

REFLECTION 1: ADAPTATION

Climate Change Adaptation Law: Is There Such a Thing?

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Responses to climate change are (mainly) of two sorts. Some responses aim at mitigating climate change by reducing GHG emissions and enhancing sinks and reservoirs of GHGs. Others aim at adapting to the impacts of climate change.

The UNFCCC's ultimate objective is unmistakably a mitigation objective — to stabilize GHG concentrations in the atmosphere 'at a level that would prevent dangerous anthropogenic interference with the climate system'.¹ This objective mentions adaptation as a natural phenomenon and a benchmark to determine what is 'dangerous': climate change mitigation should be achieved 'within a time-frame sufficient to allow ecosystems to adapt naturally to climate change'.² The UNFCCC mentions adaptation as a policy goal in other provisions on principles³ and commitments,⁴ but clearly the emphasis is elsewhere.

Nonetheless, adaptation has been the subject of increasing emphasis ever since the Bali Action Plan and the Cancun Agreements called for 'enhanced action' in this domain.⁵ The Paris Agreement adopts, along with its mitigation and finance objectives, the objective of 'Increasing the ability to adapt to the adverse impacts of climate change'.⁶ A dedicated article, Article 7, specifies 'the global goal ... of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change'.⁷ These provisions were agreed to at the request of developing states, as part of 'package deals' providing for enhanced mitigation commitments applicable to developing states.⁸

This increasing emphasis on adaptation has come with little clarity about the meaning and implications of this concept. Treaty provisions and COP decisions suggest that adaptation is neither remedial, nor substantive, thus raising questions as to what precisely legal provisions on adaptation aim to achieve. In fact, most provisions on climate change adaptation range from hortatory to nugatory, imposing few if any obligations on states. On the domestic plane, it is noteworthy that virtually no state has adopted any laws on climate change adaptation; states, rather, have mainstreamed climate change adaptation in their efforts on various aspects of sustainable development.

¹ UN Framework Convention on Climate Change (adopted 9 May 1992, EIF 21 March 1994) 1771 UNTS 107, art 2.

² *ibid.*

³ *ibid* art 3(3)

⁴ *ibid* art 4(1)(b), (e), (f), 4(4)

⁵ UNFCCC Decision 1/CP.13 (2007) (Bali Action Plan) [1(3)], in UN Doc FCCC/CP/2007/6/Add.1; UNFCCC Decision 1/CP.16 (2010) (Cancun Agreements) [11-35], in UN Doc FCCC/CP/2010/7/Add.1.

⁶ Paris Agreement (adopted 12 December 2015, EIF 4 November 2016) (2016) 55 ILM 740, art 2(1)(b).

⁷ *ibid* art 7(1).

⁸ See Nina Hall and Åsa Persson, 'Global Climate Adaptation Governance: Why Is It Not Legally Binding?' (2018) 24 EJIR 540, 547; Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani, *International Climate Change Law* (OUP 2017) 237

This chapter aims to review existing or nascent debates on climate change adaptation and the law. The first section looks at debates about what adaptation means. The second section distinguishes between two ways to approach the relation between climate change adaptation and the law, namely as either the adaptation of the law or as the adoption of adaptation laws. The third section questions the existence of an adaptation law, while the fourth considers whether such a law should be created.

1. What Is Adaptation?

The IPCC's Fifth Assessment Report defines adaptation as 'The process of adjustment to actual or expected climate and its effects' in order 'to moderate or avoid harm or exploit beneficial opportunities.'⁹ This definition was changed from the IPCC's previous definition of adaptation in order to reflect what the IPCC presents as 'progress in science'.¹⁰ The Fourth Assessment Report defined adaptation as measures 'to reduce the vulnerability' of human systems.¹¹ This left open the question of the inclusion of measures on human migration, displacement, and relocation, which aim at reducing exposure rather than vulnerability.¹² The new definition clarifies that adaptation includes any measure that seeks to reduce the harm caused by climate change.

Early international policy debates sometimes featured mitigation and adaptation as competing priorities, or otherwise approached adaptation as merely a natural phenomenon.¹³ In contrast, it is now largely accepted that adaptation policies are an essential complement to mitigation action.¹⁴ It is also well accepted that adaptation could be prompted 'through complementary actions across levels, from individuals to Governments'.¹⁵ The IPCC and scholars have highlighted the complementary roles of national and sub-national governments, the private sector, communities, households, and civil society in promoting adaptation.¹⁶ The law may have a role to play as part of a patchwork of governmental and other adaptation actions.

⁹ Core Writing Team and others (eds), 'Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change' (IPCC 2014) 118.

¹⁰ *ibid.*

¹¹ Alfons PM Baede and others (eds), 'Glossary' in Core Writing Team and others (eds), *Climate Change 2007. Synthesis Report* (WMO and UNEP 2007) 76.

¹² In the IPCC conceptual framework, vulnerability and exposure are two independent factors that define the risk of impacts. See, eg, Christopher B Field and others, 'Summary for Policymakers' in Christopher B Field and others (eds), *Climate Change 2014: Impacts, Adaptation, and Vulnerability, Part A: Global and Sectoral Aspects. The Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (CUP 2014) 3. See generally, eg, François Gemenne and Julia Blocher, 'How can migration serve adaptation to climate change? Challenges to fleshing out a policy ideal' (2017) 183 *Geographical J* 336.

¹³ Robert W Kates, 'Cautionary Tales: Adaptation and the Global Poor' (2000) 45 *Climatic Change* 5, 5–6; E Lisa F Schipper, 'Conceptual History of Adaptation in the UNFCCC Process' (2006) 15 *Review of European Community & International Environmental Law* 82, 83–84.

¹⁴ See, eg, Matthew D Zinn, 'Adapting to Climate Change: Environmental Law in Warmer World' (2007) 34 *Ecology LQ* 61; Core Writing Team and others (n 9) 17.

¹⁵ *ibid.* 19.

¹⁶ *ibid.* See also Heleen LP Mees, Peter PJ Driessen and Hens AC Runhaar, 'Exploring the Scope of Public and Private Responsibilities for Climate Adaptation' (2012) 14 *J Envtl Policy & Planning* 305; Lee Godden and others, 'Law, Governance and Risk: Deconstructing the Public-Private Divide in Climate Change Adaptation The Evolution of the Public/Private Divide' (2013) 36 *UNWLJ* 224;

Thus, Jan McDonald describes adaptation as ‘a mix of strategies ranging from the technological, to the social and behavioural, to the managerial’.¹⁷ Like others, she suggests that legislation could be part of these measures.¹⁸ In her view, ‘Regulatory interventions become even more important when future climate impacts are potentially irreversible or the costs of preventive measures are significantly lower than longer-term remedial efforts’.¹⁹ She suggests that ‘Legislation is the best tool for erecting the legal architecture to support fiscal policies for adaptation, such as subsidies, rebates and other incentives.’²⁰

As Craig has noted, ‘climate change adaptation law and policy ... cannot be preservationist’.²¹ Adaptation is not just about preserving society as it is, but about transforming it. Therefore, adaptation implies value-based judgments about what our transformed societies ought to be like — or, more concretely, about what needs to be protected from the impacts of climate change (eg, human lives, property, or ecological resources) with what level of priority and at what costs, and what can be forfeited. Adaptation typically consists in an arbitrage between different types of resources or different levels of risk. Societies may have different levels of readiness and ability to pay for measures that reduce casualties; they may also have different perceptions on the need to invest large amounts of resources to avoid a small change of disastrous consequences.²² Consequently, adaptation is not a purely technical matter best decided by scientists;²³ it implies inherently political choices which are best made through participatory and deliberative processes.²⁴

It is difficult, perhaps even impossible, to delimit the scope of adaptation action. Craig justly observes that ‘adaptation measures can be as broad-ranging as the scope of climate change impacts’.²⁵ These impacts, Craig highlights, are ‘ever-changing, often unpredictable, and subject to feedback mechanisms that may not be completely understood and that may change over time, often leading to nonlinear alterations of ecosystems and their services.’²⁶

Daniel A DeCaro and others, ‘Legal and Institutional Foundations of Adaptive Environmental Governance’ (2017) 22(1) *Ecology & Society* 1.

¹⁷ Jan McDonald, ‘Creating Legislative Frameworks for Adaptation’ in Jean P Lalutikof and others (eds), *Climate Adaptation Futures* (Wiley 2013) 126.

¹⁸ *ibid.* See also Joseph Wenta, Jan McDonald and Jeffrey S McGee, ‘Enhancing Resilience and Justice in Climate Adaptation Laws’ (2019) 8 *TEL* 89, 90.

¹⁹ McDonald, ‘Creating Legislative Frameworks’ (n 17) 126.

²⁰ *ibid* 128.

²¹ Robin Kundis Craig, ‘Stationarity Is Dead, Long Live Transformation: Five Principles for Climate Change Adaptation Law’ (2010) 34 *Harv Envlt LR* 9, 30.

²² See, eg, E Michel-Kerjan and others, ‘Catastrophe Risk Models for Evaluating Disaster Risk Reduction Investments in Developing Countries’ (2013) 33 *Risk Analysis* 984; Joost Buurman and Vladan Babovic, ‘Adaptation Pathways and Real Options Analysis: An Approach to Deep Uncertainty in Climate Change Adaptation Policies’ (2016) 35 *Policy & Society* 137.

²³ See Siri H Eriksen, Andrea J Nightingale and Hallie Eakin, ‘Reframing Adaptation: The Political Nature of Climate Change Adaptation’ (2015) 35 *Global Envntl Change* 523; and generally Mike Hulme, *Why We Disagree about Climate Change: Understanding Controversy, Inaction and Opportunity* (CUP 2009).

²⁴ See, eg, Stephan Hügel and Anna R Davies, ‘Public Participation, Engagement, and Climate Change Adaptation: A Review of the Research Literature’ (2020) 11 *WIREs Climate Change* e645, 12; Rebecca Romsdahl, Gwendolyn Blue and Andrei Kirilenko, ‘Action on Climate Change Requires Deliberative Framing at Local Governance Level’ (2018) 149 *Climatic Change* 277.

²⁵ Craig (n 21) 21.

²⁶ *ibid* 29.

Consequently, measures on climate change adaptation could extend to many different aspects of regulation. In practice, adaptation action often relates to areas of governance typically associated with sustainable development, touching on issues of land-use planning, agricultural policies, construction standards, freshwater management, poverty alleviation, public health policies, ecological conservation, and so on.²⁷

Determining the scope of climate change adaptation raises questions about what can be attributed to climate change. Contemporary debates on climate change adaptation are often influenced by scientific studies that seek to attribute specific weather events to anthropogenic climate change.²⁸ One must keep in mind, however, that these studies are not uncontroversial in scientific circles. Critical voices have warned against the simplistic and misleading conclusions echoed in the media. Greg Lusk, for instance, has noted that ‘The attribution of specific events just doesn’t have the purported social benefits that motivate its use and development’;²⁹ in particular, event attribution ‘is unlikely to substantially contribute to litigation or adaptation’.³⁰ As event attribution is probabilistic, it can seldom determine that a weather event could not have occurred *but for* climate change. In any case, the consequences of a weather event on a given society depend not only on the physical event, but also on that society’s vulnerability and exposure to such events. Most of the time, observed variations in the impacts from extreme weather events have more to do with social, economic, demographic, and other factors, than with climate change.³¹

2. Adaptation of the Law and Adoption of Adaptation Laws

The law relates to climate change adaptation in various ways.³² Firstly, it can hinder adaptation when it imposes a stability in social relations (eg, contracts) that prevents spontaneous adaptation efforts. Thus, Arnold suggests that ‘Legal systems typically have not done a very good job at facilitating flexible responses to extraordinary situations that have many causes and effects and are continually changing.’³³ Secondly, legal norms can facilitate adaptation by introducing ‘more flexibility’ to allow actors to adapt.³⁴ For instance, as

²⁷ ELF Schipper and others, ‘The Debate: Is Global Development Adapting to Climate Change?’ (2020) 18 *World Development Perspectives* 100205.

²⁸ See, eg, Aglaé Jézéquel and others, ‘Behind the Veil of Extreme Event Attribution’ (2018) 149 *Climatic Change* 367.

²⁹ Greg Lusk, ‘Attributing Individual Extreme Events to Anthropogenic Factors Is Not as Useful as You Might Think’ in Mike Hulme (ed), *Contemporary Climate Change Debates: A Student Primer* (Routledge, 2020) 47.

³⁰ Greg Lusk, ‘The Social Utility of Event Attribution: Liability, Adaptation, and Justice-Based Loss and Damage’ (2017) 143 *Climatic Change* 201, 201. See also Mike Hulme, ‘Attributing Weather Extremes to “Climate Change”: A Review’ (2014) 38 *Progress in Physical Geography: Earth & Environment* 499.

³¹ See, eg, Field and others (n 12) 19; Fabian Barthel and Eric Neumayer, ‘A Trend Analysis of Normalized Insured Damage from Natural Disasters’ (2012) 113 *Climatic Change* 215.

³² See, eg, Lea Berrang-Ford and others, ‘What Drives National Adaptation? A Global Assessment’ (2014) 124 *Climatic Change* 441.

³³ Craig Anthony (Tony) Arnold, ‘Adaptive Law’ in Rosemary Lyster and Robert RM Verchick (eds), *Research Handbook on Climate Disaster Law* (Elgar 2018) 169. See also Craig Anthony Arnold and Lance H Gunderson, ‘Adaptive Law and Resilience’ (2013) 43 *Envtl L Reporter* 10426; Alejandro E Camacho, ‘Transforming the Means and Ends of Natural Resources Management Adaptation and Resiliency in Legal Systems’ (2010) 89 *North Carolina LR* 1405.

³⁴ Robin Kundis Craig and others, ‘Balancing Stability and Flexibility in Adaptive Governance: An Analysis of Tools Available in US Environmental Law’ (2017) 22(2) *Ecology & Society* 1, 1.

freshwater resources are set to change in previously unpredictable ways, their sharing among or within states will often need to be renegotiated. Lastly, the law may incorporate new rules and principles aimed at promoting adaptation, in particular by regulating activities such as urban development or construction standards to reduce vulnerability and exposure to the impacts of climate change.

Ruhl and Salzman have argued that the need to adapt to climate change challenges the assumption of stationarity underlying the law: in various aspects of governance, new norms can no longer seek merely to address problems of the past.³⁵ Therefore, climate change adaptation will require the adaptation of various fields of the law, such as environmental law, water law, and land-use law,³⁶ or for instance with regard to littoral property rights.³⁷ Wenta, McDonald, and McGee note that the adaptation of the law will take place through new legislation, but also possibly through the evolution of legal concepts and doctrines, including through precedents, for instance in the common law of negligence.³⁸

The observation that the law must adapt to climate change may appear obvious, almost banal. After all, the law is not cast in stone; it is constantly evolving in response to changes in the societies, economies, and environments in which it applies. Yet, climate change adaptation may call for more systematic evolution — not just a one-off reform, but a reform towards a more adaptive law, one which allows more discretion in the application of pre-existing rules when circumstances have changed.³⁹ As will be seen, adaptation law often consists in rules and processes that ensure that legal and policy reforms are contemplated on a regular basis.

Beside the adaptation of existing laws, a more controversial question concerns the need to adopt laws dedicated to climate change adaptation⁴⁰ — and, more broadly, the need to create a new field of law⁴¹ or policy,⁴² or new institutions,⁴³ rather than simply mainstreaming certain considerations in existing fields and institutions. This debate has been had in relation to climate change adaptation in general, but also in relation to particular aspects of it, for instance in response to calls to treat ‘climate disasters’ or ‘climate migration’ as distinct governance issues. The next two sections look at the debate from two different perspectives: firstly, the law as it is (*lex lata*), and then the law as it ought to be (*lex ferenda*).

3. Is There a Law on Climate Change Adaptation?

The literature on climate change adaptation and the law sometimes merely assumes that there is something that can be called an ‘adaptation law’.⁴⁴ Some authors concede the ‘inherent

³⁵ JB Ruhl and James Salzman, ‘Climate Change Meets the Law of the Horse’ (2013) 62 Duke LJ 975, 993.

³⁶ *ibid* 1010.

³⁷ *ibid* 994.

³⁸ Wenta, McDonald and McGee (n 18) 108.

³⁹ *ibid*.

⁴⁰ Victor B Flatt, ‘Adapting Laws for a Changing World: A Systemic Approach to Climate Change Adaptation Climate Change Special Issue: Essay’ (2012) 64 Florida LR 269.

⁴¹ See in particular Ruhl and Salzman (n 35).

⁴² See, eg, Schipper and others (n 27).

⁴³ See, eg, Thomas J Timberlake and Courtney A Schultz, ‘Policy, Practice, and Partnerships for Climate Change Adaptation on US National Forests’ (2017) 144 Climatic Change 257.

⁴⁴ See, eg, Arnold (n 33); Jonathan Verschuuren (ed), *Research Handbook on Climate Change Adaptation Law* (Elgar 2013).

difficulty’ that ‘adaptation measures have to be implemented through a wide range of policies’,⁴⁵ but they carry on talking about ‘adaptation law’ as a distinct set of rules and principles.⁴⁶ They quickly run into difficulties when trying to identify these rules and principles, irrespective of whether they are looking at international or domestic law.

A. Looking for International Legal Norms on Climate Change Adaptation

Verschuuren suggests that adaptation law ‘originates at the international level’.⁴⁷ This hypothesis is presumably based on the understanding that adaptation should pursue a remedial function — holding some states responsible for the expenses faced by others as a consequence of the impacts of climate change. But Verschuuren’s interest lies with the law as it is: he contends that the UNFCCC imposes an ‘impressive list of adaptation duties’.⁴⁸

These duties may exist, but the list is hardly impressive. The main commitment on adaptation arising from the UNFCCC, under Article 4(1)(b), is to ‘formulate, implement, publish and regularly update national ... programmes containing ... measures to facilitate adequate adaptation to climate change’⁴⁹ — an obligation which is vague and undemanding. Nor does the UNFCCC contain particularly impressive provisions on financial support for adaptation. Under Article 4(4), Annex II country parties commit to ‘assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to these effects’,⁵⁰ but this provision does not require Annex II parties to cover *all* the costs of adaptation,⁵¹ nor does it create any obligation for any Annex II party to pay any specific amount.⁵²

Verschuuren’s optimistic view is shared by scholars who have hailed Article 7 of the Paris Agreement as ‘a significant step forward’⁵³ and the foundation of ‘a new framework or regime’⁵⁴ on climate change adaptation. Here again, this supposed vindication of an international law on climate change adaptation is not supported by a dispassionate reading of the treaty. The only provisions of Article 7 that are phrased as obligations are vague and largely duplicative of the UNFCCC: they require parties, ‘as appropriate’, to ‘engage in adaptation planning processes’ and, if they submit an adaptation communication, to update it

⁴⁵ Jonathan Verschuuren, ‘Introduction’ in *Research Handbook on Climate Change Adaptation Law* (n 44) 3.

⁴⁶ See also, eg, Jacqueline Peel, ‘Climate Change Law: The Emergence of a New Legal Discipline’ (2008) 32 *Melbourne University LR* 922.

⁴⁷ Jonathan Verschuuren, ‘Climate Change Adaptation under the United Nations Framework Convention on Climate Change and Related Documents’ in *Research Handbook on Climate Change Adaptation Law* (n 44) 16.

⁴⁸ *ibid* 18.

⁴⁹ UNFCCC (n 1) art 4(1)(b), cited in Verschuuren, ‘Climate Change Adaptation’ (n 47) 17.

⁵⁰ UNFCCC (n 1) art 4(4).

⁵¹ Daniel Bodansky, ‘The United Nations Framework Convention on Climate Change: A Commentary’ (1993) 18 *Yale JIL* 451, 528.

⁵² On the existence of financial obligations in climate governance in general (and in particular on climate change mitigation), see Yulia Yamineva, ‘A Legal Perspective on Climate Finance Debates: How Constructive Is the Current Norm Ambiguity?’ in Benoit Mayer and Alexander Zahar (eds), *Debating Climate Law* (CUP 2021).

⁵³ Alexandra Lesnikowski and others, ‘What Does the Paris Agreement Mean for Adaptation?’ (2017) 17 *Climate Policy* 825, 825.

⁵⁴ Irene Suárez Pérez and Angela Churie Kallhauge, ‘Adaptation (Article 7)’ in Daniel Klein and others (eds), *The Paris Agreement on Climate Change: Analysis and Commentary* (OUP 2017) 221.

‘periodically’.⁵⁵ The treaty proclaims a ‘global goal on adaptation’, but this goal is defined in terms that essentially reiterate the definition of adaptation;⁵⁶ overall, it is not translated into any specific legal norm. Nor does the Paris Agreement impose any effective obligation on its parties to fund adaptation in developing states. Lyster justly identifies ‘a very wide gap between the rhetoric of the Agreement and the reality of the funding available to achieve [its adaptation] goals.’⁵⁷ Likewise, Bodansky notes that ‘Most of the provisions on adaptation and means of implementations are expressed, not as legal obligations, but rather as recommendations, expectations or understandings.’⁵⁸

B. Looking for Domestic Legal Norms on Climate Change Adaptation

By contrast to Verschuuren, some scholars note the paucity of international norms on adaptation and assume that rules and principles on climate change adaptation are to be found instead in domestic law. When adaptation is viewed not as a matter of compensation (by responsible states) but rather as a matter of protection (by territorially competent states), it is a matter that falls naturally within the realm of domestic law rather than international law. Peel points out that adaptation is ‘naturally suited to consideration at a local level’ since ‘the benefits of adaptation measures tend to be quite localised’.⁵⁹ Banda similarly asserts that ‘adaptation is still largely treated as a *local* matter’.⁶⁰

Evidence of law-making at the local level, however, is lacking: in sharp contrast to the proliferation of laws on climate change mitigation, states have virtually no laws dedicated to climate change adaptation. A database of 2,062 laws and policies on climate change contains only one document which it considers to be on ‘adaptation’ — a blueprint for development adopted by Kiribati.⁶¹ Some states have adopted policies on climate change adaptation, or policies that include considerations for climate change adaptation,⁶² but the author is not aware of any statute specifically on climate change adaptation. The UK’s Climate Change Act contains a few procedural provisions on adaptation, essentially setting up a mechanism to assess climate-related risks and adopt policy objectives.⁶³ Kenya’s Climate Change Act mentions adaptation as among the areas in which the government must define policy objectives and in which actions under a domestic Climate Change Fund can be financed.⁶⁴

⁵⁵ Paris Agreement (n 6) arts 7(9), 7(11). No other provisions in article 7 applies the word ‘shall’ in the active form to a legal person.

⁵⁶ *ibid* art 7(1).

⁵⁷ Rosemary Lyster, ‘Climate Justice, Adaptation and the Paris Agreement: A Recipe for Disasters?’ (2017) 26 *Envtl Politics* 438, 449. See also Anju Sharma, ‘Precaution and Post-Caution in the Paris Agreement: Adaptation, Loss and Damage and Finance’ (2017) 17 *Climate Policy* 33.

⁵⁸ Daniel Bodansky, ‘The Legal Character of the Paris Agreement’ (2016) 25 *RECIEL* 142, 147. See also Hall and Persson (n 8) 552–553.

⁵⁹ Peel (n 46) 951.

⁶⁰ Maria L Banda, ‘Climate Adaptation Law: Governing Multi-Level Public Goods Across Borders’ (2018) 51 *Vanderbilt J Transnl L* 1027, 1031 (emphasis in the original).

⁶¹ 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/>.

⁶² See for instance Ministry of the Environment and Water Resources and Ministry of National Development, *Climate Action Plan: A Climate-Resilient Singapore for a Sustainable Future* (Singapore, 2016).

⁶³ *Climate Change Act 2008* (UK), as revised, ss56-70.

⁶⁴ *Climate Change Act 2016* (Kenya), ss14(1)(a), 25(8)(c). See however Clarice Wambua, ‘The Kenya Climate Change Act 2016: Emerging Lessons from a Pioneer Law’ (2019) 2019 *CCLR* 257,

But these few allusions to climate change adaptation here and there do not create a comprehensive legal field.

The paucity of dedicated international or domestic legal instruments does not mean that no legal reform is taking place to foster climate change adaptation. Massey and colleagues revealed a rapid diffusion of policy objectives on climate change adaptation, especially in European countries.⁶⁵ States have been reporting on their strategy for climate change adaptation, especially when this has allowed them to apply for international funding, for instance through the National Adaptation Programmes of Action under the Kyoto Protocol.⁶⁶ Four out of five Intended Nationally Determined Contributions included an adaptation component.⁶⁷

States are adopting and implementing strategies on climate change adaptation, but they are doing so by mainstreaming adaptation in existing laws and policies rather than by creating a separate legal, policy, or institutional field.⁶⁸ Thus, McDonald has showed that statutory reforms implemented in various Australian states and territories to prepare for sea-level rise rely on ‘the interplay of land use planning, coastal management, climate change, emergency management and, in some cases, conservation laws ... Regulation is split across these sectoral boundaries’.⁶⁹ She concludes that ‘all of the legislative responses to projected sea-level rise involve refinements to existing frameworks rather than entirely new statutory schemes.’⁷⁰ While adaptation is thus being mainstreamed in various legal fields, it does not constitute a distinct legal field.

4. Should There Be a Law on Adaptation?

Few scholars have questioned the need for a dedicated set of rules and principles on climate change adaptation.⁷¹ A common assumption has been that the urgency of climate change adaptation necessarily implies that ‘a new legal framework’⁷² has to be created — as if the adoption of dedicated laws is either the only way, or necessarily the ‘best tool’,⁷³ for public authorities to prompt adaptation action. However, the appropriateness of dedicated laws has been debated in more specific contexts, for instance in relation to putative norms on ‘climate migration’ or ‘climate disaster’.

The following looks at the desirability of a law on climate change adaptation, first on the domestic plane and then at the international level.

261, suggesting that ‘Compared to other framework laws on climate change, the CC Act is relatively strong on adaptation’.

⁶⁵ Eric Massey and others, ‘Climate Policy Innovation: The Adoption and Diffusion of Adaptation Policies across Europe’ (2014) 29 *Global Environmental Change* 434.

⁶⁶ UNFCCC Decision 28/CP.7 (2001), in UN Doc FCCC/CP/2001/13/Add.4.

⁶⁷ UNFCCC Secretariat, ‘Aggregate Effect of the Intended Nationally Determined Contributions: An Update’ (2016), UN Doc FCCC/CP/2016/2, [7].

⁶⁸ See, eg, Xiangbai He, ‘Legal and Policy Pathways of Climate Change Adaptation: Comparative Analysis of the Adaptation Practices in the United States, Australia and China’ (2018) 7 *TEL* 347.

⁶⁹ McDonald, ‘Creating Legislative Frameworks’ (n 17) 129.

⁷⁰ *ibid.* See also Jane McDonald, ‘A Short History of Climate Adaptation Law in Australia’ (2014) 4 *Climate Law* 150.

⁷¹ For a notable exception, see Ruhl and Salzman (n 35).

⁷² Craig (n 21) 17.

⁷³ McDonald, ‘Creating Legislative Frameworks’ (n 17) 128.

A. A domestic Law on Climate Change Adaptation?

Using the contrived notion of ‘horse law’, Ruhl and Salzman have showed that applying the law to an issue does not necessarily involve the creation of a distinct legal field — no unique rules and principles arise when the law is applied to activities whose only commonality is that they involve horses.⁷⁴ Ruhl and Salzman consider that climate change adaptation requires reforms to take place across various existing legal fields. They note that ‘Most of law and legal institutions will see climate change adaptation as just another set of challenging issues to work through the system’.⁷⁵ Land law, for instance, has already imposed restrictions on developments for various purposes; ‘Climate change adaptation would just be a new purpose.’⁷⁶ In these circumstances, it would make little sense to entrust a specialized agency or a self-contained piece of legislation with climate change adaptation.⁷⁷ If adaptation law was to be a distinct legal field, in Ruhl and Salzman’s view, it should be limited to ‘a procedural overlay’,⁷⁸ which would aim to promote effective and equitable adaptation outcomes but would otherwise rely on the substantive rules and principles defined in other legal fields.

This sensible reasoning should apply, it seems, not only to adaptation as a whole, but also to particular aspects of it. Various authors have noted that climate change affects patterns of human migration and, on this basis, they have argued for specific legal rules and principles to protect ‘climate migrants’ or otherwise address ‘climate migration’.⁷⁹ As discussed by Nicholson in this volume, such arguments face a conceptual problem: the migration of a person cannot be shown to be caused by climate change.⁸⁰ Overall, these arguments lack normative traction: whether a person’s migration can be attributed to climate change is not relevant in assessing the protection this person needs, or deserves — there is no reason for states to prioritize the protection of a population of ‘climate migrants’ over that of other migrants (or forced migrants, or other populations of migrants characterized by particular protection needs).⁸¹ Existing human rights instruments apply to any population of migrants; if these instruments fail to protect certain rights, this failure is not specific to ‘climate

⁷⁴ Ruhl and Salzman (n 35).

⁷⁵ *ibid* 1013.

⁷⁶ *ibid*.

⁷⁷ *ibid* 1018. See also Dewald van Niekerk, ‘Climate Change Adaptation and Disaster Law’ in *Research Handbook on Climate Change Adaptation Law* (n 44) 146.

⁷⁸ Ruhl and Salzman (n 35) 1019.

⁷⁹ See, eg, Jane McAdam, *Climate Change, Forced Migration, and International Law* (OUP 2012); Lauren Nishimura, ‘“Climate Change Migrants”: Impediments to a Protection Framework and the Need to Incorporate Migration into Climate Change Adaptation Strategies’ (2015) 27 *Intl J Refugee L* 107; Frank Biermann and Ingrid Boas, ‘Towards a Global Governance System to Protect Climate Migrants: Taking Stock’ in Benoit Mayer and François Crépeau (eds), *Research Handbook on Climate Change, Migration and the Law* (Elgar 2017).

⁸⁰ See generally Calum TM Nicholson, ‘Climate Mobility’ Is Not a Proper Subject of Research and Governance’ in *Debating Climate Law* (n 52). See also, eg, Foresight, ‘Migration and Global Environmental Change’ (Final Project Report, UK Government Office for Science 2011); and generally Calum TM Nicholson, review of *Climate Change, Forced Migration, and International Law*, by Jane McAdam (2013) 26 *J Refugee Studies* 311; Benoit Mayer, ‘Constructing Climate Migration as a Global Governance Issue: Essential Flaws in the Contemporary Literature’ (2013) 9 *McGill JSDLP* 87.

⁸¹ See, eg, Benoit Mayer, *The Concept of Climate Migration: Advocacy and its Prospects* (Elgar 2016) ch 2.

migration’.⁸² Nor is there any evidence that a discourse on ‘climate migration’ is effective from an advocacy perspective — it could just as well create more confusion, thus hindering the acceptance of political arguments for the protection of migrants’ rights.⁸³

Arguments about ‘climate disasters’⁸⁴ run into similar issues. The concept is as perplexing as ‘climate migration’: to talk meaningfully about a ‘climate disaster’, one would need not only to attribute an extreme weather event to climate change (which, itself, is problematic), but also to attribute the disaster to this weather event, thus downplaying the concurrent role of exposure and vulnerability.⁸⁵ But even leaving questions of attribution aside, the usefulness of this concept is not at all clear. There is no doubt that climate change ‘will greatly accentuate disaster risks, putting even more stress on disaster response systems’,⁸⁶ and this should certainly be taken into account, for instance, when a state decides how to allocate resources to disaster preparedness. Yet, there does not seem to be any reason why a ‘potential legal duty to deal with climate-related disaster risks’⁸⁷ would differ from states’ general disaster-risk-management obligations arising, in particular, from international human rights law.⁸⁸ Arguments that have been made for the creation of a ‘climate disaster law’ have neither demonstrated that disasters can be attributed to climate change, nor that they ought to be treated differently from other disasters.⁸⁹

This line of argument could extend to countless other aspects of climate change adaptation. That climate change impacts a lot of ‘things’ does not mean that it creates ‘climate-impacted things’ that are distinguishable and ought to be distinguished from other ‘things’. McCormack convincingly argues that biological diversity needs to be protected when it is under stress, but this applies equally and indifferently to all stressors, notwithstanding any relation they may have with climate change.⁹⁰ Faure makes an interesting case for compensation as a tool of social protection in the event of a disaster as a tool for climate change adaptation, but this argument should be made in relation to any disaster, rather than solely in the context of climate change.⁹¹ The impact of climate change on public health does not justify the development of a new field of climate-related public health law.⁹² The

⁸² See, eg, Alexander Betts, *Survival Migration: Failed Governance and the Crisis of Displacement* (Cornell UP 2013) 16-17.

⁸³ See generally the discussion in Benoit Mayer, “‘Environmental Migration’ as Advocacy: Is It Going to Work?” (2014) 29 *Refuge* 27; Benoit Mayer, ‘Climate Migration and the Politics of Causal Attribution: A Case Study in Mongolia’ (2016) 5 *Migration & Development* 234.

⁸⁴ See in particular Rosemary Lyster, *Climate Justice and Disaster Law* (CUP 2015); Rosemary Lyster and Robert RM Verchick (eds), *Research Handbook on Climate Disaster Law* (Elgar 2018).

⁸⁵ See above notes 28-31 and accompanying text.

⁸⁶ Daniel Farber, ‘Climate Change and Disaster Law’ in Cinnamon P Carlarne, Kevin R Gray and Richard G Tarasofsky (eds), *The Oxford Handbook of International Climate Change Law* (OUP 2016) 589.

⁸⁷ *ibid* 594.

⁸⁸ See in particular ILC, Draft articles on the protection of persons in the event of disasters, in Report of the ILC on its 68th Session, UN Doc A/71/10 (2016) 17.

⁸⁹ See discussion in Benoit Mayer, review of *Climate Justice and Disaster Law*, by Rosemary Lyster (2017) 11 *CCLR* 166, 168-169.

⁹⁰ Cf Phillipa C McCormack, ‘Conservation Introductions for Biodiversity Adaptation under Climate Change’ (2018) 7 *TEL* 323.

⁹¹ Cf Michael Faure, ‘Climate Change Adaptation and Compensation’ in *Research Handbook on Climate Change Adaptation Law* (n 44).

⁹² Cf Michael Burger and Justin Gundlach (eds), *Climate Change, Public Health, and the Law* (CUP 2019).

protection of human rights and the environment is not a wheel that needs to be re-invented ‘in the context of climate change’. Climate change may (and, arguably, should) lead to a political awakening about the shortfalls of existing governance — for instance about the lack of effective protection of the human rights of migrants or the shortcomings of disaster preparedness — but the solution to these issues does not lie in more categorization and compartmentalization.

Thus, at the domestic level, climate change adaptation is best addressed by adapting existing legal frameworks rather than by creating new ones. If there ought to be specific rules on climate change adaptation at all, this should be, as Ruhl and Salzman suggest, limited to a thin procedural overlay.⁹³

B. An International Law on Climate Change Adaptation?

Unlike mitigation action, action on climate change adaptation is, as noted above, typically a domestic matter⁹⁴ — a state’s adaptation outcomes do not usually depend on another state’s adaptation efforts. Admittedly, international cooperation (typically in a regional context) may be needed to protect transboundary resources, or resources situated in areas beyond national jurisdiction, from the impacts of climate change.⁹⁵ Yet, for the reasons given in the previous subsection, such transboundary impacts are better addressed under existing resource-specific legal frameworks (eg, treaties on the sharing of transboundary freshwater resources)⁹⁶ or else under new resource-specific legal frameworks (eg, new treaties on the management of transboundary aquifers)⁹⁷ rather than under international instruments on climate change adaptation. There may be a need to reform regional and international instruments in order to take the impacts of climate change into account (ie, to adapt existing law), but probably not to adopt new, dedicated legal frameworks.

Banda has argued that adaptation is ‘an international public good requiring international cooperation’.⁹⁸ This argument could be supported by the recognition of states’ complex interdependence: in a world where ‘multiple channels connect societies, ... the distinction between domestic and foreign issues becomes blurred’.⁹⁹ States already recognize the international community’s interest in ensuring that every state protects the human rights of its own citizens¹⁰⁰ and (albeit to a lesser extent) the environment within its own territory.¹⁰¹ Arguably, this implies an interest of the international community in ensuring that every state

⁹³ Ruhl and Salzman (n 35) 1019. See the examples of the UK and Kenya, above notes 63-64.

⁹⁴ See above note 60 and accompanying text.

⁹⁵ Banda (n 60) 1056.

⁹⁶ See in particular Convention on the Law of the Non-Navigational Uses of International Watercourses (adopted 21 May 1997, EIF 17 August 2014) 2999 UNTS 1; and generally Mark Giordano and others, ‘A Review of the Evolution and State of Transboundary Freshwater Treaties’ (2014) 14 Intl Env’tl Agreements 245.

⁹⁷ Cf Raya Marina Stephan, ‘Climate Change Considerations under International Groundwater Law’ (2017) 42 Water International 757.

⁹⁸ Banda (n 60) 1027.

⁹⁹ Robert Keohane and Joseph Nye, *Power and Interdependence* (4th ed, Longman 2012) 20-21.

¹⁰⁰ See, eg, International Covenant on Economic, Cultural and Social Rights (adopted 16 December 1966, EIF 3 January 1976) 993 UNTS 3; International Covenant on Civil and Political Rights (adopted 16 December 1966, EIF 23 March 1976) 999 UNTS 171.

¹⁰¹ See, eg, Convention on Biological Diversity (adopted 5 June 1992, EIF 29 December 1993) 1760 UNTS 79; UN Convention on the Law of the Sea (adopted 10 December 1982, EIF 16 November 1994) 1833 UNTS 3, in particular arts 192, 194.

adapts to climate change in ways that ensure the protection of human rights and of the environment. On the other hand, states have also recognized emphatically the prohibition of interference in ‘matters which are essentially within the domestic jurisdiction of any state’,¹⁰² as well as the right of all peoples to self-determination.¹⁰³ We must make sure that state sovereignty is not sacrificed on the altar of human rights.

There is a risk that the project of an international law on climate change adaptation would disproportionately infringe states’ independence and hinder sustainable development in developing countries. This risk appears perhaps most clearly in academic discussions concerned with measuring adaptation outcomes and monitoring the achievement of the adaptation goal under the Paris Agreement. Measuring adaptation outcomes requires a definition of these outcomes, which, in turn, implies value-based judgments about what adaptation should prioritize.¹⁰⁴

The literature on measuring adaptation outcomes minces no words about the difficulty this involves. Dupuis and Biesbroek, for instance, note ‘the indistinctness of the phenomenon that is being measured and the fuzziness of its scope and boundaries’.¹⁰⁵ Yet, this difficulty is often viewed as one that expertise can overcome. The IPCC — Magnan and Ribera suggest — could adopt ‘tracking criteria’ that would allow for the measurement of adaptation outcomes in much the same way as the tracking of GHG emissions is used to reflect mitigation outcomes.¹⁰⁶ Other authors, however, have noted that the definition of such criteria would be a ‘contentious process’¹⁰⁷ and have questioned its desirability.¹⁰⁸

Common adaptation metrics are part of a broader project of managerial governance underlying proposals for an international law on climate change adaptation. This managerial governance assumes that there is a ‘right’ way to adapt to climate change that ‘international experts’ are best qualified to determine.¹⁰⁹ This project is in tension with the legal principle of the sovereignty of states in international cooperation to address climate change,¹¹⁰ the

¹⁰² UN Charter (adopted 26 June 1945, EIF 24 October 1945) 1 UNTS XVI, art 2(7)

¹⁰³ ICCPR (n 100) art 1(1); ICESCR (n 100) art 1(1)

¹⁰⁴ See above text after footnote 21.

¹⁰⁵ Johann Dupuis and Robbert Biesbroek, ‘Comparing Apples and Oranges: The Dependent Variable Problem in Comparing and Evaluating Climate Change Adaptation Policies’ (2013) 23 *Global Environmental Change* 1476, 1476.

¹⁰⁶ Alexandre K Magnan and Teresa Ribera, ‘Global Adaptation after Paris’ (2016) 352 *Science* 1280, 1281. See also, eg, Brianna Craft and Susannah Fisher, ‘Measuring the Adaptation Goal in the Global Stocktake of the Paris Agreement’ (2018) 18 *Climate Policy* 1203; James C Arnott, Susanne C Moser and Kristen A Goodrich, ‘Evaluation That Counts: A Review of Climate Change Adaptation Indicators and Metrics Using Lessons from Effective Evaluation and Science-Practice Interaction’ (2016) 66 *Environmental Science & Policy* 383.

¹⁰⁷ UN Environment, ‘The Adaptation Gap Report’ (2018) <www.unenvironment.org/resources/adaptation-gap-report> Annex to ch 3, 1. See also, eg, Lindsey Jones, ‘Resilience Isn’t the Same for All: Comparing Subjective and Objective Approaches to Resilience Measurement’ (2019) 10 *WIREs Climate Change* e552.

¹⁰⁸ See in particular Annett Möhner, ‘The Evolution of Adaptation Metrics under the UNFCCC and its Paris Agreement’ in Lars Christiansen, Gerardo Martinez and Prakriti Naswa (eds), *Adaptation Metrics: Perspectives on Measuring, Aggregating and Comparing Adaptation Results* (UNEP DTU 2018) 15.

¹⁰⁹ See generally Martti Koskenniemi, ‘What Use for Sovereignty Today?’ (2011) 1 *AsJIL* 61.

¹¹⁰ UNFCCC (n 1) Preamble. See also UN Charter (n 102) art 2(1).

concept of subsidiarity,¹¹¹ and the notion that adaptation action ought to be ‘country-driven’.¹¹² Common adaptation metrics, whether adopted by experts or negotiated by states, would bypass legitimate domestic political processes when making inherently political decisions about what adaptation should protect and what it should forfeit. Developed states would likely have considerable influence in this process (due to their greater negotiating power and leadership in academic research) and, thus, on determining what developing states prioritize in their adaptation strategies. Already, the emphasis on ‘climate migration’ in both negotiations and the literature seems to reflect developed states’ agenda of controlling immigration more than developing states’ interest in protecting the most vulnerable within their population.¹¹³

Rather than determining how states must adapt to climate change, an international law on climate change adaptation could determine who ought to pay for it. Causation is irrelevant in assessing protection needs, but it is essential when assessing moral or legal responsibilities. The costs of adaptation in developing states raises questions of distributive and possibly corrective justice, as well as legal questions of state responsibility.¹¹⁴ It is on these grounds that developing states brought adaptation to the agenda of international negotiations in the late 1980s.¹¹⁵ Article 4(4) of the UNFCCC suggested that the concept of adaptation could be associated with something akin to ‘compensation’ — even if developed states could not agree on using this word in the Convention.¹¹⁶

Over the past three decades, developed states have constantly avoided any questions of causal responsibility and reparations. Developing states could have viewed the mention of ‘loss and damage associated with climate change impacts in developing countries’¹¹⁷ in the Bali Action Plan as a victory but, instead of an anchoring point for discussions of reparations, loss and damage was soon treated with the same ambivalence as adaptation itself — as neither an attempt to define substantive legal standards that should be followed in order to reduce the impacts of climate change, nor as ‘a basis for any liability or compensation’.¹¹⁸ Instead of clarifying the function of climate change adaptation, the recognition of ‘the importance of averting, minimizing and addressing loss and damage’¹¹⁹ as a separate agenda item has

¹¹¹ See, eg, Isabel Feichtner, ‘Subsidiarity’ in *Max Planck Encyclopedia of Public International Law* (online edn, OUP 2007) [16-30].

¹¹² Paris Agreement (n 6) art 7(5).

¹¹³ Migrants are rarely the most vulnerable individuals in a society (as the most vulnerable cannot afford to migrate). See, eg, Foresight (n 80).

¹¹⁴ See, eg, Sarah Mason-Case and Julia Dehm, ‘Redressing Historical Responsibility for the Unjust Precarities of Climate Change in the Present’ in *Debating Climate Law* (n 52); Benoit Mayer, ‘State Responsibility and Climate Change Governance: A Light through the Storm’ (2014) 13 *CJIL* 539; Benoit Mayer, ‘Climate Change Reparations and the Law and Practice of State Responsibility’ (2017) 7 *AsJIL* 185.

¹¹⁵ Caracas Declaration of the Ministers of Foreign Affairs of the Group of 77 on the Occasion of the 25th Anniversary of the Group (1989), reproduced in UN Doc A/44/361 [II-34].

¹¹⁶ See in particular Philippe Sands, ‘The United Nations Framework Convention on Climate Change’ (1992) 1 *RECIEL* 270, 275.

¹¹⁷ Bali Action Plan (n 5) [1(c)(iii)].

¹¹⁸ UNFCCC Decision 1/CP.21 (2015) [51], in UN Doc FCCC/CP/2015/10/Add.1. See generally Benoit Mayer, ‘Whose “Loss and Damage”? Promoting the Agency of Beneficiary States’ (2014) 4 *Climate Law* 267; Florentina Simlinger and Benoit Mayer, ‘Legal Responses to Climate Change Induced Loss and Damage’ in Reinhard Mechler and others (eds), *Loss and Damage from Climate Change Concepts, Methods and Policy Options* (Springer 2019).

¹¹⁹ See Paris Agreement (n 6) art 8.

merely added more intractable questions about the distinction between this and climate change adaptation.¹²⁰

5. Conclusion

A debate ought to take place as to the existence and desirability of a law on climate change adaptation. Scholars often assume that such a law exists, or else that a legal framework would foster more effective adaptation action. Yet, effective adaptation action does not necessarily involve the development of a new legal field or the creation of specific categories or dedicated institutions. The impacts of climate change may reveal some shortfalls in the law, for instance with regard to disaster preparedness, but these shortfalls ought to be addressed in their entirety. On the other hand, questions of responsibility and reparations should be addressed through compensation, not by imposing additional rules and principles on those states most affected by the impacts of climate change. The law needs to be adapted to climate change, but there is no obvious need to adopt laws on climate change adaptation — at least not beyond a thin procedural overlay aimed at ensuring that climate change adaptation is mainstreamed in various fields of law and governance.

¹²⁰ See, eg, Alice Venn, ‘Legal Claims for Reparation of Loss and Damage’ in *Debating Climate Law* (n 52).