate change make them good subjects for comparative study. The final part of the chapter provides an outline of the remainder of the book.

1.2 What is climate change litigation?

As noted earlier, climate change is a complex problem that cuts across multiple levels of governance, areas of law, and sectors of the economy. Taking a broad approach, then, "virtually all litigation could be conceived of as [climate change litigation]," given that "climate change is the

¹⁰ Skype interview, Australian Participant 6 (Apr. 5, 2013).

consequence of billions of everyday human actions, personal, commercial, and industrial.”¹¹ However, the climate change litigation that has arisen in countries like the United States and Australia tends to have a much more direct link to climate change, by addressing either the greenhouse gas emissions that cause the problem (mitigation-related litigation) or the predicted impacts of climate change on ecosystems, communities, and infrastructure (adaptation-related litigation). Litigants in such cases may be seeking to promote climate change regulation (proactive litigation) or to oppose existing or proposed regulatory measures (antiregulatory litigation).

More difficult to classify are cases at the edges of these categories. A good example is the many claims that have been brought – both in the United States and Australia – concerning the environmental effects of hydraulic fracturing (“fracking”) for unconventional energy sources such as shale or coal seam gas.¹² As we discuss further in Chapter 3, the explosion in natural gas production facilitated by fracking has major implications for the future of clean energy. Although many in the industry argue that “we’re advancing the cause for climate change by our emissions being less than other fossil fuels, like coal,” the relationship between fracking and climate change is more complex.¹³ This expansion may decrease emissions in the short term through coal-to-gas substitution in energy systems. Over the longer term, though, reliance on natural gas – without major technological shifts – will still result in rising greenhouse gas emissions.¹⁴

¹¹ Chris Hilson, “Climate Change Litigation in the UK: An Explanatory Approach (or Bringing Grievance Back In)” in F. Fracchia and M. Occhiena (eds.), *Climate Change: La Riposta del Diritto* (2010, Editoriale Scientifica, Naples), 421. Hilson also makes the point that litigation itself is a broad concept that can connote many different things. It extends from the formal resolution of a dispute by a court or tribunal on the basis of adjudicative procedures to more informal proceedings before an independent decision maker, as well as to judicial proceedings that have been commenced but settle before they reach the stage of a full hearing and judgment. Because our focus is on the regulatory impact, direct and indirect, of climate change litigation rather than on its form, we have taken a broad view of what litigation involves and include decided cases, cases before administrative tribunals, and settled cases in our discussion.

¹² US fracking cases are tracked in Arnold and Porter LLP, “Hydraulic Fracturing Case Chart,” “US Climate Change Litigation Chart.” For examples of cases over fracking and coal seam gas exploitation in Australia, see Peel, “Australian Climate Change Litigation.” In the United States, coal seam gas is referred to as coal bed methane.

¹³ Skype interview, Australian Participant 7 (Apr. 11, 2013).

¹⁴ International Energy Agency, “Are We Entering a Golden Age of Gas? Special Report” in *World Energy Outlook 2011* (2011, OECD/IEA, Paris), 8 (“An increased share of natural gas in the global energy mix is far from enough on its own to put us on a carbon emissions path consistent with an average global temperature rise of no more than 2°C”). See

Fracking cases have not (yet) been litigated on an explicit climate action platform, with plaintiffs instead favoring arguments about the impacts on water resources and wildlife.¹⁵ Nonetheless, at least some groups bringing antifracking claims in the United States and Australia are doing so as part of broader climate change campaigns.¹⁶

Other scholars who have evaluated climate change litigation, such as Professors J.B. Ruhl and David Markell, have been hesitant to rely on the motivation of litigants bringing claims as a basis for categorizing cases as “climate change litigation.” They worry that this approach requires uninformed judgments about litigants’ mental state. Hence, in their empirical studies of climate change litigation in the United States, these authors have limited their analysis to “any piece of federal, state, tribal, or local administrative or judicial litigation in which the party filings or tribunal decisions directly and expressly raise an issue of fact or law regarding the substance or policy of climate change causes and impacts.”¹⁷ As Markell and Ruhl acknowledge, this approach “has some limiting effects on the pool of cases included.”¹⁸ For instance, their definition excludes challenges to coal-fired power plants that are motivated by a concern over climate change but litigated on other grounds, such as the plants’ contribution to air pollution or their impacts on water. Markell and Ruhl argue that such cases are likely to influence the law and policy of climate change only “in the broadest sense” and “would not be contributing to any discrete body of law bearing a direct connection to climate change issues.”¹⁹

In our view, however, this approach is too narrow where the purpose is to understand the linkage between litigation and climate change

also recent scientific evidence suggesting that fugitive methane emissions associated with unconventional gas exploitation may outweigh any climate benefits from its substitution for coal. See Robert W. Howarth, Renee Santoro, and Anthony Ingraffea, “Methane and the Greenhouse-Gas Footprint of Natural Gas from Shale Formations” (2011) 106 *Clim. Change* 679.

¹⁵ See, e.g., *Fullerton Cove Residents Action Group Incorporated v. Dart Energy Ltd.* (No. 2) (2013) NSWLEC 38.

¹⁶ See, e.g., Center for Biological Diversity, “California Fracking,” available at www.biologicaldiversity.org/campaigns/california_fracking/. In an Australian context, see “Lock the Gate Alliance,” www.lockthegate.org.au/.

¹⁷ David Markell and J.B. Ruhl, “An Empirical Survey of Climate Change Litigation in the United States” (2010) 40(7) *Environ. L. Rep.* 10644, 10647. See also Markell and Ruhl, “A New Jurisprudence or Business as Usual,” 27.

¹⁸ Markell and Ruhl, “A New Jurisprudence or Business as Usual,” 27.

¹⁹ Markell and Ruhl, “An Empirical Survey,” 10647; Markell and Ruhl, “A New Jurisprudence or Business as Usual,” 26–27.

regulation. Although discerning a climate change–related motivation for litigation is not always straightforward when the parties’ pleadings or the judgment do not mention it directly, a range of other materials, including case briefings and media releases, can aid in identifying the ultimate reasons behind particular litigation.²⁰ Our interviews with litigants, particularly those from environmental groups, also indicate that the way a case is framed in argument is often dictated by what are perceived to be the strongest legal points for a claim, which may not be the climate change issue at stake. Nonetheless, the litigation itself is designated within the organization or by the litigants concerned as contributing to a climate change or antioal campaign.²¹ Taken on an individual basis, a case focused on challenging a particular fossil fuel project is often relatively small scale and narrow in scope, which tends to limit its discrete impact. However, excluding these cases from consideration may miss their cumulative regulatory influence. No single case may achieve a “home run,” but collectively they work to “forc[e] coal plants to account for some of their unrealized externalities.”²²

At the opposite end of the spectrum from cases motivated by climate concerns but litigated on alternative non–climate grounds are lawsuits that only peripherally touch on climate change issues. In some of these cases, climate-related concerns may be thrown into pleadings as another plausible argument, but without such concerns being the main focus of the litigation.²³ In others, responses to climate change created the regulatory issue being litigated, but climate change itself is not central to the case. Interviewees mentioned private litigation over carbon trading contracts as an example of this category of cases. Although such litigation is a by-product of carbon trading schemes under climate regulatory instruments such as the Kyoto Protocol²⁴ or the European Emissions

²⁰ Hilson, “Climate Change Litigation in the UK.”

²¹ See, e.g., in-person interview, Australian Participant 1 (Mar. 7, 2013) (“The contribution of coal to climate change was one of our motivations for taking on the litigation and discussing the issue, even though the cases did not directly address climate change issues”).

²² Telephone interview, US Participant 1 (Oct. 20, 2012).

²³ Skype interview, Australian Participant 18 (Jul. 18, 2013). Another interviewee gave the example of cases against animal factories: “there the hook was smog forming pollution from big dairies or a big meat chicken factory. But the same processes at the dairies that emit a lot of smog forming emissions also emit a lot of methane. So there’s this two-for-one aspect sometimes in some cases.” In-person interview, US Participant 10 (Jan. 14, 2013).

²⁴ This international treaty, discussed further later, provides for trading of emissions units between nations that are Protocol parties.

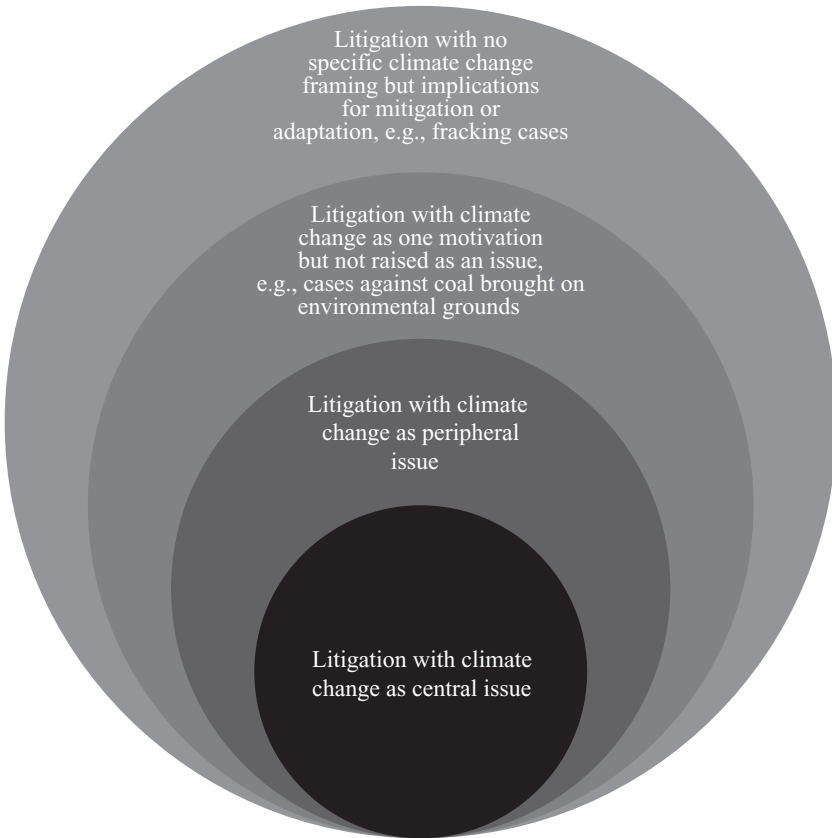


Figure 1.1 Conceptualizing climate change litigation.

Trading Scheme,²⁵ climate change as such is not an issue in the disputes, which largely concern the interpretation of contractual terms.²⁶

In Figure 1.1, we represent our concept of climate change litigation in terms of a series of concentric circles. At the core are cases where climate change – whether relating to mitigation or adaptation and brought by pro- or antiregulatory claimants – is a central issue in the litigation. These

²⁵ For details of the European Emissions Trading Scheme, see European Commission, “Climate Action,” http://ec.europa.eu/clima/policies/ets/index_en.htm. See also Michael Faure and Marjan Peeters (eds.), *Climate Change and European Emissions Trading: Lessons for Theory and Practice* (2008, Elgar, Cheltenham).

²⁶ Skype interview, Australian Participant 6 (Apr. 5, 2013).

cases tend to have some element of deliberate framing of the arguments or judgment in climate change terms. As Professor Chris Hilson points out, “climate change framing of claims is a relatively new phenomenon.”²⁷ Challenges to fossil fuel projects or other greenhouse gas-intensive developments have been brought in both the United States and Australia for many years. But it is only in the last decade that a substantial portion of these cases has used the contribution to climate change as part of the argument or motivation for the case.²⁸ At the outer limits of the boundaries of climate change litigation lie cases that are not explicitly tied to specific climate change arguments but which have clear implications for climate change mitigation or adaptation. In between are cases where (1) climate change is raised, but as a peripheral issue in the litigation, and (2) concerns over climate change motivate the lawsuit, at least in part, but are not raised explicitly in the claims or decision.

As our interest lies in how litigation may serve as a pathway to improved climate change regulation, and in the process influence mitigation and adaptive behaviors, the majority of our case examples in the following chapters are drawn from the core of this broader sphere. However, on occasion, cases further from the core may have a significant regulatory impact, usually in combination with other cases or through the indirect effects they have on government or corporate behavior.

1.3 Why climate litigation matters as part of climate governance

This book examines climate change litigation and the extent to which these cases mandate, foster, or facilitate improved regulation. It moves beyond describing or cataloging the cases that have emerged to evaluate the impact of climate change litigation on government regulation of climate change and the behavior of other key actors, such as major corporate emitters. We are thus fundamentally concerned with the real-world consequences of climate change litigation for the achievement of mitigation and adaptive outcomes.

This choice of focus may invite several questions from readers; after all, the realm of climate change governance is increasingly acknowledged to

²⁷ Hilson, “Climate Change Litigation in the UK.”

²⁸ Many cases against coal in both the United States and Australia continue to pursue only non-climate-related grounds, such as environmental, health, or air quality impacts.

be both complex and multidimensional.²⁹ Why, then, focus on litigation rather than other pieces of the governance puzzle, such as international agreements or national regulatory programs? Moreover, given that litigation is fact intensive and jurisdiction specific, can it have any broader regulatory role, especially in addressing a problem of global dimensions such as climate change? In the following sections, we argue that there are at least three reasons why climate change litigation matters as a component of the overall system of climate governance: (1) international regulatory efforts are failing, increasing reliance on domestic regulatory solutions to which litigation can contribute; (2) climate governance operates across multiple scales and involves many actors, and litigation can be a useful means of connecting these different elements; and (3) mitigation and adaptive outcomes rely on the cumulative effect of numerous smaller-scale decisions, many of which come before courts and through which litigation can play an effective shaping role.

1.3.1 *Regulatory gaps created by struggling international climate negotiations*

As is widely acknowledged, international solutions to the climate change problem have been slow to emerge.³⁰ The international climate change

²⁹ Among others, see Steven Bernstein and Benjamin Cashore, "Complex Global Governance and Domestic Policies: Four Pathways of Influence" (2012) 88(3) *Int. Affairs* 585; Frank Biermann, Philipp Pattberg, and Fariborz Zelli, *Global Climate Governance beyond 2012: Architecture, Agency and Adaptation* (2010, Cambridge University Press, Cambridge); Daniel C. Esty, "Climate Change and Global Environmental Governance" (2008) 14 *Global Governance* 111; Neil Gunningham, "Confronting the Challenge of Energy Governance" (2012) 1(1) *Transnatl. Environ. L.* 119; Ellen Hey and Andria Naudé Fourie, "Participation in Climate Change Governance and Its Implications for International Law" in Rosemary Rayfuse and Shirley V. Scott (eds.), *International Law in the Era of Climate Change* (2012, Edward Elgar, Cheltenham), 254; Kati Kulovesi, "Exploring the Landscape of Climate Law and Scholarship: Two Emerging Trends" in Erkki J. Hollo, Kati Kulovesi, and Michael Mehling (eds.), *Climate Change and the Law* (2013, Springer, Dordrecht), 31; Jacqueline Peel, Lee Godden, and Rodney J. Keenan, "Climate Change Law in an Era of Multi-Level Governance" (2012) 1(2) *Transnatl. Environ. Law* 245; Joanne Scott, "The Multi-level Governance of Climate Change" (2011) 5(1) *Carbon Clim. L. Rev.* 25.

³⁰ In the wake of the Copenhagen COP, the failures of the UNFCCC regime prompted serious discussion of the future of international climate law: see, e.g., Daniel Bodansky, "The Copenhagen Climate Change Conference: A Postmortem" (2010) 104 *Am. J. Intl. L.* 230; Sebastian Oberthür, "Global Climate Governance after Cancun: Options for EU Leadership" (2011) 46(1) *Intl. Spectator* 5; Elinor Ostrom, *A Polycentric Approach for Coping with Climate Change: Background Paper to the 2010 World Development Report* (Policy Research Working Paper 5095) (2009, World Bank, New York); Gwyn Prins et al., *The Hartwell Paper: A New Direction for Climate Policy after the Crash of 2009* (2010,

regime as it stands consists of the two-decades-old United Nations Framework Convention on Climate Change (UNFCCC) – which establishes the basic global infrastructure for climate change mitigation and adaptation actions and seeks to stabilize atmospheric greenhouse gas concentrations “at a level that would prevent dangerous anthropogenic interference with the climate system”³¹ – and the supplementary Kyoto Protocol.³² The 1997 Kyoto Protocol established binding emissions reduction targets for participating developed-country parties (which did not include the United States) over the first commitment period running from 2008 to 2012.³³ At the UNFCCC Conference of the Parties (COP) meeting in 2012, parties to the Protocol agreed to institute a second commitment period for 2013 to 2020, but the necessary treaty amendment has not yet received sufficient support to come into force.³⁴

Although countries acknowledged at the 2009 COP in Copenhagen the urgency of deep cuts in greenhouse gas emissions and agreed that global temperature rise should be limited to two degrees Celsius (2°C) to avoid the worst impacts of climate change,³⁵ subsequent international actions to reduce emissions and prepare for impacts have been feeble.³⁶ International climate negotiators are currently engaged in another round of negotiations pursuant to the so-called Durban Platform that emerged from the 2011 COP. These negotiations aim to reach agreement by late

Institute for Science, Innovation, and Society, University of Oxford; LSE for the Study of Long Wave Events; MacKinder Programme, Buckinghamshire).

³¹ United Nations Framework Convention on Climate Change (UNFCCC), New York, May 9, 1992, entered into force Mar. 21, 1994, 1771 UNTS 107, article 2.

³² Kyoto Protocol to the United Nations Framework Convention on Climate Change (Kyoto Protocol), Kyoto, Dec. 11, 1997, entered into force Feb. 16, 2005, 2303 UNTS 148.

³³ Kyoto Protocol, article 3 and Annex B. The Protocol includes no binding emissions reduction targets for developing countries even though some such countries, including China and India, have emerged as major emitters.

³⁴ Doha Amendment to the Kyoto Protocol, Doha, Dec. 8, 2012, C.N.718.2012.TREATIES-XXVII.7.c (not yet in force). The amendment requires support from three-quarters of the Protocol’s parties to enter into force. So far only nine of the Protocol’s 192 parties have ratified the amendment: see UNFCCC, “Doha Amendment,” https://unfccc.int/kyoto_protocol/doha_amendment/items/7362.php. Australia, under the Gillard government, was a supporter of the Doha amendment, but with the Abbott government now in power, it is unlikely that Australia will join a second commitment period under the Protocol. See, further, Chapter 3.

³⁵ Decision 2/CP.15, “Copenhagen Accord,” in UNFCCC/CP/2009/11/Add.1 (Mar. 30, 2010), paragraphs 1 and 2.

³⁶ A significant gap remains between emissions reduction pledges submitted by countries under the Copenhagen Accord and Cancun Agreements that emerged from the 2010 COP and the emissions cuts necessary to meet the 2°C target. See UNEP, *The Emissions Gap Report 2013* (2013, UNEP, Geneva).

2015 on “a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties.”³⁷

The parties made progress toward that goal in the 2014 negotiations with the Lima Call for Action, but the commitments by all nations to make voluntary commitments likely will still fall substantially short of what scientists say are needed. Even if the Durban Platform negotiations are successful in producing a robust, comprehensive, and universal climate change agreement (i.e., one that would bind all UNFCCC parties, including major emitters outside the Kyoto Protocol, regime such as the United States and China), the agreement would only come into effect from 2020.³⁸ This timetable is seriously at odds with the information emerging from scientific organizations such as the Intergovernmental Panel on Climate Change (IPCC). In its latest 2014 report, the IPCC stresses that

continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system. Limiting climate change will require substantial and sustained reductions of greenhouse gas emissions.³⁹

Other reports have been more explicit about the urgency of action in the next few years. For instance, in 2011, the Australian Climate Commission warned that 2011 to 2020 is the “critical decade” for turning around rising emissions of greenhouse gases and putting us on the pathway to stabilizing the climate system.⁴⁰ Likewise, the United Nations Environment Programme – in its successive Emissions Gap reports since 2010,

³⁷ Decision 1/CP.17, “Establishment of an Ad Hoc Working Group on a Durban Platform for Enhanced Action, 2011,” in FCCC/CP/2011/9/Add.1 (Mar. 15, 2012), paragraph 2 (Durban Platform).

³⁸ Durban Platform, paragraph 2; Lima Call for Action, Decision -/CP.20, Dec. 14, 2014, http://unfccc.int/files/meetings/lima_dec_2014/application/pdf/auv_cop20_lima_call_for_climate_action.pdf; Coral Davenport, “A Climate Accord Based on Global Peer Pressure,” *N.Y. Times*, Dec. 14, 2014, http://www.nytimes.com/2014/12/15/world/americas/lima-climate-deal.html?emc=edit_na_20141214&nlid=52930963&r=0.

³⁹ IPCC, “Summary for Policymakers” in T. F. Stocker et al. (eds.), *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (2013, Cambridge University Press, Cambridge), 19. The IPCC found that to have a greater than 66 percent chance of limiting the warming caused by anthropogenic carbon dioxide emissions to less than 2°C, cumulative emissions from all anthropogenic sources will need to stay below 1 trillion tonnes of carbon. Of this carbon budget, around 531 billion tonnes (over half) was already emitted by 2011. This accords with scientific literature suggesting that to stay within the available carbon budget, less than half the proven oil, gas, and coal reserves can be exploited. See Malte Meinshausen et al., “Greenhouse-Gas Emissions Targets for Limiting Global Warming to 2°C” (2009) 458 *Nature* 1158.

⁴⁰ Climate Commission, *The Critical Decade: Science, Risks and Responses* (2011, Australian Government, Canberra).

assessing emissions pathways necessary to give the world a more than even odds chance of staying below the 2°C warming target – has repeatedly emphasized that this will require a peak in global annual emissions before 2020.⁴¹

The failures of the international climate treaty regime in adequately reducing emissions⁴² and improving adaptive capacity⁴³ have focused attention and hope on regulatory efforts at the subglobal and even sub-national levels, especially in countries that are major carbon emitters.⁴⁴ At these federal, state, and local levels, in both countries, litigation clearly has a vital role to play, both as a gap-filler and as a potential catalyst for regulatory action.⁴⁵

1.3.2 *Litigation as an element of multidimensional climate governance*

Even if a more effective treaty regime were to emerge from current international climate negotiations, it would still struggle to capture the ways in which both mitigation and adaptation require regulatory interactions among public and private stakeholders at individual, local, state, national, and interstitial regional scales. Climate change is a problem that cuts across many levels of governance and types of law, implicates the competencies of different agencies, and involves a wide range of public and private actors.⁴⁶ For this reason, some have described climate change

⁴¹ See, e.g., UNEP, *Emissions Gap Report 2013*.

⁴² Emissions are steadily growing, and according to the International Energy Agency, current energy consumption puts the world on track for a long-term global average temperature rise of at least 3.6°C, far in excess of the 2.0°C aim. See International Energy Agency, *World Energy Outlook 2013* (2013, OECD/IEA, Paris).

⁴³ IPCC Working Group II, *Summary for Policymakers – Final Draft, Climate Change 2014 – Impacts, Adaptation, and Vulnerability* (2014, IPCC, Geneva), describing “a growing adaptation deficit.”

⁴⁴ See, e.g., Kirsten H. Engel and Scott R. Saleska, “Subglobal Regulation of the Global Commons: The Case of Climate Change” (2005) 32 *Ecol. L. Q.* 183; Ann E. Carlson, “Iterative Federalism and Climate Change” (2009) 103 *Northwestern Univ. L. Rev.* 1097; Daniel Farber, “Carbon Leakage versus Policy Diffusion: The Perils and Promise of Subglobal Climate Action” (2013) 13 *Chicago J. Intl. L.* 359; Hari M. Osofsky, “Suburban Climate Change Efforts: Possibilities for Small and Nimble Cities Participating in State, Regional, National, and International Networks” (2012) 22 *Cornell J. L. Public Policy* 395; Peel et al., “Climate Change Law in an Era of Multi-Level Governance.”

⁴⁵ Hari M. Osofsky, “The Continuing Importance of Climate Change Litigation” (2010) 1 *Clim. L.* 3.

⁴⁶ Hari M. Osofsky and Jacqueline Peel, “Litigation’s Regulatory Pathways and the Administrative State: Lessons from U.S. and Australian Climate Change Governance” (2013) 25 *Georgetown Intl. Environ. L. Rev.* 207.

as a “super-wicked” problem – one that is not only enormously complicated but also poses problems of timing, incentives, and massive scope.⁴⁷

An emerging scholarly literature conceptualizes what governance models capable of capturing these complexities might look like.⁴⁸ This literature often draws from theories of international law, such as polycentric governance and global legal pluralism, which have an inclusive vision of lawmaking. Such theories treat treaties between nation-states as important but also look to the contributions of a diverse set of actors at multiple levels to climate change governance. These models provide possibilities for valuing the role of litigation in climate change regulation. If a vision of climate change governance views treaties among nation-states as only one piece of a regulatory puzzle, even if the most important one, that opens an inquiry into how other approaches to regulation fit into an overall scheme.

Although scholars and policy makers have devoted significant attention to evolving climate change litigation, especially in the United States, much of the focus has been on the analysis of particularly significant cases on an individual basis⁴⁹ or, alternatively, on creating typologies for the case law and quantifying the number of cases in different categories.⁵⁰ In these first and second waves of climate litigation scholarship, less attention has been paid to the part courts can play in helping to create and develop

⁴⁷ Richard Lazarus, “Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future” (2009) 94 *Cornell L. Rev.* 1153.

⁴⁸ See particularly Hari M. Osofsky, “Climate Change Litigation as Pluralist Legal Dialogue” (2007) 26A *Stanford Environ. L. J.* 181, and Ostrom, “A Polycentric Approach.”

⁴⁹ The *Massachusetts v. EPA* case alone generated a massive number of law review articles, as noted in Elizabeth Fisher, “Climate Change Litigation, Obsession and Expertise: Reflecting on the Scholarly Response to *Massachusetts v. EPA*” (2013) 35(3) *L. Policy* 236. Of the many examples, see, particularly, Jody Freeman and Adrian Vermule, “Massachusetts v. EPA: From Politics to Expertise” (2007) *Supreme Court Rev.* 51; Hari M. Osofsky, “The Intersection of Scale, Science, and Law in *Massachusetts v. EPA*” in William C. G. Burns and Hari M. Osofsky (eds.), *Adjudicating Climate Change: State, National, and International Approaches* (2009, Cambridge University Press, New York), 129; Kathryn A. Watts and Amy J. Wildermuth, “*Massachusetts v. EPA*: Breaking New Ground on Issues Other Than Global Warming” (2008) 102 *Nw. Univ. L. Rev.* 1029.

⁵⁰ For prominent examples, see Markell and Ruhl, “An Empirical Survey” and “A New Jurisprudence or Business as Usual”; Navraj S. Ghaleigh, “Six honest serving men’: Climate change litigation as legal mobilization and the utility of typologies” (2010) 1 *Clim. L.* 31, and Tim Stephens, “International Courts and Climate Change: Progression, Regression and Administration” in Rosemary Lyster (ed.), *In the Wilds of Climate Change Law* (2010) 53.

regulatory responses to the complex climate change problem.⁵¹ This ever-growing body of cases, however, may serve as a generative source of regulation well suited to the complexity of the problem. It provides a mechanism for fluid, multilevel interests to interact among relatively fixed legal structures situated at different scales.⁵² In addition, courts are forums accessible, in the main, to a wider range of actors than are other government institutions.⁵³ As one interviewee explained, litigation offers the chance of

actually doing something to try and deal with a massive issue that at an individual level is hard to [do] because the decisions are made by government and internationally that individuals can't influence very much. But two or three, or maybe half a dozen key people can run a really good court case. Half a dozen people can't normally influence national policy or international policy.⁵⁴

This combination of bringing together key stakeholders at multiple levels and of accessibility has made, and likely will continue to make, courts an important place for shaping climate change regulation.

1.3.3 Role of court decisions in shaping smaller-scale decision making

Although the accumulation of greenhouse gases in the atmosphere ultimately causes the climate change problem, many billions of individual

⁵¹ We situate the work in this book as part of a new “third wave” of climate litigation scholarship concerned with litigation’s regulatory role. We believe that this concept of waves has value in differentiating our work from what has gone before, while acknowledging the important contribution made by previous research to developing our understanding of climate change litigation. These waves represent conceptual rather than chronological development; some third wave scholarship, including articles we have authored, was published several years ago, and some first and second wave scholarship continues to be produced. However, thinking of these types of scholarship as a progression helps to clarify how they fit together.

⁵² Hari Osofsky, “Diagonal Federalism and Climate Change: Implications for the Obama Administration” (2011) 62 *Alabama L. Rev.* 237 (arguing that litigation has an important “diagonal quality” that can create intersections between different levels of government and different actors – public and private – concerned with a climate issue).

⁵³ Nonetheless, climate litigants, like other public interest claimants, face access to justice barriers. These barriers and the extent to which they have been addressed in climate litigation are examined in Chapter 7.

⁵⁴ Skype interview, Australian Participant 4 (Mar. 20, 2013). See also David B. Hunter, “The Implications of Climate Change Litigation: Litigation for International Environmental Law-Making” in William C. G. Burns and Hari M. Osofsky (eds.), *Adjudicating Climate Change: State, National, and International Approaches* (2009, Cambridge University Press, New York) 357.

decisions and actions impact global efforts to reduce emissions or adapt to climate change effects. Examples include whether a city's plan opts for denser development and integrated public transport over urban sprawl; whether new coal-fired power plants are allowed to be built or existing ones extended; whether insurers provide policies for homes in areas that could be inundated or are otherwise at risk in the future as a result of sea level rise and climate change; and whether investors and banks decide to invest in fossil fuel assets or alternatives. These are the kinds of decisions that regularly come before local decision makers and that may subsequently be challenged or reviewed in the courts. Courts can play a significant role in shaping individual decisions at this level, both through the direct legal changes their judgments bring about and through the indirect influence they exert over broader social norms and values. Moreover, over time, a series of judicial opinions can aid in providing coherence to policies and decision making through courts' consistent application of legal principles and consolidation of a body of case law.

In sum, climate change litigation matters in overall climate governance because of the significant part it can play, is playing, and is likely to play in shaping decision making and the regulatory landscape relating to climate change across various levels of governance. Its impact to date has been felt most prominently at the national, subnational, and local levels. Given the failures of top-down, international models of climate change governance in recent years, it is likely that regulatory action at these levels will continue to make a critical contribution in addressing the larger, globalized problem of climate change.

1.4 Climate litigation and regulatory pathways in the United States and Australia

Climate change litigation has been initiated in many countries around the world, including Argentina, Australia, Canada, the Czech Republic, France, Germany, Greece, India, Israel, Japan, New Zealand, Nigeria, Poland, Spain, Ukraine, the United Kingdom, Uruguay, and, most prominently, the United States.⁵⁵ In the book, we focus on the United States

⁵⁵ This listing is based on records of climate change cases in Richard Lord et al. (eds.), *Climate Change Liability: Transnational Law and Practice* (2011, Cambridge University Press, Cambridge), Arnold and Porter LLP, "U.S. Climate Change Litigation Chart" and "Non-U.S. Climate Change Litigation Chart," available at www.climatecasechart.com,

and Australia as two national case studies of the ways in which litigation shapes climate regulatory pathways.

The United States as a central case study in investigating the regulatory role of litigation is an obvious choice. The United States has been, and remains, the epicenter of the climate change litigation phenomenon. As we discuss further in Chapter 3, the country's uneven regulatory response to climate change, including its failure to ratify the Kyoto Protocol and to enact comprehensive national climate legislation, has been a major driver of climate change litigation in the United States. The United States also has a far more litigious culture compared to other nations, as the opening quotation for this chapter highlights.⁵⁶

Litigation has played a key role in shaping the US regulatory response to climate change at multiple levels. Most significantly, as discussed further in Chapter 3, the Obama administration has justified Clean Air Act

and Climate Justice Programme, "Cases," www.climatelaw.org/cases. In common law countries, half a dozen cases each have been brought in Canada and New Zealand. Several Canadian cases have focused on the necessity of considering greenhouse gas emissions and climate change impacts in development, including fossil fuel extraction and power generation projects. Other cases have sought to question Canada's compliance with duties under legislation implementing the Kyoto Protocol and the decision of the Canadian government in 2011 to withdraw from the Protocol. Lisa Vanhala, "The Comparative Politics of Courts and Climate Change" (2013) 22(3) *Environ. Politics* 447. The New Zealand cases raising climate change issues have done so in challenges to power stations and in defence of renewable energy wind farm projects. Greenpeace Briefing, "History of Climate Change Litigation," New Zealand, June 2007. For its part, the United Kingdom has seen more than twenty cases, with many likewise involving wind farm proposals. Other UK climate change cases have concerned the adequacy of government decision making on proposals with significant, associated greenhouse gas emissions (e.g., airport expansions), contractual claims relating to carbon trading, the compatibility of investment decisions by Treasury with the United Kingdom's climate change commitments, and "reactive" litigation where climate change activists are prosecuted for their involvement in allegedly unlawful direct action. Hilson, "Climate Change Litigation in the U.K." Climate change litigation at the European Union level has mainly focused on the operation of the EU emissions trading scheme. These actions have been brought by the private sector, or member states lobbied by the private sector, seeking to protect economic interests. Sanja Bogojević, "EU Climate Change Litigation, the Role of the European Courts and the Importance of Legal Culture" (2013) 35(3) *L. Policy* 184. There have also been a handful of cases brought at the international level as petitions to human rights bodies (e.g., the petitions to the Inter-American Commission on Human Rights by the Inuit and on black carbon emissions from Canada) and the World Heritage Committee (with the latter seeking "in danger" listings for world heritage sites imperiled by climate change), as well as noncompliance actions under the Kyoto Protocol and disputes over renewable energy subsidies before the World Trade Organization.

⁵⁶ In-person interview, US Participant (Nov. 14, 2012).

regulation of motor vehicle and power plant emissions as flowing from the US Supreme Court's decision in *Massachusetts v. EPA*. However, the diversity of the several hundred legal claims that have been brought, by both pro- and antiregulatory claimants, illustrates the many different pathways by which litigation can impact regulation, and their relative strengths and weaknesses.

Australia, to some, might seem a less obvious choice as a focus for comparative study of the regulatory role of climate change litigation. In contrast to the massive greenhouse gas emissions of the United States, Australia is a small nation of 23 million people whose domestic emissions make a relatively modest contribution to global greenhouse gas pollution.⁵⁷ However, the country is second only to the United States in the number of decided climate cases and so also offers considerable data for analysis. Indeed, taken on a per capita basis, Australia has seen the most climate change cases brought.⁵⁸

More importantly, Australia is a major player in the global carbon economy as a result of its substantial fossil fuel reserves. For instance, the country is the world's second largest coal exporter, with the majority of this coal supplying the Asian market in China and India.⁵⁹ The local decisions made in Australia about coal projects thus have significance for the development of cleaner energy beyond its shores. In addition to its significant mitigation litigation, Australia has the most well-developed adaptation litigation in the world. It thus provides a useful model for the United States and other countries for how lawsuits might influence evolving systems of adaptation regulation.

The following sections outline key details about the climate change litigation that has been brought in the United States and Australia. They then address why these two countries are good comparators. As explored in more depth subsequently, important similarities in their legal systems and domestic climate change politics allow for an especially fruitful comparative analysis of litigation's regulatory influence.

⁵⁷ As discussed in Chapter 3, Australia's domestic emissions account for 1.2 percent of the global total. This figure, however, does not take into account exported emissions associated with Australian coal and other fossil fuels shipped overseas.

⁵⁸ The relative ratio in Australia is around 1 case per 300,000 people compared with 1 case per 600,000 people in the United States. Our study thus encompasses the country with the highest absolute number of climate change cases and the country with the highest per capita number of cases. We are grateful to Michael Findlay (Jacqueline Peel's husband) for identifying this important point.

⁵⁹ Australia's "carbon economy" is discussed further in Chapters 3 and 5.

1.4.1 *Climate change litigation in the United States*

Climate change cases filed in US courts currently number more than five hundred.⁶⁰ The earliest US climate change case was *City of Los Angeles v. National Highway Transportation Safety Administration* (NHTSA), decided by the DC Circuit Court of Appeals in 1990.⁶¹ That litigation involved a challenge by cities, states, and environmental groups to the failure of the NHTSA to prepare an environmental impact statement under the National Environmental Policy Act (NEPA) considering the adverse climatic effects of lowering fuel economy standards for motor vehicles. Although the petitioners were unsuccessful in their argument before the DC Circuit, the case has served as a “prototype” for the vast majority of US climate change litigation brought subsequently.⁶² This litigation gained steam around 2006 – the year when the US Supreme Court heard oral argument in *Massachusetts v. EPA* – and has grown exponentially since then.⁶³ Because the United States has failed to pass comprehensive climate change legislation, and has no prospects of doing so in the near future, litigation has played a particularly important role in its regulatory approach to climate change.

US litigants have used a wide variety of legal avenues in pursuing climate change–related claims. Charts prepared by Professor Michael Gerrard’s Center for Climate Change Law at Columbia University detail the numerous statutory and common law claims that have been brought in state and federal courts raising climate change issues.⁶⁴ Suits have been brought, for example, to attempt to force or prevent federal and state governmental regulation of greenhouse gas emissions under environmental statutes, to require consideration of climate change in the review of power plant projects, and to portray climate change as a public nuisance. Although much of the US climate change litigation started out as progressive action designed to force or spur regulatory reform by governments or behavioral

⁶⁰ Arnold and Porter LLP, “Types of Climate Cases Filed” (Oct. 3, 2012), at www.climatecasechart.com/. See also Arnold and Porter LLP, “Climate Chart Case Index,” at www.climatecasechart.com. This case index divides up cases as active (310 claims), inactive or resolved (78 claims), or unknown (251 claims) (figures as of May 15, 2014).

⁶¹ 912 F.2d 478 (D.C. Cir. 1990).

⁶² Markell and Ruhl, “An Empirical Assessment,” 10649: (“Based on sheer number of cases, the prototype of climate change litigation in the United States involves an environmental NGO suing a federal agency in federal court to prevent the agency from taking action by alleging that the agency violated NEPA.”)

⁶³ Markell and Ruhl, “An Empirical Assessment,” 10647.

⁶⁴ Arnold and Porter LLP, “U.S. Climate Change Litigation Chart.”

change by polluters, an increasingly substantial body of antiregulatory cases seeking to delay, limit, or invalidate climate regulatory actions by different levels of government has emerged over the last few years.⁶⁵

Both pro- and antiregulatory climate change litigation in the United States has been predominantly directed at issues of mitigation, with a particular focus on stopping coal-fired power and tightening regulatory requirements applicable to fossil fuel energy sources.⁶⁶ As we discuss further in Chapter 4, adaptation concerns – such as the management of coastal climate hazards and planning for weather-related disasters – are also beginning to emerge in the US case law, although this adaptation-specific litigation is far less developed in the United States than it is in Australia. A smaller number of US climate lawsuits have sought to regulate private conduct (e.g., by requiring corporate disclosure of climate change-related risks to assets and investments) and to defend (or attack) protestors or scientists who advocate action to address climate change.

1.4.2 *Climate change litigation in Australia*

The United States has not been alone in experiencing a surge in climate change litigation since the mid 2000s. Besides the United States, the other country that stands out as having experienced a significant amount of climate change litigation is Australia. Our database of Australian climate change litigation compiled in the research contains more than sixty cases, which is more than double the number of climate-related lawsuits in larger common law countries, such as the United Kingdom.⁶⁷

Like in the United States, climate change litigation in Australia first surfaced in the 1990s. In 1994, Greenpeace Australia challenged a development consent issued for the Redbank Power Station in New South Wales on the basis of the plant's greenhouse gas emissions and its "contribution to the human enhanced greenhouse effect."⁶⁸ Justice Pearlman of

⁶⁵ This antiregulatory litigation is discussed further in Chapter 7.

⁶⁶ Michael B. Gerrard, "Coal-Fired Power Plants Dominate Climate Change Litigation" (2009) 242(61) *N.Y. L. J.* 25.

⁶⁷ Peel, "Australian Climate Change Litigation." See also Arnold and Porter LLP, "Non-US Climate Change Litigation Chart."

⁶⁸ *Greenpeace v. Redbank Power Company* (1994) 86 LGERA 143; see also Tim Bonyhady, "The New Australian Climate Law" in Tim Bonyhady and Peter Christoff (eds.), *Climate Law in Australia* (2007, Federation Press, Sydney) 8, 11–13. The Redbank project was not a traditional coal-fired power station as it was proposed to be fueled by coal washery tailings. Hence the environmental benefits of reducing coal mining waste were an important consideration in the case.

the New South Wales Land and Environment Court – a state-level, specialist environmental court – recognized the national and international concern over climate change. However, Her Honor ultimately ruled that whether individual power stations should be prohibited as a result was “a matter of government policy” and not for the court to decide.⁶⁹

Although unsuccessful, the Redbank Power Station case provided a model for much of the Australian climate change litigation that followed. As in the United States, a significant proportion of Australian climate change cases have focused on greenhouse gas-intensive energy sources, with challenges to coal-fired power and coal mining proposals. Australia’s rejection of the Kyoto Protocol during the ten-year tenure of the Howard federal government (1997–2007), coupled with resistance to mandatory national regulation to reduce domestic greenhouse gas emissions over that period, provided drivers for Australian climate change litigation similar to those in the United States.⁷⁰

Like the United States, Australia has also had litigation addressing adaptation issues.⁷¹ Compared with the adaptation lawsuits in the United States, which have only emerged in the past few years, Australia has a far more developed adaptation jurisprudence, which has significantly shaped government policies and the behavior of actors in the land use and development sector.⁷² It is likely that Australia’s experience of early climate change effects over the past decade – including severe droughts, wildfires, floods, and intense storms – has been a factor precipitating this earlier consideration of adaptation issues in its courts.

Under the administration of the Rudd and Gillard Labor federal governments (2007–13), Australia’s climate regulatory path diverged from that of the United States. The Rudd government ratified the Kyoto Protocol in 2007, and in 2011, the Gillard government passed legislation – the Clean Energy Act – to introduce a national carbon pricing mechanism

⁶⁹ *Greenpeace v. Redbank Power Company* (1994) 86 LGERA 143, 153.

⁷⁰ Jacqueline Peel, “The Role of Climate Change Litigation in Australia’s Response to Global Warming” (2007) 24 *Environmental & Planning Law Journal* 90.

⁷¹ Brian J. Preston, “The Role of the Courts in Relation to Adaptation to Climate Change” in *Adaptation to Climate Change: Law and Policy* (2010, Federation Press, Sydney). Several of the international climate change actions brought to date, such as the petitions submitted to the Inter-American Commission on Human Rights and the World Heritage Committee, have a similar focus on the impacts of climate change for sensitive communities and ecosystems. It is noteworthy that such cases have particularly targeted the United States and Australia.

⁷² Jacqueline Peel and Hari M. Osofsky, “Sue to Adapt?” 2015 *Minn. L. Rev.* (forthcoming).

regulating major greenhouse gas emitters.⁷³ The introduction of this legislation might have seen Australia's climate change litigation develop in a significantly different direction from that of the United States, with a greater focus on enforcement of the statutory regime. However, the Clean Energy Act, and the carbon pricing mechanism it established, proved to be short-lived. Australian's current government, led by Prime Minister Tony Abbott, has repealed the Clean Energy Act and is seeking to do away with other clean energy institutions.⁷⁴ Australia is thus once again facing a similar climate regulatory landscape to the United States – or, arguably, a worse one, given the Obama administration's substantial regulation of greenhouse gas emissions under federal environmental statutes – with limited short-term prospects for comprehensive national climate legislation.

1.4.3 *How the United States and Australia compare*

In terms of the clean energy and adaptation challenges they face, and the use of litigation to address those challenges, the United States and Australia share the most commonalities of any developed countries.⁷⁵ On the mitigation side, the United States and Australia have faced many similar policy and political challenges. As we discuss further in Chapter 3, both have energy, industrial, and transportation sectors that are heavily dependent on coal and other fossil fuels, and consequently, the two countries are among the world's highest per capita emitters. Coal and other fossil fuel companies based in the United States and Australia have been active in opposing climate regulation at both the domestic and international levels, though this opposition has not been uniform. Responses

⁷³ Clean Energy Act 2011 (Cth). On the nature of the carbon pricing mechanism, see further Lisa Caripis et al., "Australia's Carbon Pricing Mechanism" (2011) 2(4) *Clim. L.* 1; Jacqueline Peel, "The Australian Carbon Pricing Mechanism: Promise and Pitfalls on the Pathway to a Clean Energy Future" (2014) 15(1) *Minn. J. L. Sci. Technol.* 429.

⁷⁴ Clean Energy Legislation (Carbon Tax Repeal) Act 2014 (Cth). Ongoing negotiations between the government and senators who hold the balance of power suggest other legislation designed to dismantle clean energy institutions such as the Climate Change Authority or the Clean Energy Finance Corporation may be blocked in the Senate. For details of the government's "Carbon Tax Repeal" legislation and other associated legislation, see Australian Government, Department of the Environment, "Repealing the Carbon Tax," at www.environment.gov.au/climate-change/repealing-carbon-tax.

⁷⁵ Canada is another similarly placed country, but its climate litigation has been far more limited than the litigation of either the United States or Australia. Vanhala, "The Comparative Politics of Courts and Climate Change."

to climate change have varied across sectors of the energy industry and among different companies within each sector, as explored in Chapter 5. Each country also has experienced a recent boom in fossil fuel exploration and exploitation, especially with respect to the oil and gas that fracking and deepwater drilling have opened up, and the two nations are major contributors to coal exports that fuel greenhouse gas emissions in other parts of the world.

Both the United States and Australia also face similar, albeit not identical, challenges in adapting to climate change impacts. Their substantial coastlines, containing their most politically and financially important cities, paired with susceptibility to drought, flood, fire, and severe storms, could place them among the developed countries most vulnerable to the effects of rising seas and a changing climate.⁷⁶ In both countries, greater awareness of the impacts of climate change and the need for adaptation measures has been heightened by an increasing frequency and severity of extreme weather events in recent years.⁷⁷ In response, governments are beginning to engage more earnestly with issues of coastal hazard management, disaster planning, and improving the resilience of cities, agriculture, and infrastructure.⁷⁸

Parallels between the social and environmental contexts of the United States and Australia with respect to climate change policy and litigation patterns are supplemented by similar governance and legal traditions. Each country's legal system rests on a common law foundation. This is overlaid with a federal structure anchored in a national constitution prescribing the powers and functions of the federal government. Both countries have a multi-tiered system of federal and state courts as well as a tradition of judges shaping the content of the law through their decisions within the framework of a separation of powers among the judicial and other government branches. In comparative method terms, this constellation of similarities means that the United States and Australia conform to what is known as the "most similar cases" logic.⁷⁹ Accordingly,

⁷⁶ IPCC Working Group II, *Summary for Policymakers – Final Draft, Climate Change 2014 – Impacts, Adaptation, and Vulnerability* (2014, IPCC, Geneva).

⁷⁷ Notable events in the United States include Hurricane Katrina, Superstorm Sandy, and the 2013–14 Midwest and Californian droughts. In Australia, standout events include the Millennium Drought, the Black Saturday Bushfires, and the Queensland 2010–11 floods.

⁷⁸ Government responses to adaptation issues in the United States and Australia are discussed further in Chapter 4.

⁷⁹ Ran Hirschl, "The Question of Case Selection in Comparative Constitutional Law" (2005) 53 *Am. J. Comp. L.* 125; Ran Hirschl, "On the Blurred Methodological Matrix of Comparative Constitutional Law" in Sujit Choudhry (ed.), *The Migration of Constitutional Ideas*

comparison of the climate change litigation–regulatory linkages in these two jurisdictions opens up opportunities for testing explanations of the broader regulatory impact of climate change case law. It can assist in identifying those pathways that are the most well traveled in the case law, those that are emerging, and those pathways that – based on the experience of litigants in the two countries – are likely to encounter significant roadblocks that will ultimately reduce their effectiveness.⁸⁰

At the same time, differences in litigation patterns and regulatory pathways in the United States and Australia can help predict future trajectories of climate change litigation. These two countries' comparative experiences can also provide lessons, positive or cautionary, for each other and for countries around the world. For example, as adaptation case law continues to develop in the United States, petitioners potentially have much to learn from the Australian experience, as we discuss in Chapter 4. Both successful and unsuccessful cases can help litigators develop future approaches. Cases that fail in their direct goals may provide a learning opportunity. Australian nongovernmental organizations might consider (and some are actively doing so) mounting a US-style tort claim against fossil fuel industries if they think they can avoid the pitfalls that have befallen US cases pursuing this pathway. Likewise, investor groups in both countries may look to the successes and failures of each other's efforts in using litigation to promote greater corporate disclosure around issues of climate investment risk.

A comparative examination of regulatory pathways through climate change litigation provides a window into the benefits and limitations of courts as sites for advancing regulation and accompanying social and behavioral change. Commentators discussing climate change litigation often embrace courts rather uncritically as forums for progressive climate action. The case examples and interview data presented in this book provide substantial evidence for this belief, pointing to the many ways that courts can be flexible, deliberative, and participatory sites for discussions of climate change science, policy, and regulation. In a number of instances, court decisions have led directly to climate change regulation that might not otherwise have emerged from legislative and executive processes. Moreover, the authority and respect accorded to court

(2011, Cambridge University Press, Cambridge), 39, 48–51; Mathias Siems, *Comparative Law* (2014, Cambridge University Press, Cambridge), 288–92.

⁸⁰ Jacqueline Peel and Hari M. Osofsky, "Climate Change Litigation's Regulatory Pathways: A Comparative Analysis of the United States and Australia" (2013) 35(3) *L. Policy* 150.

decisions in societies like the United States and Australia, whose legal systems are underpinned by rule-of-law principles, have allowed claimants to use litigation in a variety of ways to change the regulatory environment for addressing climate change.

However, the case law and interviews also reinforce that efforts to use litigation as a regulatory tool do not uniformly yield positive outcomes. Not only can litigation be deployed in an antiregulatory manner to delay, frustrate, or invalidate governmental initiatives but litigants bringing climate change cases can also face problems of courts' information deficits (e.g., regarding climate science), access barriers such as separation-of-powers doctrines and costs, and complex positionality with respect to policy consequences. Such barriers, which we discuss further in Chapter 7, help to shape and constrain the regulatory influence of these cases.

A key finding that emerges from this book's comparative analysis is that the type of court hearing the claim itself exercises a strong influence over the kinds of claims brought and the regulatory pathways that flow from this litigation. For instance, the availability of specialist environmental and planning courts at the state level in Australia – where the majority of the country's climate cases have been decided – has shaped the types of lawsuits litigated, the way climate science is received, and the extent of the case law's regulatory impact. In the United States, the lack of such courts and the focus of the litigation on interpreting the extent of mandates for climate regulation under existing, broadly framed environmental laws have generated a different set of litigation-regulatory dynamics. These include a greater diversity in the causes of action pursued, a more complex interaction between courts and climate science, greater attention to separation-of-powers concerns, and a stronger emphasis on antiregulatory litigation as industry groups seek to undo statutory mandates under environmental laws found in previous cases.

1.5 Outline of the book

In this book, we tell the story of climate change litigation and its regulatory impact through the lens of the case law that has arisen in the United States and Australia. Each chapter draws on doctrinal materials and insights from interviewees to elaborate different facets of the regulatory significance of climate change litigation.

Chapter 2 presents the model we have developed for understanding the ways in which climate change litigation can serve as a pathway for achieving regulatory outcomes regarding climate change. This model

distinguishes between the direct and indirect impacts of litigation on regulation. Direct effects of the case law flow from its capacity to produce legal change through the interpretation of constitutional provisions, statutory mandates and requirements, or common law doctrines. Indirect effects arise, not from climate change decisions themselves, but as a result of the motivations cases provide for different choices around mitigation or adaptation. We focus on two types of indirect effects that seem most critical to making progress on climate change: alterations in corporate behavior and social norms. The chapter illustrates these direct and indirect pathways with examples drawn from US and Australian climate change case law.

Chapters 3 and 4 consider how climate change litigation influences regulatory efforts to mitigate and adapt. In Chapter 3, we discuss the substantial impact of litigation on greenhouse gas regulation in the United States and, to a lesser extent, in Australia. In Chapter 4, the narrative is reversed: we relate the development of adaptation litigation in Australia and consider what lessons this case law offers for the United States as adaptation lawsuits begin to emerge there too.

Whereas Chapters 3 and 4 are primarily concerned with government responses to climate change litigation and direct regulatory change, Chapters 5 and 6 focus on impacts on other actors. Chapter 5 examines corporate responses to climate change, canvassing the reaction of companies in the energy, land use, insurance, financial, and professional advising sectors to ongoing litigation and future litigation risk. Chapter 6 looks at how climate change litigation has influenced public attitudes, social norms, and values around climate change. The chapter also examines the ways in which public debates over climate change science and appropriate regulation play out in courts.

As we have already noted, although climate change litigation originally began as an effort by progressive actors to advance regulatory goals using the courts, litigation can equally be used as a tool by antiregulatory interests. Antiregulatory litigation has expanded significantly in the United States in reaction to efforts by the federal Environmental Protection Agency (EPA) to regulate greenhouse gas emissions from motor vehicles and power plants in line with the Clean Air Act authority found by the US Supreme Court in *Massachusetts v. EPA*. Progressive state climate change regulation, such as actions taken by California agencies under AB32, the Global Warming Solutions Act, has also attracted a number of lawsuits. Antiregulatory litigation has not been as prominent in Australia, notwithstanding the introduction (and demise) of national climate

change legislation. However, climate change litigation is clearly producing some antiregulatory reactions as conservative governments move to overturn proactive case outcomes via legislation or to limit avenues for challenging government decisions approving fossil fuel projects. In Chapter 7, we assess these antiregulatory trends in conjunction with other potential barriers to climate change cases achieving pro-regulatory impact, such as costs and separation-of-powers issues expressed in doctrines of standing, political question, and displacement.

Chapter 8 evaluates the overall impact of climate change litigation in promoting regulation and discusses the potential future of the litigation in the United States and Australia – and elsewhere. We draw on insights provided by our interviewees to track the likely future directions in which the litigation may evolve. The chapter concludes with reflections on the roles that climate change litigation might play as regulatory strategies for mitigation and adaptation continue to develop. It is clear that, both now and in the future, litigation is not a panacea for addressing the climate change problem. But unlike many other regulatory efforts focused on distant milestones, climate change litigation has the distinct advantage of responding to the urgency of now in choosing our energy and climate future.