

Book Reviews

The Oxford Handbook of Climate Change and Society

Edited by John S. Dryzek, Richard B. Norgaard and David Schlosberg

Oxford University Press, 2011, 736 pp., ISBN 978-0-19-956660-0 (hb).

It is hard for a new book on climate change to make a significant contribution to scholarly or policy debates. This is true for various reasons. Society's dependence on climate, and thus the potential impacts of both climate change and attempts to manage it, are broad, diffuse, uncertain, and potentially severe. There is thus scarcely any area of knowledge not potentially relevant, yet these wide-ranging areas of relevant knowledge are not well integrated or connected. Many proposals for overarching frameworks to integrate relevant knowledge have been advanced, none persuasively. Political conflict over action has spread into research and scholarship, so many research claims about climate or its effects—including even well-established points of scientific knowledge—are marked by sharp, ideologically polarized controversy. At the same time, the available books span widely varying levels (introductory to advanced), scopes (comprehensive to highly specialized), and stances (from scholarly objectivity through impassioned advocacy of a dozen flavours).

Into this crowded and troubled landscape comes *The Oxford Handbook of Climate Change and Society*. The volume's scale and scope mirror those of its topic—at more than 700 pages, with 47 chapters clustered in twelve thematic areas, and a distinguished group of nearly 70 contributing authors from a wide range of disciplines.

The editors' introduction gives the expected overview of topics to be addressed, and also hints at difficulties to come. Their statement of the volume's aims is rather vague and procedural: they stress gathering a strong diverse author group, not what the group will do. In listing what the volume is not—not a synthesis, not a “unified diagnosis of contemporary systems relative to climate change”, not an integrated program of research, not a blueprint for collective action—they speak more clearly and specifically than in stating what it is. Even in this introduction it is clear that the editors tread lightly—in my view, too lightly—in organizing or integrating the diverse

offerings that follow. Their overview of the range of topics to be addressed uses an organizing scheme that, confusingly, is not quite consistent with the topics by which they subsequently organize the volume into sections. And both schemes—in the introduction, and the section headings—are rather vague and generic, heralding confusion about what each section does, and why particular chapters are placed in one rather than another.

For illustration, consider the pieces in the first section, entitled “The Challenge and its History”. The section opens with a chapter by an atmospheric scientist, which combines a brief history of climate science, a descriptive account of the current scientific consensus, a discussion of governance challenges and potential responses, and a plea to reconceptualize climate change as “global change”, for integrated understanding of multiple human disruptions of global-scale processes. (This last point illustrates a recurrent problem in the volume. In identifying this reframing as a newly recognized imperative, the author ignores twenty-plus years of debate on precisely this topic. The value of this framing was recognized so widely by the 1980s that it was incorporated in the design of the major US scientific research program, the Global Change Research Program, in 1990.) There then follow, in the same section, an essay arguing that the basic nature of the climate change issue is contested; an argument that characterizing climate change as either a collective-action problem or a market failure are fundamental errors, because its essential nature is inter-generational; a history of climate science far more detailed and sophisticated than the brief treatment in the section’s opening chapter; a discourse analysis of alternative terms and framings related to climate change; and an application of Foucault’s notion of “governmentality” that blithely rejects contemporary climate science in advocating the supremacy of local governance and control. The pieces are highly variable in both quality and relevance—some excellent and clearly addressing the section topic, others much less so—but they barely connect with each other, and do not add up to a coherent discussion of the nature of the climate challenge.

The first section establishes a pattern that persists throughout the volume. Individual contributions are diverse in tone, level, perspective, and quality. Some are seriously problematic, others excellent. But the coverage is spotty, the organization is problematic, and no guidance is provided—either within chapters, or through such elements as section introductions or concluding and synthesis chapters. After the introduction, you are on your own.

Focusing on strong contributions—there are too many to discuss each individually—I highlight only a few examples.

Successive chapters by Mendelsohn and Richard Norgaard provide a nicely juxtaposed examination of a benefit-cost framing of climate change, impacts, and implications for action. Mendelsohn is particularly cogent in providing background on the basics of an optimization approach to the issue, and a crisp review of major issues in climate-impacts assessment through the mid-1990s. He grows a little tendentious and over-broad, however, in his praise of methodological advances since then, and his conclusion that these show impacts will probably be small. Norgaard’s chapter balances this with a discussion of methodological challenges to doing such assessments for

issues as societally pervasive as climate change, focusing particularly on the difficulties posed by the exclusion of general-equilibrium effects. Together, the two chapters nicely illuminate the topic from divergent perspectives—an example one wishes occurred more in the volume.

Chapters by Baer and Howarth discuss distinct aspects of justice problems posed by climate change. Howarth examines intergenerational justice. His mostly cogent essay is weakened by exaggeration of others' views of inter-temporal climate justice into the straw-man of "presentism"—exclusive consideration of the interests of current generations. Baer considers the international dimension of justice, placing climate in the context of recent ethical debate on "cosmopolitanism", the existence and nature of moral rights and duties that transcend boundaries and citizenship. Here, the editors could have enhanced the coherence of the volume by connecting Baer's discussion of moral dimensions of cosmopolitanism with Jasanoff's call for a corresponding cosmopolitanism in knowledge and interpretation of the climate risks upon which conceptions of related rights and duties depend.

In other contributions, Gilman, Randall, and Schwartz provide a helpful clarification of the often-muddled debate on climate change and security, carefully delineating distinct types of security threats against states, populations, and vital systems, and developing scenarios of climate threats to each. Also noteworthy are Kari Norgaard's discussion of individual, community, and political factors that encourage denial of climate-change risks; Kearns's historical account of the relationship between religion and activism, leading to an informative discussion of conflicting environmental currents within contemporary American Christianity; Schreurs' introduction to the domestic political and institutional landscape for climate-change policy in China; Farber's conceptual scheme to consider what specific climate-related responsibilities are best addressed by what level of government; and Gough and Meadowcroft's clear and quite radical analysis of tensions posed by climate change to the large-scale political bargains and tradeoffs that underpin the stability of modern capitalist-democratic welfare states.

So in the small—in these and many other contributions—the collection offers substantial value, of diverse character. Some pieces provide clear and economical introductions to some relevant body of scholarship; some provide cogent syntheses of some area of work; some advance a novel perspective or provocative thesis.

But in the large, the volume confuses, frustrates, and ultimately disappoints. It does not succeed as an introduction to the field. For this purpose it is too big, provides inadequate guidance, includes too many chapters that do not adequately communicate outside the authors' field, and lacks essential elements such as an adequately substantive scientific introduction. There are not one but two chapters that begin to provide this required scientific background, but both provide only summary recitations of facts, and then stray, rather weakly, into other topics. Nor does the volume succeed as an authoritative reference. For this purpose, it includes too many tendentious, eccentric, and weak contributions, too little guidance, and too little effective effort at serious interdisciplinary engagement—despite frequent repetition of familiar tropes on the need for this.

Moreover, the volume's actual aim remains frustratingly opaque, from beginning to end—from the vague introduction, to the organizational problems and lack of subsequent guidance, to the three oddly disparate papers that make up the final section, (unhelpfully entitled “Reconstruction”), any of which could as sensibly have been grouped in some prior section.

For the volume's shortfalls, I fault the editors for not imposing enough clarifying and organizing structure on the endeavour or adequately directing the efforts of the author team. Yet I also feel bad for them. Large collaborative endeavours like this require this organizing work to be done very early, and I suspect that this project at some point simply got out of their control. Beyond that point, given the sprawling and variable collection of papers that resulted, it is not clear how any editors could have effectively provided synthesis, or even order. In retrospect, the editors' renunciation in their opening chapter of any aim at synthesis looks like bowing to the inevitable, and their remark that the project left them acutely aware of the limits to current knowledge and the constraints on intelligent action like a lament for the situation they found themselves in. Since we are all, by analogy, in the same situation, let us hope for progress on these limits—to knowledge and especially to action—soon.

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Migration and Climate Change

Edited by Étienne Piguet, Antoine Pécoud and Paul de Guchteneire

Cambridge University Press, 2011, 442 pp. (inc. index), ISBN 978-1-107-01485-5.

Gertrude Stein's famous declaration, “there is no there there”, has been used to describe a myriad circumstances. Generally understood to convey a sense of place, some have argued that the space she describes is without passion or focus. It was not a place with distinct characteristics that her commonly trenchant observation could serve. Others have theorized that upon her return to her childhood home of Oakland—which had changed dramatically since she had departed—saying there was “no there there” was an expression of “painful nostalgia”. Her home was gone, and the pastoral place she remembered had changed completely and irrevocably. Upon completing *Migration and Climate Change*—a book seeking to capture the complexity of climate-induced migration—the question that arose for this reader was: is there a there?

Migration and Climate Change convenes a stellar collection of scholars to tackle a difficult and oft-controversial subject matter. By bringing together both case studies and syntheses from different parts of the world, *Migration and Climate Change* includes credible expertise from disciplines as diverse as demography and law for an interdisciplinary discussion of the topic.

The editors seek to provide clarity about the discourse on the movement of peoples from their lands possibly spurred by the emerging climate crisis. Instead, they have produced a text that takes the reader in several directions with no clear destination. In detailing the conflicts in style, motivation, methodology, and perceived outcomes that riddle the academic and popular discourse about the relationship between climate change and migration, the book itself struggles with an internal conflict: Is there truly a challenge of climate-induced migration that requires swift and concerted policy action?

The editors correctly point out that the body of literature regarding climate-induced migration to date is heterogeneous. More rigorous academic research is coupled with “grey” publications, such as policy reports, advocacy brochures, and conference proceedings. This *mélange* of sources has produced a policy discourse that includes voices that, on the one hand, overestimate and, on the other, perhaps underestimate the existence of a discreet climate-change-related migration phenomenon, as well as its size and scope. Several authors conclude that the feared large-scale international population displacements are not inevitable results of climate change, or, for that matter, of any other environmental change. Yet others, even though conceding that many factors are at play, argue that we must steadfastly prepare for a major climate-induced phenomenon. The book does not resolve these conflicting messages. Complete consensus is not necessary, but while it appears that there is an emerging predicament, the content and degree of the predicament ranges from “currently plays a role” to “highly exaggerated”. By the time the reader transitions to Part 2 of the book, on policy responses and normative issues, the challenge that policymakers and others must address has not been coherently defined, nor has the book convincingly established that the challenge is a *major* problem warranting several chapters of problem-solving.

The tension for the reader, of course, results from the lingering sense that there is a there there. Perhaps it is not, and will not be, the large-scale, international crisis many claim; however, it is a concern that rightly deserves some preliminary attention. At the very least, reliable research contained in *Migration and Climate Change* suggests that one can frame the problem as follows: There exists a link between climate change and migration, evidenced by the impact of prior environmental changes as well as novel phenomena such as global sea-level rise; and migration will occur most often at the sub-national level and might require significant attention as the impacts of climate change continue to manifest. I would go a step further in the problem definition to argue that accelerating climate change will likely produce the “no-analogue future”—one in which changes to the climate will likely produce a physical state of the world of which we have no prior experience—including in the field of migration studies. One of the novel consequences might be unique kinds of migration flows—which the UNFCCC postulated more than twenty years ago—that fail to meet the predictions of those who overestimate the challenge but also exceed the conclusions of the migration scholar.

Migration and Climate Change betrays a clear bias toward the more conservative assessment of the climate-migration phenomenon—and future flows may well reveal this more historically based research approach as the correct one. Yet, in making its case, the book makes at least three missteps that detract from its potential as a major interdisciplinary contribution to the discourse.

First, it spends a significant and quite distracting amount of time decrying the influence of “alarmists” and “environmentalists”—often one and the same—on the climate-and-migration discourse. Second, its dispassionate detailing and application of past migration dynamics fails to take into account the inherent uniqueness of accelerating climate change as a possible driver, and the unique legal and ethical questions climate change raises. Using a law-and-justice lens necessarily influences how the international community should respond to the impacts of *human-caused* climate disruption. Finally, and perhaps most importantly, *Migration and Climate Change* fails to take the opportunity to identify areas of consensus and to focus its problem-solving in those areas.

Though “alarmists” and “environmentalists” are terms used throughout, they are never adequately defined. For example, if you suggest that climate change might displace millions (versus thousands) of people in years (versus decades), have you engaged in alarmism? From the book, it is unclear. Even though poorly defined, the term is clearly a pejorative. Further, “environmentalists”—also poorly defined, though consistently contrasted with scholars—engage in this kind of alarmism, which has produced “neo-Malthusian”, “anti-immigration” panic, among other things. This is not the first place where we see these descriptors with these connotations used to discuss climate migration. It is odd, however, to read an academic text that uses such value-laden terms so frequently in a relatively carefree manner. It is stranger still because the nature of climate-induced migration, if it is indeed a problem, suggests that it is too difficult to predict the number of migrants. Perhaps the problem does not exist at all; but perhaps it will be much greater than anticipated.

To be clear, I am in complete agreement with the assessment of Castles, Gemenne, and others that it is critically important not to overestimate the potential problem. However, the degree to which the book attempts to marginalize those who put forth high estimates of future climate-related migration suggests that there is another motivating factor at work, one which may escape an American, or perhaps non-European, audience. In particular, a desire to address potentially jingoistic concerns about a new “wave of refugees” and concomitant “repressive state measures” seems to be at least one of the motives behind the strong critique of the use of large estimates of climate migrants. For this reader, however, portraits of climate migrants humanizes the otherwise science-, policy-, and economics-dominated geo-political headache that climate change has become, especially in the United States. While this more human portrayal is identified in the book, it is judged cynically throughout as though any recounting of loss of homeland is a political tool rather than an empathetic call for addressing the more novel challenges of climate change. Climate-induced migration might be a legitimate space for learning how to govern under both uncertainty and complexity. Migration scholarship is, therefore, essential to identify as many of the triggers and weigh them appropriately.

Castles laments having to rehash the old debate regarding the relevance of environmental degradation to the multi-causal migration phenomenon. He fails to acknowledge, however, that there is a sound argument that climate change is a quite different kind of environmental degradation—one that portends unprecedented and accelerating climate disruptions that might

render prior migration-research findings increasingly irrelevant. Further, it will not be clear to the reader, particularly after reading the preceding chapters, that Castles needs to rehash the debate. Several authors repeatedly make the claim that alarmists and environmentalists exaggerate the urgency of climate change and migration. It seems that this argument could have been succinctly made in one or two articles, leaving several more pages for productive and relevant interdisciplinary problem-solving.

This brings me to my second point. Dissatisfaction with the thrust of the book may have more to do with divergent disciplinary orientations. In other words, the goals of the migration scholar in contrast to those of the legal scholar will impact the research agenda for tackling the potential crisis. Legal scholars tend to seek solutions oriented toward their conceptions of justice. While existing evidence will incite more calls for research from the migration-studies perspective—calls made throughout *Migration and Climate Change*—the legal scholar might employ a “more likely than not” standard or a precautionary-principle approach, as Epiney suggests, which sets the discourse in a more forward-looking direction.

The legal scholar will also ask about the relative weight of the climate-change driver. While migration is a multi-causal phenomenon, are the various causes given equal weight in all circumstances or are there signals of greater and increasing weight for climate change that researchers will need to incorporate in their near-term work? This weighting is relevant because climate change itself is not a legally or ethically neutral environmental problem. Indeed, some international actors have far greater responsibility for the cause of the problem, as well as a much higher capacity to adapt to it. The principle of common but differentiated responsibility, for example, is a legal and ethical attempt to account for those differences. Policy will be a product of the weighting of appropriate and feasible actions in light of considerations of fault, injury, and relative capacity. For this reason, instead of rehashing the controversy regarding environmental migration, the more helpful approach when convening diverse scholars would be for migration scholars and social scientists to provide a metric for identifying a tipping point that policymakers, for example, could reliably use across regions, cultures, and nationalities. This would help policymakers identify the triggers to kick-start the oft-lengthy process of crafting effective and politically viable responses.

Oliver-Smith identifies the predicament of small-islanders as perhaps the neatest example of climate-induced migration. It is still riddled with complexity, as McAdam explains, yet the relationship between climate change, sea-level rise, and loss of significant, habitable land by atoll nations, in particular, is relatively linear. *Migration and Climate Change* missed an opportunity to isolate this challenge and provide interdisciplinary guidance on how best to move forward, in both research and policy implementation. Internal displacement due to climate challenges seems sufficiently established by the research presented in Part I of the book. If this kind of disruption is more likely than not a result of climate change, there is an opportunity to discuss how the international community might assist at the state level, for example. Koser’s article on the normative framework for climate change and internal displacement is a refreshing and insightful first step—one that might have been successfully repeated throughout the book.

With the good empirical data some authors provide, as well as the convincing recommendations for bottom-up, community-oriented decision-making, the reader is left wondering why the book does not include more specific recommendations relevant to the appropriate scale of climate-related migration. From the law-and-policy perspective, it is critical to know the scale and complexity of the problem, for if it is more of an international phenomenon it will yield very different legal challenges than if it is at the scale of traditional migration corridors or is exclusively domestic in nature. Further, as Leighton makes clear, the complex nature of immigration regulations, among other kinds of regulation, will require lengthy and substantial amendment—policy actions that take an inordinate amount of time and negotiation in most instances.

An integrated approach to a book like *Migration and Climate Change* would seek to identify ways to create policy and governance around circumstances of unpredictability and uncertainty, having first clearly outlined the challenges that require concerted attention. Castles concedes that this interdisciplinary work is aggregative rather than integrative. I agree. It is an important introductory contribution that begs for a sequel—one that integrates and problem-solves.

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Legal Systems and Wind Energy: A Comparative Perspective

Edited by Helle Tegner Anker, Brigette Egelund Olsen and Anita Rønne

Kluwer Law International, 2009, 357 pp., ISBN 13-978904-112831-7 (hb).

Renewable energy has moved to the forefront of many political agendas in recent years, and the link between ambitious renewable-energy goals and their realization often takes the form of legal systems, to which markets then react, hopefully as intended. This edited volume is a comparative study which provides an analysis of both civil-law and common-law legal systems in terms of their fundamental legal principles, how environmental law is regulated in general, and the specific legal procedures in place to deal with wind energy. The comparators are Denmark, New Zealand, Norway, and the United States. The study adopts a coherent structure, providing an analysis of the issues being discussed in each chapter for each country and ending with a concluding section which usefully highlights the main differences that exist between the countries considered.

Much of the legislation and policy referred to has been updated or amended (or, if in draft at the time, implemented) since the book was published in 2009. For example, the authors refer to offshore wind-power generation and how it is in its preliminary stages of development. Although to an extent still true, offshore wind power is rapidly evolving. It would be interesting to read an

updated edition of this text to fully understand the extent of development, particularly in offshore wind, over the past four years.

The introductory chapters (1–5) give an overview of EU law, Scandinavian law, and the legal systems of New Zealand and the United States. An extensive description of the historical basis of each country's legal system is provided. Throughout the book there are references to EU law, for it has shaped the legal regimes of Denmark and Norway (while the latter is not an EU member state, it is a member of the European Economic Area, and as such complies with EU law). The authors point out that EU law is only part of the legal picture for wind energy: Denmark, in particular, has been developing onshore wind farms “for the last 25 years” (p. 311), which predates much of the specific EU legislation relating to renewable energy.

One important element of wind-energy legal systems is the hierarchy of planning and how applications to develop wind-energy schemes are dealt with, including the provision of any appeal mechanism. Chapters 5 and 6 and the last chapter (11) all discuss the hierarchical systems in each country. The book concludes that there has been concern raised by those supporting wind energy over the move towards municipal planning rather than regional planning, as municipal planning authorities are less likely to designate wind-energy development areas (p. 301) because of the influence of local objections, for example visual impact or wind-farm-generated traffic passing through neighbouring villages. This has been the approach in the United Kingdom, where decisions are made and appealed against at the local level, with only the larger proposed developments having the ability to appeal to the government.

Chapters 6 and 7 deal with planning law and its environmental-assessment requirements. Although there may exist an overarching wind-energy policy at the national level, planning law is the legal system in each country which enables wind-energy development, albeit conditioned on several factors. An environmental-assessment procedure is prescribed within each country, and it is one of the main ways in which proposed developments are decided upon. Under the procedure, prescribed environmental factors, normally identified through a scoping process, must be considered, for example noise and shadow-flicker impacts. Some examples of environmental issues which are normally included within an environmental assessment are set out in Chapters 8, 9, and 10. These chapters provide a useful insight on the importance that individual countries place on certain environmental factors, by detailing the extent to which they must be assessed. Although these legal regimes do not always specifically concern wind energy, they become an important consideration as part of the development process for wind energy. The book provides a number of good examples of factors which most jurisdictions regard as important.

Chapter 10, ‘Energy Law and Regulation of Wind Energy’, considers a number of specific legal aspects of wind-farm development and also details the influences outside the legal framework which are political and economic. It thus discusses how political and economic factors shape the regulation of wind energy. It also provides an informative discussion of the different tiers of regulation which exist in relation to energy. The international instruments considered include the UN Convention on the Law of the Sea, the UNFCCC, and the Kyoto Protocol. Some of

the economic issues associated with wind-energy development are also given consideration in chapter 10. They vary according to the country under consideration. It is important to note that the bulk of this book would have been written before the 2008 economic crisis, which hit some countries harder than others. The authors consider the economic and regulatory issues related to grid connections of wind-energy developments. The ability to obtain a grid connection with the local provider of the distribution or transmission network is often a “show-stopper” associated with wind-energy development. Depending on the regime in place, the ability to connect to the grid network can vary greatly. The book summarizes the regulatory issues for grids in the case-study countries and draws attention where necessary to the positive regulations which are in place for renewable energy, as is the case in Denmark (pp. 265). The book touches on some of the influences which grid connection can have on potential wind-energy developments. It is a topic that warrants a whole book.

The book directs the reader’s attention to some of the political influences that have been fundamental to the shaping of legal systems to deal with wind energy. Chapter 11 notes that although Denmark has been self-sufficient in energy, including through the use of renewable energy such as hydro-power, the country’s political agenda has realized the potential benefits of becoming involved in wind energy and has facilitated Denmark’s position as a world leader in wind-energy research and development (p. 295).

The volume contains a number of useful appendices. Appendix 1 contains several “wind farm scenarios” which attempt to explain how each of the scenarios would be dealt with under the legal systems of Denmark, New Zealand, Norway, and the United States. Appendix 2 is a case study of how the legal regime within the state of Maine deals with a development application for wind energy. More such examples would have been useful. Appendix 3 provides examples of case law in New Zealand and Denmark. Again, additional examples would have enabled the reader to obtain a better understanding of how specific legal issues are handled, for example how nature-protection law is balanced with wind-energy policy. Appendix 4 provides a statistical overview of renewable energy for each of the four countries. Although not directly relevant to the legal aspects of wind energy in each country, the overview assists in illustrating the extent to which the legal systems within the countries discussed have been successful in permitting the development of wind farms.

The book accurately highlights many of the issues that are associated with wind energy and how they are reflected in the legal systems governing the development of wind farms in the chosen countries. It is a thought-provoking book in terms of how legal regimes which are not specifically designed for wind energy can be improved in order to provide for a more efficient process. The book highlights the fact that even today, when wind energy may be regarded as being relatively well developed, there are still vast differences among countries in respect of the effectiveness of their legal systems in facilitating the expansion of wind energy.

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Climate Change Liability

Edited by Michael Faure and Marjan Peeters

Edward Elgar, 2011, 304 pp., ISBN 978-1-84980-286-4 (hb).

Climate Change Liability collects articles by eleven authors offering a wide range of perspectives on the multi-jurisdictional and multilevel nature of regulatory responses to climate-change liability.

The volume addresses two fundamental concerns: “to what extent the victims of climate change could use the liability system to obtain compensation for damage resulting from climate change”; and, “to what extent civil liability and the courts in general may be useful to force potential polluters (or governmental authorities) to take measures to reduce (the effects of) climate change” (p. 5). Whilst the first question reflects a more classical liability approach, the second takes the issue in a new direction.

Civil liability is the legal obligation that we all have to put right a wrong inflicted on another, where, for example, A causes damage to B, and A is obliged to compensate B according to the statutory or common law. However, civil liability when applied to the “environment” disrupts the aforementioned archetype, because often B (which in this case is the environment) does not belong to anyone; it is *res commune* and *res nullius*. The term “*environmental* civil liability” means to recover the costs of damage which occur in violation of environmental standards. Not only is the term “civil liability” very different from “environmental civil liability”, it is also different from “environmental administrative liability” and “criminal environmental liability”, both of which carry their own important linguistic nuances.

In order to address the two concerns above, the editors take a broad approach that goes beyond the classical approach of tort liability. Five perspectives on liability are used by the chapter authors to frame the liability resulting from climate-change events: (i) a classical public-law versus private-law approach with a strong focus on the role of public law as well as the precautionary principle (Haritz, chapter 2); (ii) a skeptical approach, marked by doubt about whether liability would be the right legal tool, or whether instead it would be better to consider other approaches, such as criminal liability (Spier, chapter 3); (iii) a state-liability approach with a European Union, international, and human-rights perspective (de Cendra de Larragán, chapter 4; Peeters, chapter 5; and Gourit in who, in chapter 6, emphasizes the human-rights perspective); (iv) a traditional tort-law approach (Kaminskaite-Salters, chapter 7; van Dijk, chapter 9; van den Biesen, chapter 10; and Kosolapova who, in chapter 8, reviews civil liability in US courts and focuses on the role of domestic courts; and (v) a public-law approach simpliciter (Schueler, chapter 11).

In ‘Cross-Cutting Themes’ (chapter 2), Haritz analyses the role of the precautionary principle in climate-change liability and its legal force in regulating the uncertainty that characterizes the typology of climate change damage (p. 16). The author identifies “causation” as the most

sensitive focal point of the environmental-liability regime for climate change (p. 19). Responding to Haritz's perspective, Spier argues against the use of liability as a legal instrument in solving climate-change problems. He doubts the effectiveness of liability in solving legal problems (p. 48), advocating instead that climate change is tackled from the perspectives of different legal disciplines, such as international law, human-rights principles, private/public law, and criminal law (p. 50).

Chapters 4, 5, and 6 offer a European Union/international-law perspective on civil liability for climate change. De Cendra de Larragán's chapter analyses liability in a broader multilevel context, in particular under European Union law and international law. The author also takes into account the role of the European Union as an actor in international agreements (p. 59) and its legal basis for concluding environmental agreements (pp. 63–69). The chapter could have been better connected with the research question if it had explicitly made the link between international relations and the effectiveness of the environmental-liability regime for climate change, for example by using an interdisciplinary approach which combines political science and law, since a climate-change-liability regime demands a non-legal approach as well.

Asking whether and how regulations should be used to address EU provisions on the responsibility of present polluters for future damage, Peeters focuses on what could be called the sensitive elements of the EU liability regime for climate change. These make it difficult for the EU legislature to design a liability system for polluters for climate-change damage, or for the victims to obtain compensation payment. The first element is the "time factor" regarding the manifestation of the damage, where the consequences of the damage appear only several years after the verification of it, and thus where causation is difficult to prove. Peeters calls this element the "long-tail problem" (pp. 91, 92 and 117). The second element is the existence of "cumulative emissions", where lawyers face the problem of determining the percentage of each polluter's contribution to each activity. Peeters scrutinizes EU climate legislation and, more specifically, the EU-ETS, concluding that this system "does not intend to incorporate the cost of the damages caused by emissions in the price of [emission] allowances" (p. 118). As a possible solution to cover civil-liability claims, Peeters suggests an allowance price that represents all carbon costs, or a fee paid by member states (p. 122).

Peeters also analyses the Environmental Liability Directive 2004/35/EC on the prevention and remediation of environmental damage, pointing out that liability cannot be attributed in cases of diffuse pollution (p. 113), which is the kind of pollution deriving from climate change effects. She points out that the EU environmental-liability regime set by the Directive is not designed to address liability for polluters causing damage emanating from climate-change effects, and thus leaves damage uncovered where it is not possible to prove a causal link. Nevertheless, she highlights the great regulatory uncertainty that exists under the EU environmental-liability regime, because in the recent case C-378/08, the European Court of Justice seems to have taken the position that it is not so important, after all, to establish causation (p. 131, fn. 91). This would be an interesting starting point for adapting the EU environmental-liability system to the new typology of climate-change damages.

In chapter 6, Gouritin bridges the gap between environmental rules protecting the environment and those protecting human rights. Gouritin argues (p. 134) that the UN Human Rights Council Decision 7/23 on human rights and climate change is an important step towards ascertaining the existence of a human right to a healthy and secure environment and the existence of a potential liability of European states under the European Convention on Human Rights for failing to take appropriate measures to adapt to climate change. The link between human rights and environmental protection is already strong in international law. There is pressure at this level to agree to a fundamental right to a clean environment. However, there are difficulties in formulating such a fundamental right. The ECHR does not contain a provision expressly covering environmental matters, and international “soft law” consists of little more than the formulation in the 1972 Stockholm Declaration that “Man has the fundamental right to ... adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being”. A right to a healthy and unpolluted environment has not been recognized in international customary or treaty law, and indeed the threshold level corresponding to a breach never been agreed to.

Some fundamental rights do have an environmental value. This is so with the rights to life, private property, and family life (pp. 138, 139 and 142), where the link between them and a healthy and unpolluted environment is self-evident. Progress was made in formulating this right in *Tatar v. Romania* (2009), where the ECHR recognized a right to a healthy environment (p. 143).

The later part of the book focuses on national views of civil liability and contains chapters by Kaminskaite-Salters, Kosolopova, van Dijk, van den Biesen, and Schueler, all of who offer a rich panorama of how an environmental-liability regime for climate change can be tackled. They include suggestions about overcoming problems of legal standing, causation, the laying of charges, retroactivity, compensation, choice of liability, and a lack of relevant case law. Overall, each of these national experiences, whether it is the United Kingdom (pp. 166–185), the United States (pp. 189–203), or the Netherlands (pp. 206–226), shows the difficulties inherent in making a successful compensation claim for climate-change damage.

Based on the analyses presented in the first eleven chapters, the editors draw lessons in a valuable concluding chapter (pp. 255–275). They discuss the need for new regulation in the liability regime for climate change—one that offers an effective and clear legal design which corrects the shortcomings of the present.

Overall, the chapter authors do a good job of describing the work-in-progress of the liability regime for climate change using a broad range of perspectives which enable the common thread of the book—causation—to emerge. As recognized in each chapter, causation is an important element of the liability regime, because, if not established, there is no possibility for a plaintiff to obtain compensation for damage inflicted as a result of climate change. The editors find that even if it were possible to establish a causal link, questions would remain, such as how to make states liable (pp. 134–152) and how to use the courts to make polluters comply given that the climate-related damage of their actions will occur in the distant future. This means that compensation, even if awarded, would be neither automatic nor immediate (pp. 165–274). The value of the book

is its mandate to go beyond the “compensation issue” and create the basis for a new, effective legal scheme based on deterrence and corrective justice.

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