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The Future of Climate Change Litigation Complexities of Science, Scale, and International Lawmaking

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ABSTRACT

This Essay analyzes the regulatory role of climate change litigation by focusing on the intersection of science, scale, and international lawmaking in these cases. The paper begins by exploring the role that the litigation plays in regulatory rescaling, that is, changing the level at which the problem is regulated. It then argues that in this rescaling role, the litigation provides a valuable complement to treaty, legislative, and executive action because it fosters needed interaction across levels of government. The Essay concludes with an analysis of the complexities of time and reflections on the future of this litigation.

I. INTRODUCTION

Over the course of the last several years, the number of cases around the world raising the problem of climate change has increased dramatically, as has their mainstream acceptance around the world. The impact of this litigation has arguably been greatest in the United States. Most notably, the U.S. Supreme Court's decision

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in *Massachusetts v. EPA*¹ – together with a cultural shift symbolized by Al Gore and the Intergovernmental Panel on Climate Change (IPCC) winning the Nobel Peace Prize² – transformed the policy and litigation landscape. The election of President Obama changed things further, with his commitment to active U.S. participation in international climate treaty negotiations and to a robust federal regulatory approach to greenhouse gas emissions.³ The continuing relevance of climate change litigation in the United States was reinforced in fall 2009, as two circuit courts allowed public nuisance suits to move forward against major corporate emitters⁴ and implementation of *Massachusetts v. EPA* proceeded against a backdrop of continued uncertainty surrounding climate change legislation.⁵

Although U.S. courts and administrative tribunals remain major loci for these cases, they are not alone. Numerous cases have been filed in local, state, national,

¹ *Massachusetts v. EPA*, 549 U.S. 497 (2007).

² The Nobel Peace Prize 2007, available at http://nobelprize.org/nobel_prizes/peace/laureates/2007/ (visited Nov 17, 2007).

³ See President Barack Obama, Address to Joint Session of Congress (Feb. 24, 2009), http://www.whitehouse.gov/the_press_office/Remarks-of-President-Barack-Obama-Address-to-Joint-Session-of-Congress/; Remarks by the President on Jobs, Energy Independence, and Climate Change, East Room of the White House, Jan. 26, 2009, http://www.whitehouse.gov/blog_post/Fromperiltoprogress/; Obama for America, Barack Obama and Joe Biden: New Energy for America, at http://www.barackobama.com/pdf/factsheet_energy_speech_080308.pdf (last visited Dec. 22, 2008).

⁴ See *Comer v. Murphy Oil*, No. 07-60756 (5th Cir.) (Revised Oct. 22, 2009), available at <http://www.ca5.uscourts.gov/opinions/pub/07/07-60756-CV0.wpd.pdf> (last visited Nov. 9, 2009); *Connecticut v. AEP*, Nos. 05-5104-cv, 05-5119-cv (2d Cir.) (Sept. 21, 2009), available at http://www.ca2.uscourts.gov/decisions/isysquery/8d7ac2bf-5143-450d-8b13-a522af71038e/2/doc/05-5104-cv_opn.pdf#xml=http://www.ca2.uscourts.gov/decisio (last visited Nov. 9, 2009).

⁵ See Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Proposed Rule, 74 Fed. Reg. 18885 (proposed Apr. 24, 2009) (to be codified at 40 C.F.R. ch. 1).

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and international tribunals around the world based on a wide range of legal theories. What these cases share in common is their application of law to the problem of climate change, and their engagement of the complex public-private regulatory dynamics at the core of transnational climate change regulation. As individuals, corporations, nongovernmental organizations, and governments serve as plaintiffs and defendants in these cases, courts have become a critical forum in which the future of greenhouse gas emissions regulation and responsibility are debated.⁶

This Essay grapples with how this evolution impacts the way in which we should view the role of litigation as part of transnational regulation of climate change. Although we are still in the early stages of these cases,⁷ some of the impacts of climate change litigation are already clear. David Hunter's *The Implications of Climate Change Litigation: Litigation for International Environmental Law-Making* does an excellent job of analyzing the cases as vehicles for promoting greater public awareness.⁸ This Essay builds upon his analysis by focusing on the complexities of science, scale, and international lawmaking that climate change litigation embodies.

⁶ For an overview of these cases, see ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES (William C.G. Burns & Hari M. Osofsky, eds.) (2009, Cambridge University Press); Hari M. Osofsky, *The Geography of Climate Change Litigation: Implications for Transnational Regulatory Governance*, 83 WASH. U. L.Q. 1789 (2005) (actual publication in 2006).

⁷ See Peter Roderick, *Preface*, in ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES (William C.G. Burns & Hari M. Osofsky, eds.) (2009, Cambridge University Press).

⁸ See David B. Hunter, *The Implications of Climate Change Litigation: Litigation for International Law-Making*, in ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES (William C.G. Burns & Hari M. Osofsky, eds.) (2009, Cambridge University Press).

As a scientific and legal matter, climate change is multiscalar. In other words, emissions, impacts, and the legal structures that interact with them are simultaneously individual, local, state, national, international, and every level in between.⁹ The cross-cutting nature of this problem raises fundamental questions for those attempting to address it through lawsuits and other petitions. First, at what scales should the various aspects of the problem of climate change be regulated? Second, what role does and should litigation play in establishing appropriate regulatory scale?

To answer these questions, one must have some idea of what “scale” means. At the surface, such a definition seems attainable, especially when conversing in the language of law. Each suit was brought in a particular tribunal, which operates at a designated level of governance. We can label cases as state, national, regional, or international based on the type of tribunal hearing them.

An examination of almost any of these cases, however, reveals the danger of such a simple characterization. For example, the U.S. Supreme Court case *Massachusetts v. EPA*¹⁰ could be characterized as national-level based on both the adjudicating tribunal and the case's focus on federal law.¹¹ But such a categorization

⁹ For an in-depth exploration of climate change as a multiscalar regulatory problem, see Hari M. Osofsky, *Is Climate Change “International”?: Litigation's Diagonal Regulatory Role* 49 VA. J. INT'L L. 585 (2009).

¹⁰ See *Massachusetts v. EPA*, 549 U.S. 497 (2007).

¹¹ See Hari M. Osofsky, *The Intersection of Scale, Science, and Law in Massachusetts v. EPA*, 9 OREGON R. INT'L L. 233 (2007) (actual publication 2008).

would fail to capture other aspects of the dispute's scale; the parties on both sides of the case included local and state governments focusing primarily on potential threats to local and state-based interests, as well as nongovernmental and corporate entities with ties at multiple scales. And, as discussed in my prior work on that case, the "federal law" dispute centered around questions of the appropriate scale at which to regulate climate change.¹²

This Essay interweaves themes of scientific uncertainty and regulatory rescaling to reflect upon the significance of these lawsuits. It argues that the problem of climate change and adjudication over it are simultaneously multiscale and scale-dependent; the Essay uses the term "multiscale" to mean connected to more than one scale and "scale-dependent" to mean tied to a particular scale.¹³ In other words, individuals, localities, states, nations, regional supranational bodies, international entities, and other actors at many intermediate levels make emissions decisions, suffer the impacts of climate change, and bring, defend against, and adjudicate these suits. However, because lawsuits and petitions, as a formal matter, are adjudicated at

¹² *See id.*

¹³ As discussed in more depth in Part III, the concept of scale is a highly contested one in the literature of many disciplines. For discussion of that contestation in the geography literature, see NEIL BRENNER, NEW STATE SPACES: URBAN GOVERNANCE AND THE RESCALING OF STATEHOOD 9 (2004); Neil Brenner, *The Limits to Scale? Methodological Reflections on Scalar Structuration*, 25 PROGRESS HUM. GEOGRAPHY 591 (2001); Sallie A. Marston, *The Social Construction of Scale*, 24 PROGRESS HUM. GEOGRAPHY 219 (2000); and Sallie A. Marston & Neil Smith, *States, Scales and Households: Limits to Scale Thinking? A Response to Brenner*, 25 PROGRESS HUM. GEOGRAPHY 615 (2001). For interdisciplinary analyses of these issues more directly tied to environmental regulatory problems, see Michael Mason, *Transnational Environmental Obligations: Locating New Spaces of Accountability in a Post-Westphalian Global Order*, 26 TRANSACTIONS BRITISH GEOGRAPHERS 407 (2001); Osofsky, *The Intersection of Scale, Science, and Law in Massachusetts v. EPA*, *supra* note 11, and Nathan F. Sayre, *Ecological and Geographical Scale: Parallels and Potential for Integration*, 29 PROGRESS HUM. GEOGRAPHY 276, 281 (2005).

particular levels of governance over time, an engagement of specific decisionmaking scales also must inform an exploration of these actions' significance.

Part II of this Essay explores the role that climate litigation plays in regulatory rescaling.¹⁴ Part III then argues that climate change litigation provides a valuable complement to treaty, legislative, and executive action because it fosters needed interaction across levels of government. The Essay concludes by considering next steps for climate change litigation as part of the regulatory discourse about this problem.

II. RESCALING THROUGH CLIMATE CHANGE LITIGATION

This Part focuses on the rescaling role that climate change litigation plays by considering what regulatory scale is and how these cases interact with it. As noted, the definitional issue with which this Essay begins has been explored extensively in the geography literature on scale. Although human geographers increasingly agree that scale is socially constructed, foundational debates have raged over the past decade about what scale is and how it might be relevant to analyses of regulation.¹⁵ An issue from these dialogues with particular salience for climate change litigation is the question of scale's fixity and fluidity.¹⁶ Namely, to what extent are the scalar

¹⁴ Rescaling processes are ones in which individuals or entities attempt to jump levels. See Sayre, *supra* note 10, at 285. In the context of climate change litigation, I have described attempts at rescaling in *Massachusetts v. EPA*. See Osofsky, *The Intersection of Scale, Science, and Law in Massachusetts v. EPA*, *supra* note 11.

¹⁵ See *supra* note 10

¹⁶ For discussion of issues of fixity and fluidity, see Kevin R. Cox, *Spaces of Dependence, Spaces of Engagement and the Politics of Scale, Or: Looking for Local Politics*, 17 *POL. GEOGRAPHY* 1, 20–21 (1998); David Delaney & Helga Leitner, *The Political Construction of Scale*, 16 *POL.*

categories into which one might group these lawsuits – state, national, and international – terms that actually have meaning? As government and civil society interact with the problem of climate change, are these scales steady organizational groupings or constantly shifting spaces of engagement? How does scale shape regulatory decisionmaking and vice versa?

And yet for all this literature's engagement with scale, it rarely separates out law from other sociopolitical ordering.¹⁷ "Regulation" lumps together formal and informal social ordering. Although such an approach avoids the formalism that too often dominates the legal literature, and that at times prevents an analysis of all relevant stakeholders and decisionmakers,¹⁸ it can undervalue the role of formal legal institutions in shaping and being shaped by scale.

GEOGRAPHY 93, 93 (1997); Andrew Herod, *Scale: The Local and the Global*, in KEY CONCEPTS IN GEOGRAPHY 229, 234, 242 (Sarah L. Holloway, Stephen P. Rice & Gill Valentine eds., 2003); Deborah G. Martin, *Transcending the Fixity of Jurisdictional Scale*, 17 POL. GEOGRAPHY 33, 35 (1998); Anssi Paasi, *Place and Region: Looking Through the Prism of Scale*, 28 PROGRESS HUM. GEOGRAPHY 536, 542–43 (2004); Neil Brenner, *Between Fixity and Motion: Accumulation, Territorial Organization and the Historical Geography of Spatial Scales*, 16 ENV'T. & PLANNING D: SOC'Y & SPACE 459, 461 (1998); Erik Swyngedouw, *Excluding the Other: The Production of Scale and Scaled Politics*, in GEOGRAPHIES OF ECONOMIES 167, 169 (Roger Lee & Jane Wills eds., 1997); Erik Swyngedouw, *Neither Global nor Local: "Glocalization" and the Politics of Scale*, in SPACES OF GLOBALIZATION: REASSERTING THE POWER OF THE LOCAL 137, 141 (Kevin R. Cox ed., 1997).

¹⁷ *But see* Dennis R. Judd, *The Case of the Missing Scales: A Commentary on Cox*, 17 POL. GEOGRAPHY 29, 30–31 (1998) (analyzing the effect of federalism in the United States).

¹⁸ The legal pluralist literature, for example, engages the importance of addressing the multiple normative communities – formal and informal – that share social spaces. Robert M. Cover, *The Supreme Court 1982 Term Foreword: Nomos and Narrative*, 97 HARV. L. REV. 4 (1983); Sally Engle Merry, *Legal Pluralism*, 22 LAW & SOC'Y REV. 869 (1988); Emmanuel Melissaris, *The More the Merrier? A New Take on Legal Pluralism*, 13 SOC. & LEGAL STUD. 57 (2004); Ambreena Manji, *'Like a Mask Dancing': Law and Colonialism in Chinua Achebe's Arrow of God*, 27 J. LAW & SOC'Y 626 (2000); Dalia Tsuk, *The New Deal Origins of American Legal Pluralism*, 29 FLA. ST. U. L. REV. 189 (2001); Paul Schiff Berman, *Global Legal Pluralism*, 80 S. CAL. L. REV. 1155 (2007). Similarly, the New Haven School of international law views law as "a process of

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Law and legal institutions are structured at specific levels of governance, which, despite all of the shifts wrought by globalization, stay relatively stable most of the time. The tribunals adjudicating climate change litigation and the laws that they are relying upon generally are constituted at specific, fixed scales. For example, the Inter-American Commission on Human Rights is a supranational, regional body established through the Organization of American States.¹⁹ At the other end of the spectrum, the Minnesota Court of Appeals is a judicial body created by the state of Minnesota to interpret its laws.²⁰

The fluidity in the scales of this litigation comes not from the tribunals themselves, then, but rather from the multiscalar nature of the problem of climate change and regulatory efforts to address it. These “fixed” entities, in their stability, provide a framework in which contestation across scales can take place. As petitioners and respondents debate appropriate emissions limits and redress for those harmed, they attempt to rescale regulatory mechanisms related to greenhouse gas emissions and impacts.

authoritative decision by which members of a community clarify and secure their common interests” and argues that “humankind today lives in a whole hierarchy of interpenetrating communities, from the local to the global.” HAROLD D. LASSWELL & MYRES S. MCDUGAL, *JURISPRUDENCE FOR A FREE SOCIETY: STUDIES IN LAW, SCIENCE AND POLICY* at xxi (1992).

¹⁹ For a discussion of the petition to the Inter-American Commission on Human Rights, see Hari M. Osofsky, *The Inuit Petition as a Bridge? Beyond Dialectics of Climate Change and Indigenous Peoples' Rights*, 31 AM. INDIAN L. REV. 675 (2007).

²⁰ For a discussion of the Minnesota case, see Stephanie Stern, *State Action as Political Voice in Climate Change Policy: A Case Study of the Minnesota Environmental Cost Valuation Regulation*, in *ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES* (William C.G. Burns & Hari M. Osofsky, eds.) (2009, Cambridge University Press); Hari M. Osofsky, *Local Approaches to Transnational Corporate Responsibility: Mapping the Role of Sub-National Climate Change Litigation*, 20 PAC. MCGEORGE GLOBAL BUS. & DEV. L.J. 143 (2007)..

The cases thus debate the appropriateness and necessity of regulatory entities at different scales taking particular steps to address global climate change. For example, should the World Heritage Commission be addressing the impacts of climate change on protected world heritage sites? If so, what should its role be?²¹ If the impacts of climate change threaten species, at what point should they be listed as endangered under the U.S. Endangered Species Act (ESA)? What specific obligations should such listing entail?²² When localities in Victoria, Australia, engage in environmental assessments of planned projects, should that process include an examination of climate impacts? If so, which climate impacts?²³

Moreover, these regulatory questions are made even more complex by the mixed public-private nature of the decisions involved. When can U.S. states sue

²¹ For a discussion of the World Heritage Commission petitions, see Erica J. Thorson, *The World Heritage Convention and Climate Change: The Case for a Climate-Change Mitigation Strategy Beyond the Kyoto Protocol*, in ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES (William C.G. Burns & Hari M. Osofsky, eds.) (2009, Cambridge University Press).

²² For a discussion of the U.S. Endangered Species Act actions, see Sarah Jane Morath, *The Endangered Species Act: A New Avenue for Climate Change Litigation*, 29 PUB. LAND & RESOURCES L. REV. 23 (2008); Brendan R. Cummings & Kassie R. Siegel, *Biodiversity, Global Warming, and the U.S. Endangered Species Act: The Role of Domestic Wildlife Law in Addressing Greenhouse Gas Emissions*, in ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES (William C.G. Burns & Hari M. Osofsky, eds.) (2009, Cambridge University Press). See generally J.B. Ruhl, *Climate Change and the Endangered Species Act: Building Bridges to the No-Analog Future*, 88 BOSTON U. L. REV. 1 (2008) (proposing a policy approach for the U.S. Fish and Wildlife Service).

²³ For a discussion of the pending cases in Australia over coal mining, see Tracy Bach & Justin Brown, *Recent Developments in Australian Climate Change Litigation: Forward Momentum from Down Under*, 8 SUSTAINABLE DEV. L. & POL'Y 39 (2008); Lesley K. McAllister, *Litigating Climate Change at the Coal Mine*, in ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES (William C.G. Burns & Hari M. Osofsky, eds.) (2009, Cambridge University Press); Osofsky, *Local Approaches to Transnational Corporate Responsibility*, *supra* note 20.

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federal agencies to compel them to regulate greenhouse gas emissions? When can they sue the major corporate emitters directly? Should governmental victims of climate change be treated differently than private property owners? Than indigenous communities? Because climate change results from emissions by individuals, governments, and corporations at multiple scales, the litigation embodies dynamic interactions among relevant public and private parties.

Litigation's mix of scalar fluidity and fixity thus makes it a particularly helpful tool for rescaling. Although individual regulators and corporations operate at specific, even if multiple, scales within a legal framework, the tribunals have the power to rule upon what is appropriate at a given scale. In so doing, they help to shape the scale at which regulation occurs. *Massachusetts v. EPA*, for example, involved a dispute over whether climate change was a "state," "federal," or "international" problem. Procedurally, the case hinged on whether the harms of climate change were small scale enough, in terms of both time and space, for states to have standing to sue. Substantively, the court had to determine whether the Clean Air Act, a federal law, created obligations for the U.S. Environmental Protection Agency to regulate motor vehicles' greenhouse gas emissions; in the process, questions abounded over whether climate change was "too big" to regulate at that level or at the state level. The U.S. Supreme Court's answer – to which the Obama administration, unlike the Bush administration that preceded it, is rapidly

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responding²⁴ – established as appropriate interest in the problem at a state scale and regulation at a federal scale.²⁵

At the supranational level, the Inter-American Commission on Human Rights, in response to the Inuit petition, had to decide whether it should attempt to push the United States to regulate climate change more aggressively. Or in scalar terms, should a regional supranational body pressure a nation-state to address more effectively this multiscalar problem that is producing harms in indigenous communities in two nation-states within its region? Ultimately, the Commission decided to hold a more general hearing rather than address the petition directly. In holding such a hearing, it opened the question of whether climate change was a regional human rights issue.²⁶

When viewed as a whole, rather than in individual snapshots, then, the litigation serves as a lever in regulatory contestation over how to address this looming problem. In a variety of fixed fora, petitioners attempt to reshape the regulatory map. This role raises an important practical and normative question with

²⁴ For the Bush administration's response, see Advance Notice of Proposed Rulemaking: Regulating Greenhouse Gas Emissions under the Clean Air Act, EPA-HQ-OAR-2008-0318, July 11, 2008, available at <http://www.epa.gov/climatechange/anpr.html>. For the Obama administration's response thus far, see Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Proposed Rule, 74 Fed. Reg. 18885 (proposed Apr. 24, 2009) (to be codified at 40 C.F.R. ch. 1); John M. Broder, *E.P.A. Clears Way for Greenhouse Gas Rules*, N.Y. TIMES, Apr. 17, 2009, at A15, available at <http://www.nytimes.com/2009/04/18/science/earth/18endanger.html>.

²⁵ For an analysis of these issues, see Osofsky, *The Intersection of Scale, Science, and Law in Massachusetts v. EPA*, *supra* note 11.

²⁶ For further discussion of this case, see Osofsky, *The Inuit Petition as a Bridge*, *supra* note 16.

which Part III will grapple; namely, do these regulatory rescaling efforts serve a constructive role in creating appropriate responses to climate change?

III. THE VALUE OF REGULATORY RESCALING

This Part considers the significance of these lawsuits connected to multiple levels of government in which debates over regulatory scale take place. However, its analysis of the value of climate change litigation's rescaling role faces two major complexities. First, the question of these cases' "constructive" role has both descriptive and normative dimensions. Descriptively, the dynamics play out in the particular ways highlighted in Part II, and, as a result, impact the regulatory environment. However, an inquiry into the role that this litigation plays cannot stop with mere description; fully engaging issues of "constructiveness" requires a normative judgment about how litigation should fit into broader regulatory strategy. One's underlying values will impact such a judgment significantly.

Second, and at least as important, this litigation has both formal and informal impacts. These cases have evolved over the past few years from creative advocacy to some courtroom and administrative victories. Those particular decisions, which represent a small portion of the overall adjudication associated with climate change, create binding obligations for regulatory entities and, as such, serve as a formal part of the regulatory process. But the expressive – that is, social norm-creating – role of this litigation arguably has been more significant than the gains from implementing

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those particular judgments.²⁷ Both formally successful suits and those with little hope of achieving binding results have together helped to change the regulatory landscape by putting pressure on a wide range of individuals and entities to act.²⁸ For instance, the Hazelwood Mines dispute in Australia not only mandated that greenhouse gas emissions be included as part of environmental assessment but also resulted in the first-ever Greenhouse Gas Reduction Deed between the Victorian government and International Power Hazelwood.²⁹ The listing of the polar bear as “threatened” under the U.S. ESA was accompanied by extensive media analysis of climate change.³⁰ At times, those involved in filing the petitions have even highlighted their expressive role explicitly. For example, Sheila Watt Cloutier, then chair of the Inuit Circumpolar Conference, acknowledged the Inuit’s human rights petition as fundamentally about

²⁷ For an exploration of expressivism in the War on Terror context, see Mark A. Drumbl, *The Expressive Value of Prosecuting and Punishing Terrorists: Hamdan, the Geneva Conventions, and International Criminal Law*, 75 GEO. WASH. L. REV. 1165, 1169 (2007).

²⁸ Numerous legal theories explore these dynamics and their impact on international lawmaking. For example, transnational legal process analyzes the interpretation, internalization, and enforcement of norms through interactions like those described in these cases. See Harold Hongju Koh, *Why Transnational Law Matters*, 24 PENN ST. INT’L L. REV. 745(2006); Harold Hongju Koh, *Jefferson Memorial Lecture: Transnational Legal Process after September 11th*, 22 BERKELEY J. INT’L L. 337, 339 (2004); Harold Hongju Koh, *Transnational Legal Process*, 75 NEB. L. REV. 181 (1996); Harold Hongju Koh, *Why Do Nations Obey International Law*, 106 YALE L.J. 2599 (1997). Global legal pluralists and the New Haven School that often roots their analysis explore the multiple normative communities that shape the lawmaking process. See LASSWELL & MCDUGAL, *supra* note 15; Berman, *supra* note 15.

²⁹ See Lesley K. McAllister, *Litigation Climate Change at the Coal Mine*, *supra* note 20.

³⁰ See Cummings and Siegel, *supra* note 19.

opening a dialogue with the United States regarding climate change and human rights.³¹

Together, these complexities mean that a full engagement of litigation's regulatory role requires a difficult socio-legal analysis. Namely, this rescaling takes place in a broader policy and cultural context that interacts both with the formal litigation impacts and with how people view their value. For some, the litigation only has value currently because of gaps in the treaty regime and national policies. If those were corrected – which appears more likely in the United States since the election of President Obama – they would want to minimize the opportunity for much of this advocacy.³²

For others, the litigation has value as a regulatory mechanism whether or not policy steps are taken, and should not be preempted with the implementation of stronger policies.³³ Beyond their gap-filling role, these suits allow concerned individuals and entities to highlight impacts and inequities, as well as to maintain

³¹ See *Presentation by Sheila Watt-Cloutier, Chair, Inuit Circumpolar Conference Eleventh Conference of Parties to the UN Framework Convention on Climate Change Montreal*, Dec. 7, 2005, <http://www.inuitcircumpolar.com/index.php?ID=318&Lang=En>; see also Osofsky, *supra* note 16.

³² See, e.g., Eric A. Posner, *Climate Change and International Human Rights Litigation: A Critical Appraisal*, 155 U. PA. L. REV. 1925, 1925 (2007) (“Litigation seems attractive to many people mainly because the more conventional means for addressing global warming – the development of treaties and other international conventions, such as the Kyoto Accord – have been resisted by governments.”).

³³ See, e.g., Hari M. Osofsky, *Climate Change Legislation in Context*, 102 NW. U. L. REV. COLLOQUY 245, 249 (2008) (“[L]itigation plays a crucial role in the regulation of climate change and the legislation should not attempt to preempt access to courts too broadly. Rather, the statutory scheme should provide a clear basis for concerned individuals and organizations to address inadequate regulation by government and failures by major emitters to reduce their production of greenhouse gases.”).

pressure on governments to address additional aspects of the problem. Moreover, to the extent that both climate treaties and national legislation contemplate implementation of their mandates over many decades, the spectre of climate change litigation may help to steel the resolve of the policymakers who succeed the drafters of such mandates.

Furthermore, how one regards the appropriateness of rescaling through litigation likely depends on how one views the optimal scale of climate regulation. Those who argue for “scaling up” – that is, view the problem as one only appropriate for larger scale management – over the course of litigation express concern about opinions that “scale down” but think more positively of ones that prevent smaller-scale regulation. Their opponents, who value smaller-scale regulation, generally have the opposite perspective.³⁴

Regardless of one's stance on litigation's role as part of a well-developed climate regulation regime, however, the current situation is one of regulatory insufficiency. The Kyoto Protocol has struggled to reach its goals because of nonparticipation of major emitters like the United States and many Parties' difficulties in meeting their commitments. Moreover, it does not go far enough to achieve the reductions that scientists say are necessary. Although recognition of the problem has increased dramatically in recent years, and efforts are under way to create a post-2012 regime that will be more effective than the Kyoto Protocol, it

³⁴ For analysis of scalar battles in climate change litigation, see Osofsky, *Is Climate Change “International”?*, *supra* note 6; Osofsky, *The Intersection of Scale, Science, and Law in Massachusetts v. EPA*, *supra* note 11.

appears unlikely that the treaty regime alone will be able to “solve” the problem, even with the United States participating more constructively under President Obama.³⁵

With the increasing recognition of the problem, national and subnational regulatory efforts are also developing rapidly, but they probably will not go far enough fast enough. At a national level, major emitters are under pressure to address their emissions, and they likely will regulate more effectively than they have in the past. When proposed regulations are compared with the pace of emissions and atmospheric change, however, countries may not have sufficient political will to make drastic enough reductions.³⁶ An ever-increasing number of state and local-level governments are committing to incorporating climate mitigation and adaptation policies into their laws and planning efforts, even governments that might have appeared improbable a few years ago, such as Tulsa, Oklahoma.³⁷ Although those smaller-scale efforts represent significant emissions – the international network of

³⁵ See William C.G. Burns & Hari M. Osofsky, *Overview: The Exigencies That Drive Potential Causes of Action for Climate Change*, in ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES (William C.G. Burns & Hari M. Osofsky, eds.) (2009, Cambridge University Press).

³⁶ See *id.*

³⁷ See Kevin McCarty, *Bloomberg, Palmer Lead USA and World Mayors on Climate Protection: US Mayors Climate Agreement Hits 500 Milestone*, U.S. MAYOR NEWSPAPER (May 21, 2007), available at http://www.usmayors.org/USCM/us_mayor_newspaper/documents/05_21_07/pg1_NYC_climate.asp (last visited Sept. 10, 2008); see also Hari M. Osofsky & Janet Koven Levit, *The Scale of Networks? Local Climate Coalitions*, 8 CHI. J. INT'L L. 409 (2008).

localities working on climate change, for example, represents roughly 15% of the global total³⁸ – their efforts often are not well integrated with larger-scale ones.³⁹

Despite the multiscalar nature of climate change and the way in which it interacts with a wide substantive range of regulation at different levels, regulatory collaboration that involves multiple levels of government and a wide range of entities within each level is relatively rare. At most, these efforts tend to be predominantly vertical, with a top-down or bottom-up scheme involving different levels of government, or predominantly horizontal, with different governmental entities at the same level working together.⁴⁰ Although many policymakers acknowledge the importance of cross-cutting efforts and innovative initiatives exist, much more progress needs to be made in thinking through what I have elsewhere termed “diagonal regulation,” which involves approaches that interconnect efforts both vertically and horizontally.⁴¹

In particular, I have developed a taxonomy for breaking down and understanding diagonal regulatory strategies as part of dynamic federalist approaches that involve multiple levels of government in complex variations. The taxonomy

³⁸ See ICLEI Global, *About CCP*, <http://www.iclei.org/index.php?id=811> (last visited Sept. 10, 2008).

³⁹ For example, Mayor Gavin Newsom discussed this lack of integration as a problem, as well as some of the city's efforts to collaborate with entities at multiple scales, in answer to a question I asked following his keynote address at the conference *Surviving Climate Change: Adaptation and Innovation*, University of California, Hastings, College of the Law, Monterey Institute of International Studies, Apr. 4, 2008.

⁴⁰ See Osofsky, *Is Climate Change “International”?*, *supra* note 6.

⁴¹ *See id.*

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considers the skews along four primary vectors over time: the predominant scale (large versus small), axis (vertical versus horizontal), direction of hierarchy (top-down versus bottom-up), and level of cooperativeness (cooperation versus conflict/competition).⁴² When applying that taxonomy to litigation, I have found that these cases can change the scale, axis, direction of hierarchy, and level of cooperativeness in climate change policy interactions. For example, the petitioners in *Massachusetts v. EPA* aimed to force the federal government, specifically the U.S. EPA, to act under authority granted to it by the Clean Air Act.⁴³ These states, cities, U.S. territory, and nongovernmental organizations pursued a bottom-up effort, opposed not only by the federal government but other state governments and industry and utility groups, to force top-down federal action that may ultimately have cooperative elements in its implementation.⁴⁴ Through shifting skews over time, litigation can serve as a critical force in creating more effective cross-cutting regulatory approaches, both through its substantive impact and through the pressure it puts on policymakers and major emitters.

The current regulatory environment and its limitations reinforce the importance of the socio-legal role that climate change litigation plays. The

⁴² See Hari M. Osofsky, *Diagonal Federalism and Climate Change: Implications for the Obama Administration* (draft manuscript on file with author).

⁴³ *Massachusetts v. EPA*, 549 U.S. 497 (2007).

⁴⁴ For a complete list of parties, see International Center for Technology Assessment (ICTA), Global Warming Petitioners, <http://www.icta.org/doc/global%20warming%20petitioners%20final.pdf> (last visited Sept. 28, 2009). I have analyzed these dynamics in Hari M. Osofsky, *The Future of Environmental Law and Complexities of Scale: Federalism Experiments with Climate Change under the Clean Air Act* (draft manuscript on file with author).

adjudication provides a mechanism for dialogue and awareness, in addition to a more formal forcing or limiting role, in a regulatory environment in which policies have not caught up to the problem.⁴⁵ At least as important, it creates the above-described diagonal interactions through which different levels and branches of regulators interact and grapple with what is needed. These cases help to bring attention to regulatory options and debates, and push policymakers to address more nuances of the problem in the process.⁴⁶

Thoughtful people may continue to disagree as to the normative implications of litigation's role. However, until executive and legislative branches are able to construct effective multiscalar regulatory mechanisms – which poses a difficult challenge even for politicians committed to addressing the problem – litigation's formal and informal interactions likely will continue to play an essential role in the overall regulatory framework. And as discussed previously, even with a more effective policy regime, these cases may continue to provide an important mechanism for expressing grievances and keeping pressure on decisionmakers.⁴⁷ The combination of discontent with existing efforts and a wide range of legal mechanisms applicable to this cross-cutting problem make courtrooms and other quasi-judicial fora important loci for dialogue among disparate actors across levels of governance about how to address climate change most appropriately.

⁴⁵ See Hunter, *The Implications of Climate Change Litigation: Litigation for International Law-Making*, *supra* note 5.

⁴⁶ See Osofsky, *Is Climate Change "International"?*, *supra* note 6.

⁴⁷ See *supra* Part III.

IV. THE FUTURE OF CLIMATE CHANGE LITIGATION

Thus far, this Essay has focused on spatial scale, and the role that climate change litigation plays in helping regulators grapple with the many levels of governance with which the problem intersects. However, both the problem itself and attempts to address it must also engage complexities of time. As a scientific matter, climate change happens over long periods of time. Current changes result from past emissions and present emissions will cause future changes. These multiple time scales of the problem mean that regulatory efforts always must interlink the past and the future to decide what is appropriate now in terms of ascription of responsibility for climate change related damages and emissions reduction mandates.⁴⁸

Moreover, the existing and potential cases regarding climate change span more than one time. Some of them concluded in the past,⁴⁹ others are ongoing,⁵⁰ and still others only exist as a possible future.⁵¹ The disputes discussed in this Essay

⁴⁸ For analyses of some of the intergenerational complexities of addressing climate change, see EDWARD A. PAGE, *CLIMATE CHANGE, JUSTICE AND FUTURE GENERATIONS* (2006); Burns H. Weston, *Climate Change and Intergenerational Justice: Foundational Reflections*, 9 VT. J. ENV'T L. 375 (2008).

⁴⁹ For example, Stern's discussion of the Minnesota case focuses on an action that took place in the mid-1990s but that has ongoing implications. *See* Stern, *supra* note 17.

⁵⁰ Some of the nuisance suits described by David Grossman and Jeffrey Stempel, for instance, are currently pending. *See* David A. Grossman, *Tort-Based Climate Litigation*, in *ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES* (William C.G. Burns & Hari M. Osofsky, eds.) (2009, Cambridge University Press); Jeffrey W. Stempel, *Insurance and Climate Change Litigation*, in *ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES* (William C.G. Burns & Hari M. Osofsky, eds.) (2009, Cambridge University Press).

⁵¹ For example, potential actions described by William Burns; Jennifer Gleason and David Hunter; Andrew Strauss; and Mary Wood have yet to be filed. *See* William C.G. Burns, *Potential Causes of*

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reflect the many time scales on which climate regulation takes place and the difficult questions that result. Is there enough scientific certainty about how past emissions have resulted in present change, or current emissions will result in future change? What will be accomplished by acting now and what are the risks of failing to act? Which people and entities have the obligation and/or right to act when?

Ultimately, then, the future of this litigation, in terms of both what will and what should happen, takes place in a spatially and temporally multiscale context. How quickly climate change creates impacts people care about and how different levels of governance around the world respond will determine what suits people are motivated to bring and their likelihood of success. The less effective we are in addressing the issue of climate change, the more salient these actions will become.⁵²

Although significant uncertainty continues to surround that interaction, the current regulatory gaps suggest that the impacts of climate change will likely become more significant before our regulatory efforts catch up to the problem, assuming

Action for Climate Change Impacts under the United Nations Fish Stocks Agreement, supra; Jennifer Gleason & David B. Hunter, *Bringing Climate Change Claims to the Accountability Mechanisms of International Financial Institutions*, in *ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES* (William C.G. Burns & Hari M. Osofsky, eds.) (2009, Cambridge University Press); Andrew Strauss, *Climate Change Litigation: Opening the Door to the International Court of Justice*, in *ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES* (William C.G. Burns & Hari M. Osofsky, eds.) (2009, Cambridge University Press); Mary Christina Wood, *Atmospheric Trust Litigation*, in *ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES* (William C.G. Burns & Hari M. Osofsky, eds.) (2009, Cambridge University Press).

⁵² Even those more skeptical of the value of this litigation acknowledge that regulatory failures are creating a context for such actions. See Posner, *supra* note 29, at 1925.

optimistically that they eventually will.⁵³ In the near term, then, these suits probably will continue the explosive growth – accompanied by some formal successes – that we have seen over the past several years. Moreover, as courts continue to set precedents and the problem evolves, particular legal strategies will become more or less effective.

Even if regulatory efforts improve, as appears more likely in the United States since the 2008 elections, these suits may still remain an important lever within transnational regulation of climate change. Their ability to rescale and to connect people across scales, both spatial and temporal, makes them an important piece in an ongoing regulatory dialogue. These lawsuits provide unique opportunities for people to raise concerns and serve as an impetus for action. Unless widespread agreement exists on an appropriate cross-cutting regulatory solution to this problem, courts and other fora likely will remain a key space in which people contest and create climate regulation.

⁵³ See Burns & Osofsky, *Overview: The Exigencies That Drive Potential Causes of Action for Climate Change*, *supra* note 32.