



Introduction

BENOIT MAYER AND ALEXANDER ZAHAR

Debating Climate Law is the result of a collaboration of twenty-nine scholars from around the world with an interest in better understanding what climate law is, should be, or could become. They have come together to present eleven debates and seven ‘reflections’ about debates in climate law.

But what is climate law? And why is it necessary to debate it? In introducing this volume, we begin with an account of climate law’s brief history to date. We then proceed to the reasons for the book’s layout in the form of a series of debates. We wrap up this introduction with an overview of the debates themselves.

Early Scholarly Interest in Climate Law

The earliest books on climate law, with the exception of one outlier, appeared in the period 2005–10, at a rate of one or two per year.¹

¹ The following is an essentially complete list of English-language works from the period: Prue Taylor, *An Ecological Approach to International Law: Responding to the Challenges of Climate Change* (Routledge 1998); Meinhard Doelle, *From Hot Air to Action? Climate Change, Compliance and the Future of International Environmental Law* (Thomson Carswell 2005); Roda Verheyen, *Climate Change Damage and International Law: Prevention Duties and State Responsibility* (Brill 2005); Marjan Peeters and Kurt Deketelaere (eds.), *EU Climate Change Policy: The Challenge of New Regulatory Initiatives* (Elgar 2006); Tim Bonyhady and Peter Christoff (eds.), *Climate Law in Australia* (Federation Press 2007); Jonathan Robinson and others, *Climate Change Law: Emissions Trading in the EU and the UK* (Cameron May 2007); Michael Faure and Marjan Peeters (eds.), *Climate Change and European Emissions Trading: Lessons for Theory and Practice* (Elgar 2009); David Freestone and Charlotte Streck (eds.), *Legal Aspects of Carbon Trading: Kyoto, Copenhagen, and Beyond* (Oxford University Press 2009); Tim Bonyhady, Andrew Macintosh and Jan McDonald (eds.), *Adaptation to Climate Change: Law and Policy* (Federation Press 2010); and Cinnamon P Carlarne, *Climate Change Law and Policy: EU and US Approaches* (Oxford University Press 2010).

The first courses in climate law were not offered much earlier than 2008.² The significance of those years for the growth of climate law as both a taught and a scholarly subject might have been that the period began with the entry into force of the Kyoto Protocol, in February 2005, and culminated in a watershed event: the December 2009 Copenhagen Conference of the Parties to the UN Framework Convention on Climate Change (COP 15). At COP 15, a new climate treaty was expected to be adopted with the objective of overcoming the shortcomings of the Kyoto Protocol and filling out the 'framework' of the Convention. The excitement of anticipation among scholars, as much as among activists and others, was palpable from the moment the Bali summit (COP 13), which set the agenda for COP 15, came to a close at the end of 2007.

Those early climate law books and courses had little to run on apart from the Convention's text and the facts of the treaty's implementation during its first decade. The entirely untested Kyoto Protocol – whose first commitment period did not begin until 2008 – existed essentially on paper only. Classes and legal scholarship drew as best they could on the outcomes of the meetings of the UNFCCC parties, the nascent EU Emissions Trading Scheme, and the first stirrings of climate-related litigation at the domestic level.³ But not much 'law' could have been imparted to students at that time, when domestic climate legislation was incidental and fragmented, litigation was almost non-existent, and all significant legal compulsion at the international level was expected to emerge in a top-down fashion from the 2009 treaty – a treaty that was never to be.

In retrospect, the claim made by one scholar in 2008 that a discipline of climate law (in the sense of a distinct set of rules and field of study and research) had emerged already by then,⁴ now seems premature. Even today, some remain agnostic about whether such a discipline has emerged.⁵ We might think of the disciplinary question – 'is climate law a discipline (or subdiscipline) of law?' – as climate law's original debate. It probably will not be settled for some years to come.

² One of us launched a full-semester climate law course at an Australian university, starting in March 2008, and was not able to locate any other such course in the world at the time.

³ Bonyhady and Christoff's *Climate Law in Australia* (n. 1) was used, possibly as early as 2008, in a one-week-long intensive course on climate law offered at the Australian National University. The handful of Australian climate-related cases (as at 2007) are reviewed in that book.

⁴ Jacqueline Peel, 'Climate Change Law: The Emergence of a New Legal Discipline' (2008) 32 *Melbourne University LR* 922, 977 ('this article amply makes the case that the last few years have witnessed the emergence of a new legal discipline, that of climate change law').

⁵ See, e.g., Michael Faure and Jing Liu, 'Urgently Needed: Climate Lawyers' (2018) 8 *Climate Law* 161, 162–3.

Climate Law Studies Today

Whatever one's position on the question of climate law as a discipline, there is no debating the fact that today – a mere decade after the first classes on the subject were cobbled together – scholarly production on climate law has so increased in number and variety as to be difficult to quantify.⁶ Not only are climate law courses, or topics within courses, found in the curriculum of law schools virtually everywhere, it is now not so uncommon for a university to award a higher degree in 'Climate Law'.⁷

With such an acceleration of legal commentary and pedagogy, both of them drawing on a much broader base of legislation⁸ and litigation,⁹ it is easy to lose sight of the question of whether a climate 'law' has emerged, perhaps as a distinct system of norms, articulated around fundamental

⁶ For a very selective list of recent books, see Alina Averchenkova, Sam Fankhauser and Michal Nachmany (eds.), *Trends in Climate Change Legislation* (Elgar 2017); Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani, *International Climate Change Law* (Oxford University Press 2017); Sébastien Jodoin, *Forest Preservation in a Changing Climate: REDD+ and Indigenous and Community Rights in Indonesia and Tanzania* (Cambridge University Press 2017); Tim Cadman, Rowena Maguire and Charles Sampford (eds.), *Governing the Climate Change Regime* (Routledge 2018); Sébastien Duyck, Sébastien Jodoin and Alyssa Johl (eds.), *Routledge Handbook of Human Rights and Climate Governance* (Routledge 2018); Michael B Gerrard and Tracy Hester (eds.), *Climate Engineering and the Law: Regulation and Liability for Solar Radiation Management and Carbon Dioxide Removal* (Cambridge University Press 2018); Jolene Lin, *Governing Climate Change: Global Cities and Transnational Lawmaking* (Cambridge University Press 2018); Rosemary Lyster, *Climate Justice and Disaster Law* (Cambridge University Press 2018); Rosemary Lyster and Robert RM Verchick (eds.), *Research Handbook on Climate Disaster Law: Barriers and Opportunities* (Elgar 2018); Benoit Mayer, *The International Law on Climate Change* (Cambridge University Press 2018); Vesselin Popovski (ed.), *The Implementation of the Paris Agreement on Climate Change* (Routledge 2018); Alexander Zahar, *Climate Change Finance and International Law* (Routledge 2018); Jesse L Reynolds, *The Governance of Solar Geoengineering: Managing Climate Change in the Anthropocene* (Cambridge University Press 2019); Fanny Thornton, *Climate Change and People on the Move: International Law and Justice* (Oxford University Press 2019); Margaretha Wewerinke-Singh, *State Responsibility, Climate Change and Human Rights under International Law* (Hart 2019). For a review of journal articles drawing on two journals specializing on climate law, see Ronald B Mitchell, 'Climate Law: Accomplishments and Areas for Growth' (2018) 8 *Climate Law* 135.

⁷ For example, an LLM from the University of Edinburgh <www.law.ed.ac.uk/study/masters-degrees/llm-global-environment-and-climate-change-law>, a specialized LLM from Pace University <law.pace.edu/graduate/llm-environmental-law/llm-environmental-law-specialization-energy-and-climate-change-law>, or a specialized JD from Vermont Law School <www.vermontlaw.edu/academics/specializations/climate-change-law>.

⁸ See Grantham Research Institute on Climate Change and the Environment, *Climate Change Laws of the World* (database) <www.lse.ac.uk/GranthamInstitute/climate-change-laws-of-the-world/>.

⁹ See Sabin Centre for Climate Change Law, *Climate Change Litigation Databases* <climatecasechart.com/>.

principles, providing for a comprehensive and consistent treatment of its subject. We presume that it is not uncommon for teachers of climate law courses to issue the following instruction to their students in one form or another: 'Discuss whether a coherent body of climate law has been developed, and, if you say it has, outline what it consists of'. Radically different responses to this assignment, in our experience, mark it off as climate law's *other* most fundamental debate – obviously closely related to the original one about the formation of a discipline.

On the question of climate law's content, a fundamental distinction is between the existence of climate *laws*, such as laws regulating emission trading or permissible CO₂ emissions per kilometre for different vehicle types, on the one hand, and a normative system of climate *law* developed in response to climate change, on the other. Climate law in the latter sense might, if it exists, take the form of a collection of legal norms and principles that are, individually or as a group, unique to climate change. One such principle might be the no-harm principle (if applicable to climate change) or the principle of common but differentiated responsibilities and respective capabilities (assuming that the latter has enough substance to be legally meaningful).

Where a state's response to climate change has been insufficiently ambitious, the difference between having climate laws and having climate law might be important – both rhetorically and practically.¹⁰ A body of climate law, characterized by unity and coherence, would serve as a 'core' law for addressing the problem of climate change directly and efficiently, much in the way that the core elements of tort law enable a direct and efficient response to many cases of harm to persons. To effect reform, more can be done, one might think, with a body of law than with an aggregation of laws from disparate fields. If so, it is worth exploring the law/laws debate. The chapters in this book, collectively, help to recover this fundamental debate, which would otherwise remain lost in the recent overabundance of climate law literature.

The Book's Layout

The book approaches debatable issues in climate law in two different ways. First, eleven different topics are genuinely debated by scholars taking diametrically opposite points of view on each of these topics.

¹⁰ See in particular JB Ruhl and James Salzman, 'Climate Change Meets the Law of the Horse' (2013) 62 *Duke LJ* 975, 983. Cf. Peel (n. 4) 931–2.

Second, seven chapters present an author's reflection on debates arising in relation to another set of topics, which cannot be so easily presented in a traditional, binary debating format, because, for instance, the topic consists of perspectives that are best arrayed along a continuum.

There are several reasons for the book's debating theme, and in particular for the 'opposition' layout of the first eleven topics.

First, climate law scholarship has been generating disagreement on substantive topics, and these rifts have only grown with time. For instance, unrelenting disagreement is manifest with regard to the relevance of customary international law to climate change¹¹ or the desirability of creating a legal status for 'climate migrants'.¹² There are several topics, in addition to those in which the rift is clear, where an undercurrent of disagreement exists but is not yet manifest in open clashes in the scholarly literature. For example, the generally optimistic writings on

¹¹ See, e.g., Christoph Schwarte and Will Frank, 'The International Law Association's Legal Principles on Climate Change and Climate Liability under Public International Law' (2014) 4 *Climate Law* 201; Alexander Zahar, 'Mediated versus Cumulative Environmental Damage and the International Law Association's Legal Principles on Climate Change' (2014) 4 *Climate Law* 217; Christoph Schwarte and Will Frank, 'Reply to Zahar' (2014) 4 *Climate Law* 234; Benoit Mayer, 'The Applicability of the Principle of Prevention to Climate Change: A Response to Zahar' (2015) 5 *Climate Law* 1; Alexander Zahar, 'Methodological Issues in Climate Law' (2015) 5 *Climate Law* 25; Benoit Mayer, *The International Law on Climate Change* (Cambridge University Press 2018) passim; Alexander Zahar, 'The Contested Core of Climate Law' (2018) 8 *Climate Law* 244; and Benoit Mayer, 'The Place of Customary Norms in Climate Law: A Reply to Zahar' (2018) 8 *Climate Law* 261 (2018).

¹² See, e.g., Angela Williams, 'Turning the Tide: Recognizing Climate Change Refugees in International Law' (2008) 30 *Law & Policy* 502; Bonnie Docherty and Tyler Giannini, 'Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees' (2009) 33 *Harvard JIL* 349; Frank Biermann and Ingrid Boas, 'Preparing for a Warming World: Towards a Global Governance System to Protect Climate Refugees' (2010) 10 *Global Environmental Politics* 60; Jane McAdam, 'Swimming Against the Tide: Why a Climate Change Displacement Treaty Is Not the Answer' (2011) 23 *Intl J Refugee L* 2; Benoit Mayer, 'Constructing Climate Migration as a Global Governance Issue: Essential Flaws in the Contemporary Literature' (2013) 9 *MJSDLP* 87; Katrina M Wyman, 'Responses to Climate Migration' (2013) 37 *Harvard Envtl L Rev* 167; Calum Nicholson, 'Climate Change and the Politics of Causal Reasoning: The Case of Climate Change and Migration' (2014) 180 *Geographical J* 151; Benoit Mayer, *The Concept of Climate Migration: Advocacy and its Prospects* (Elgar 2016); François Gemenne, 'The Refugees of the Anthropocene' in Benoit Mayer and François Crépeau (eds.), *Research Handbook on Climate Change, Migration and the Law* (Elgar 2017); and Benoit Mayer, 'Who Are "Climate Refugees"? Academic Engagement in the Post-Truth Era' in Avidan Kent and Simon Behrman (eds.), *Climate Refugees: Beyond the Legal Impasse?* (Routledge 2018).

climate litigation,¹³ on the prospects of using human rights law to force the hand of states to commit to more ambitious mitigation action,¹⁴ and on the Paris Agreement's Article 15 mechanism on compliance,¹⁵ are due for a corrective pushback from inconvenient arguments that have not yet been properly acknowledged.¹⁶ In their oppositional forms, these disagreements among scholars can be shown to be far from easily reconcilable, as they are built on fundamentally different, yet plausible, premises.

Second, in law especially, it is important to identify the best arguments that could support opposing positions, as it is such far-apart positions that tend to be adjudicated in court or used to train students in moot court. The intended function of the debates included in this book is, nonetheless, not to cultivate the kind of simplistic extremes that are often seen in court, but to assemble, and test through a clash of minds, the best arguments on each side. There is a long tradition, going back to Plato's *Dialogues*, of academics advancing knowledge in this way – not only dialectically, but also theatrically – by creating a stage for opposing forces to play out on. (This book's cover picture is of a corner of the Athenian Agora that Socrates is said to have frequented.)

Third, on the principle that a good climate lawyer is first and foremost a good lawyer, we owe it to ourselves to be frank about the fact that many well-intended – indeed literally vital – positions can be utterly demolished by an opponent. A little less of the environmentalist sentiment in the academic literature would help budding lawyers and scholars avoid some knock-out punches, both in court and in print. And who can deny that offering students exciting alternative positions will stimulate their critical thinking and stir up debate amongst themselves and in class?

While many of the contributors to this book have been assigned to defend positions that they would probably espouse anyway, in some cases this is not true, and we have had to persuade some of them to play devil's advocate. It should thus not be assumed that the contributing

¹³ See, e.g., Jacqueline Peel and Hari M Osofsky, *Climate Change Litigation: Regulatory Pathways to Cleaner Energy* (Cambridge University Press 2015); UNEP, *The Status of Climate Change Litigation: A Global Review* (2017).

¹⁴ See, e.g., the articles in the special issue of the journal *Climate Law* on human rights and climate law, (2019) 9(3) *Climate Law*.

¹⁵ See, e.g., Gu Zihua, Christina Voigt and Jacob Werksman, 'Facilitating Implementation and Promoting Compliance with the Paris Agreement under Article 15: Conceptual Challenges and Pragmatic Choices' (2019) 9 *Climate Law* 65.

¹⁶ See, for instance, on human rights law, Alan Boyle, 'Human Rights and the Environment: Where Next?' (2012) 23 *EJIL* 613; Alan Boyle, 'Climate Change, the Paris Agreement and Human Rights' (2018) 67 *ICLQ* 759.

authors would hold (when not debating) the exact same views expressed here. Debating-format authors (as opposed to the 'reflection' authors) have been encouraged to narrow their positions, making them at once more salient and more vulnerable to attack – and we thank them for going along with both of these consequences for the sake of argument. 'Reflection' contributors have been encouraged to bring to the surface the full range of views on a topic rather than elaborate their own stance.

With that, we proceed to a foretaste of the topics debated in this book.

Overview of the Debates

Oppositional Debates

In Debate 1, the relevance of customary law to climate law is examined. In climate-law discussions, most attention focuses on the treaties (the UNFCCC, Kyoto Protocol, and Paris Agreement) rather than on custom. Views differ as to the relevance or applicability of customary international law to state responsibility for responding to climate change. Sandrine Maljean-Dubois makes the case that norms of customary international law can meaningfully be applied to climate change mitigation. Christopher Campbell-Durufflé, by contrast, argues that those norms are too vague to address the problem in any meaningful way. This debate has important implications for determining the level of mitigation ambition that states must implement.

Debate 2 concerns the role of the International Law Commission in codifying and promoting the progressive development of climate law. The ILC's work on the protection of the atmosphere has proven to be particularly controversial. For Peter Sand, the ILC's involvement is an opportunity to develop an authoritative interpretation of the ill-understood norms of general international law applicable to climate change. For Gérard de Lasso St-Geniès, the ILC has nothing to add to a problem that is being dealt with through treaties and international negotiations – a problem, moreover, that requires an expertise which the ILC does not have and that is about the mitigation of climate change rather than the 'protection of the atmosphere'.

The principle of common but differentiated responsibilities and respective capabilities (CBDR-RC) in its new incarnation in the Paris Agreement has become the principle of common but differentiated responsibilities and respective capabilities in the light of different

national circumstances (CBDR-RC+).¹⁷ This is the topic of Debate 3. The original CBDR notion, before the ‘-RC’ and before its baroque elaboration at COP 21, was that all states should contribute to climate action, albeit on the basis of differentiated responsibility. A top-down determination of state responsibility based on an objective assessment, as in the case of the Kyoto Protocol, which created two main categories of states, has proved controversial, due to the existence of alternative theories of differentiation. All of them seem to have been mashed up together in CBDR-RC+. Thomas Leclerc develops the argument that the principle has now become legally meaningless, as it does no more than invite each state to determine its own contribution to climate action, entirely free from external review, which is something we hardly need a new principle for. But there is also the argument, articulated by Daria Shapovalova, that CBDR-RC+ remains central to the UNFCCC regime, and is capable of influencing the direction of the negotiations, as well as litigation outcomes.

Debate 4 is on the appropriateness of the Paris Agreement’s ‘compliance’ system. The treaty’s Article 15 establishes ‘a mechanism to facilitate implementation of and promote compliance with the provisions of this Agreement’. ‘Promote compliance’ clearly does not mean the same as ‘determine and . . . address cases of *non-compliance*’, which was the mandate of the Kyoto Protocol’s compliance mechanism.¹⁸ Views differ radically on the legal mandate of the Paris Agreement’s mechanism and its capacity to ensure that states comply with their treaty obligations. Meinhard Doelle praises the mechanism’s ability to sensitively inform domestic political and legal processes and, accordingly, to increase the likelihood of an effective implementation of states’ obligations. Anna Huggins develops the argument that an effective compliance system comprises both facilitation and enforcement elements, yet the Paris mechanism limits itself to facilitation. Moreover, in its facilitative role, the mechanism is duplicative of other facilitative elements of the Agreement, according to Huggins.

In the next debate there is legal controversy *about* legal controversy. Numerous cases relating to climate change have been filed with courts around the world. They include litigants who seek a judicial determination of the obligation of states to mitigate climate change beyond their

¹⁷ Paris Agreement (adopted 12 December 2015, EIF 4 November 2016) (2016) 55 ILM 740, art. 2(2).

¹⁸ Kyoto Protocol to the UNFCCC (adopted 11 December 1997, EIF 16 February 2005) 2303 UNTS 162, art. 18 (emphasis added).

treaty-based commitments. The issue in Debate 5 is whether such litigation is a meaningful way to attack the problem of climate change. For the proponents of climate litigation, whose side is taken by Cinnamon Piñon Carlarne, litigation has the potential to ensure that states take more ambitious action than they would have otherwise. But the argument developed on this side of the debate is even stronger, namely that the courts have a positive duty to take decisions in support of the mitigation of emissions. Guy Dwyer, for the sceptics, contends that litigation is the least promising way to go about addressing climate change mitigation because several unavoidable hurdles that face pro-climate litigants all but guarantee their defeat. Dwyer argues that the number of concluded court cases that *might have* caused emissions to be reduced can be counted on half of one hand.

Debate 6 stages a clash of views on the relevance of human rights law to climate law. No doubt the impacts of climate change hinder the enjoyment of many types of human right. On this ground, Nicola Pain makes the case that climate change can be viewed as a human rights problem, entailing that states must mitigate climate change in order to comply with their positive obligations to protect human rights. Fanny Thornton explores the weaknesses in this position. She counters that viewing climate change through a human rights lens is misconceived and leads to absurd results, not least because there is no standard by which to assess the adequacy of governmental mitigation action.

Historical responsibility for climate change is the topic of Debate 7. The argument from historical responsibility has a legal dimension, as it is often used to assert the heightened mitigation and compensation obligations of some states. The debate begins with the question of whether certain historically high-emitting states are legally bound to provide some sort of compensation for past levels of greenhouse gas emissions. Sarah Mason-Case and Julia Dehm answer this question in the affirmative, arguing that international law, but also notions of justice, provide bases for recognizing historical responsibility and for claiming reparation for the wrongs inflicted. Alexander Zahar, on the negative side, attacks the assumption that historical emissions and their growth rate since Industrialization are known accurately enough, such as to allow for blame to be pinned on certain countries and not others.

Debate 8 turns to the displacement impacts of climate change. Is there a need for some sort of law on 'climate migration'? Above all, does it make sense to talk about climate migration as a discrete phenomenon? Ingrid Boas argues that 'climate mobility' is real and observable and takes

many forms (hence climate *mobilities*), including that of immobility (the decision to stay put despite the pressures to move). She makes the case for this phenomenon being a proper subject of research and governance. Calum Nicholson, by contrast, argues that climate migration researchers literally have no idea about what they are talking about. These scholars, he claims, have made a virtue of imprecision in order to keep attracting research grants to study the individual experiences of those allegedly affected by the impacts of climate change, from which no generalizations could possibly be drawn.

There are two distinct geoengineering debates: Debates 9 and 10. Debate 9 concerns negative-emission technologies (NETs, another term for carbon-dioxide removal) pursued at scale. NETs range from afforestation to bioenergy with carbon capture and storage. They are seen by many as instrumental in achieving the mitigation objectives of the Paris Agreement. However, uncertainty remains regarding the technical, economic, and political feasibility of a large-scale deployment of NETs. The tension feeds Debate 9. The focus here is on whether a state may lawfully presume, for instance in the course of determining its long-term low-greenhouse-gas-emission development pathway under Article 4(19) of the Paris Agreement, that a future large-scale deployment of NETs will be realized. Gareth Davies maintains that that makes perfect sense, not least because *conventional* mitigation methods are in the same boat (of uncertainty), and that in other respects, as well, conventional methods are on a continuum with NETs. By contrast, Duncan McLaren and Wil Burns argue that any heavy reliance now on a presumed large-scale availability of NETs in the future would be irresponsible, unethical, and unlawful.

In the second geoengineering debate, Debate 10, the consistency of the deployment of Solar Radiation Management (SRM) with international law is examined. SRM might help to counter global warming at a relatively low cost, but it could also have substantial negative environmental impacts. Jesse Reynolds, reviewing all the relevant international treaties, as well as customary international law, argues that solar geoengineering *could* be consistent with international law. There is even some evidence, he argues, that solar geoengineering may be required by international law. Kerry Brent reaches the exact opposite conclusion. She argues that solar geoengineering at scale would violate the no-harm rule and is prohibited by the UNFCCC and other treaties.

An increasing number of jurisdictions are using environmental impact assessment as a tool for climate change mitigation (in brief, 'Climate Assessment', or CA). Whether this is a legal obligation, or even makes

sense, is the question thrashed out in Debate 11. Benoit Mayer argues that CA is emerging as a rule of customary international law, and that, moreover, it is a potentially useful mitigation tool. Alexander Zahar, by contrast, questions the meaningfulness of CA, arguing that it is impossible to determine what constitutes a significant, excessive, or disproportionate emission of greenhouse gases in the case of a proposed activity subject to CA, or at all.

Multisided Debates

The book then turns to the 'Reflection' chapters, each of which presents a single-authored *tour d'horizon* of the debates relating to a particular topic.

In Reflection 1, Benoit Mayer discusses the main debates surrounding climate adaptation law. Adaptation to climate change is often presented as a subfield of climate law, alongside that of mitigation. Article 7 of the Paris Agreement establishes 'the global goal on adaptation' and links it with the Article 2 mitigation goal, thus lending support to the idea that an adaptation law might develop under the influence of the Paris Agreement, at least at the domestic level. Nevertheless, many in the field are sceptical: adaptation efforts often consist in the implementation of pre-existing developmental, environmental, or human-rights policies that are highly localized in their outlook. This chapter reviews the wealth of views on whether an 'adaptation law' has emerged or should be recognized as a legal field, creating new, legally enforceable rights and obligations.

Alice Venn analyses legal claims for loss and damage from the impacts of climate change in Reflection 2. Political and academic arguments have long been made for reparations for actual harm inflicted by climate change. From a legal perspective, a first difficulty is to determine who (if anybody) can be held responsible: States? Political leaders? Multinational corporations? Individual consumers? Other questions regard the form and the quantum of reparation that would be paid, as well as the recipients of it (states? individuals? communities?). A considerable amount of debate has swirled around the topic of loss and damage, but, as with the previous topic of adaptation law, no clear law, or even clear lines of legal debate, have emerged so far.

Ori Sharon captures the controversy on 'state extinction' through climate change. Sea-level rise and changing weather patterns, among other impacts of climate change, are likely to cause some low-lying Small-Island Developing States (SIDS) to be uninhabitable in the coming

decades, even before SIDS territory ‘sinks’ out of sight. Academic debates have offered various proposals on what might happen to the remnants of the states concerned, if they could continue to exist at all, and the rights of those territorially orphaned entities, under various regimes. Sharon concludes that there is one and only one legal avenue for the – very slight – possibility that statehood could continue after the land is gone. For the answer, please turn to Reflection 3!

Yulia Yamineva considers the legal foundations of climate finance in Reflection 4. The UNFCCC and the Paris Agreement both declare that developed states ‘shall’ provide financial support to promote adaptation and mitigation in developing countries, but neither treaty specifies the form, or the amount, of such support. This essay reflects the various views on whether there is a legal obligation resting on certain states, or perhaps on a collective of states, to provide financial support to developing countries – and if there is, what it might consist in and which legal principle it might be founded on.

The majority of anthropogenic greenhouse gas emissions result from the activities of non-state actors (NSAs). States recognize the need to engage with NSAs as *mitigation* actors, including by encouraging or requiring them to pledge, or commit to, mitigation action. NSAs are also making waves through civil-society organizations (CSOs) bringing cases to court to test the legal obligations of large corporations. In Reflection 5, Mikko Rajavuori reviews the academic and social debates on whether NSAs – in particular, companies, cities, and CSOs – have any legal obligation to mitigate climate change or could meaningfully assume such an obligation, and whether they have demonstrated any kind of effective leadership in mitigation action. From this dialectic it emerges that, while NSAs assert themselves as high-profile players in the mitigation realm, their effectiveness is unclear, and unclear also is their theorization as actors from a legal-scholarly perspective.

Climate law has often been framed as a component of environmental law. Under this conception, environmental law and climate law are mutually supportive endeavours towards sustainable development. Yet, in a growing number of instances, climate action has been shown to undermine the protection of other environmental values. For instance, hydroelectricity, often embraced as pro-climate, has been promoted as a source of (relatively) clean energy, but hydroelectric dams often have a significant negative impact on human settlements and river ecosystems. In other cases, the UNFCCC regime may be read as ‘giving up’ on some impacts of climate change, possibly in contradiction to certain states’

obligations on environmental protection. Olivia Woolley, in Reflection 6, asks whether climate law is inevitably on a collision course with environmental law, or whether there exist credible ways to reconcile the objectives and operation of these two regimes.

Reflection 7 – the book’s last debate, before a brief Conclusion by the editors – concerns the interface of climate change law and aesthetics. Global warming alters the aesthetic properties of nature, and additional aesthetic changes are precipitated by the mitigation and adaptation responses of impacted societies. Domestic legal systems already have a leading role in governing certain disputes that involve strong aesthetic elements, such as the location of wind turbines or seawall defences. The international legal system has established regimes that explicitly engage with aesthetic values, such as the World Heritage Convention. Ben Richardson maps the debatable new ideas emerging from the growing scholarship on climate law’s encounters with aesthetics. The chapter also weighs different views on why aesthetic experiences might be important to better understanding the dangers of climate change, which mostly lie in the future and thus out of sight and out of mind.

Untended Topics

Other legal debates and reflections would no doubt sit comfortably in this book. Several topics on our initial list had to be dropped for lack of equal depth on both sides, narrow interest, insufficient legal content, or a failure to identify willing debaters. Debates that were regrettably left out of this edition include the following:

- The role of customary international law beyond the no-harm principle, for instance the relation between the precautionary principle and the no-harm principle.
- Questions about the degree of state acceptance and the legal implications of the principle of intergenerational equity.
- The possibility of law-based determinations (à la *Urgenda*) that a state’s mitigation ambition is adequate/inadequate.
- The legal force of Nationally Determined Contributions and, more broadly, the obligation that states may have, under the Paris Agreement or otherwise, to implement them.
- The prospects of international proceedings (whether contentious or advisory) on the obligations and responsibilities of states in relation to climate change.

- The permissibility of a border-adjustment tax as a way to force a recalcitrant state to implement mitigation action.
- Whether emissions embedded in international trade should be allocated to states in which consumers of the products are based, instead of being allocated to the producing states.
- The potential application of criminal law (in particular international criminal law) to foster climate change mitigation.
- The relevance of public participation in the making of climate-related law and policy.

Let the Debates Begin

As will be revealed by the debates summarized above, both in their multitude and in their intrinsic interest, climate law is a branch of the law which, albeit not well-formed substantially, has developed its own set of disciplinary concerns – and is a law that is here to stay. Hopefully, also, it is here to stay to make a difference. But, before engaging in such lofty thoughts, the reader will be impatient to know which side of each debate wins . . .