

International Environmental Law and Climate Change: Reflections on Structural Challenges in a “Kaleidoscopic” World

JUTTA BRUNNÉE*

ABSTRACT

Over the last decade or so, Professor Brown Weiss has drawn our attention to the implications for the international order of what she calls the “kaleidoscopic world.” International law, she argues, must transition from its origins as an exclusively sovereignty-based system to a more globalized legal system that engages state and non-state actors alike. In this ever-changing context, it must provide both dynamic, adaptable approaches to lawmaking and universally accepted norms that can promote, guide, and stabilize cooperation. Professor Brown Weiss identified harm avoidance as one such fundamental norm for international law in the kaleidoscopic world, and climate change as emblematic of the complex problems the law must confront. In this short Article, I will show that the harm avoidance norm does play a central role in general international law as well as in treaty-based environmental regimes. However, as Professor Brown Weiss cautions, the sovereignty moorings of international law entail structural limitations that complicate the pursuit of environmental harm avoidance. In the context of customary international law, these limitations are enshrined in the very parameters of the foundational harm prevention rule. The evolution of this rule beyond the sovereignty paradigm has remained tentative. In the context of multilateral environmental agreements, sovereignty-related constraints flow from the rules of treaty law. As the experience in the climate regime serves to illustrate, rules pertaining to state consent, entry-into-force, and treaty amendments have hampered the development of a long-term commitment regime for all states. The Paris Agreement frees the climate regime from at least some of these sovereignty-driven constraints. Ironically, it accomplishes this feat by giving pride of place to the sovereignty of states over national policy choices.

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* University Professor and Metcalf Chair in Environmental Law, University of Toronto. © 2020, Jutta Brunnée.

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The old order is in flux, and the emerging order is complex and often chaotic.¹

[A]n international legal system based solely on sovereignty and rights of sovereignty is no longer sufficient today.²

We are transitioning to a much more complex globalized legal system.³

INTRODUCTION

These three short quotes, taken from Edith Brown Weiss’ 2017 *Hague Lectures*, provide an apt illustration of the range, insight, and foresight that are the hallmarks of her scholarship. I was grateful to have had the opportunity to speak at the November 2019 symposium in recognition of Professor Brown Weiss’ remarkable scholarship, and I am delighted to contribute to this journal’s series of articles in her honor. In that spirit, the three opening quotes will serve as a set of jumping off points for the brief reflections on international environmental law and climate change that I am offering in this contribution.

The first proposition—about the changing international order—captures the context in which international environmental law operates today. As Professor Brown Weiss so evocatively puts it, ours is a “kaleidoscopic world.”⁴ This world, she tells us, is characterized by the globalization of the financial and economic sectors; the development and widespread dispersion of information and communications technologies around the world, empowering people from the bottom up while complicating control from the top down; and the dispersion of dangers. Perhaps most importantly, the kaleidoscopic world is subject to “rapid and often unforeseen changes with widespread effects,”⁵ including unexpected events or changes in the nature of problems or constellations of actors.⁶ Professor Brown Weiss identified climate change as emblematic of the “kaleidoscopic period” in which we find ourselves.⁷

1. Edith Brown Weiss, *Establishing Norms in a Kaleidoscopic World*, in 396 RECUEIL DES COURS 49, 51 (2018).

2. *Id.* at 52.

3. *Id.*

4. *See, e.g.*, Edith Brown Weiss, *International Law in a Kaleidoscopic World*, 1 ASIAN J. INT’L L. 21, 21 (2011); Brown Weiss, *supra* note 1, at 154.

5. Brown Weiss, *supra* note 4, at 21.

6. Brown Weiss, *supra* note 1, at 54.

7. *See* Edith Brown Weiss, *Intergenerational Equity in a Kaleidoscopic World*, 49 ENV’T POL’Y & L. 3, 8 (2019).

Climate change also illustrates the import of the second statement—the notion that sovereignty-based international law is insufficient to respond to the challenges of the kaleidoscopic world. Professor Brown Weiss has always been interested in the normative reach of international environmental law. She was path-breaking in working to expand its conceptual focus beyond territorial considerations and to encompass intertemporal considerations. One of her signal contributions was to launch the notion of intergenerational equity,⁸ a concept that captured the imagination of the field and has become engrained in its normative fabric, including through a range of complementary principles. In her recent work, Professor Brown Weiss highlighted one such principle, harm avoidance, as one of the fundamental norms of international environmental law for the kaleidoscopic world.⁹ An influential legal articulation of this principle is found in the harm prevention rule, the core rule of customary international environmental law.¹⁰ This rule, however, is constrained by the very sovereignty-focused foundations that Professor Brown Weiss warns against. Hence, it invites reflections on international environmental law’s enduring “structural” limitations.

Professor Brown Weiss’ third statement—observing a transition to a more globalized legal system—focuses on the implications of the challenges and limitations highlighted by the first and second statements, respectively. Although states and other actors should continue their work to expand the normative parameters of general international law, that work takes time and, in any case, cannot on its own suffice as a legal response to an issue like climate change. Responding to climate change requires agile, adaptable legal frameworks that can straddle different levels of governance and engage all the actors—state and non-state—who contribute to or are affected by climate change.¹¹ This proposition connects to another consistent line of inquiry in Professor Brown Weiss’ scholarship: her interest in the functioning and implementation of international law. Although by no means dismissing the importance of formal international law, Professor Brown Weiss has also been cognizant of the limitations of orthodox, legal positivist approaches to international environmental law. She has long explored standard-setting and norm-building beyond the confines of the traditional sources of international law¹² and has searched for approaches to accountability and implementation that transcend the confines of

8. See generally EDITH BROWN WEISS, *IN FAIRNESS TO FUTURE GENERATIONS: INTERNATIONAL LAW, COMMON PATRIMONY, AND INTERGENERATIONAL EQUITY* (Transnat’l Publishers 1989); Edith Brown Weiss, *Implementing Intergenerational Equity*, in *RESEARCH HANDBOOK ON INTERNATIONAL ENVIRONMENTAL LAW* 100 (Malgosia Fitzmaurice, David M. Ong & Panos Merkouris eds., 2010).

9. Brown Weiss, *supra* note 1, at 154.

10. Jutta Brunnée, *Procedure and Substance in International Environmental Law*, in 405 *RECUEIL DES COURS* 75, 115 (2020).

11. See Edith Brown Weiss, *Voluntary Commitments as Emerging Instruments in International Environmental Law*, 44 *ENV’T. POL’Y & L.* 83, 89–90 (2014); Brown Weiss, *supra* note 7, at 4.

12. See, e.g., Edith Brown Weiss, *The Evolution of International Environmental Law*, 54 *JAPAN. Y.B. INT’L L.* 1, 18–21 (2011).

the law of state responsibility.¹³ The 2015 Paris Agreement on climate change¹⁴ provides an example of just such an approach, and lends itself to considering its promises and pitfalls.

In this short Article, I explore these three themes and their implications in turn. I will show that, in the kaleidoscopic world sketched by Professor Brown Weiss, the fundamental norm of harm avoidance that she has highlighted does play a central role in general international law as well as in treaty-based environmental regimes. However, much as Professor Brown Weiss cautions, the “rights of sovereignty” entail structural limitations that complicate the pursuit of environmental harm avoidance.¹⁵ In the context of general international law, these limitations are enshrined in the very parameters of the harm prevention rule. Although that rule is no longer focused “solely on sovereignty,”¹⁶ its evolution beyond the sovereignty paradigm has been tentative. In the context of multilateral environmental agreements (“MEAs”), sovereignty-related constraints flow from the rules of treaty law. As the experience in the climate regime will serve to illustrate, rules pertaining to state consent, entry-into-force, and treaty amendments have hampered the development of a long-term commitment regime for all states. The Paris Agreement represents an effort to square the proverbial circle: it frees the climate regime from at least some of these sovereignty-based “shackles” even as it acknowledges states’ sovereign freedom to make their own national policy choices.¹⁷

I. CLIMATE CHANGE, COMPLEXITY, AND THE KALEIDOSCOPIIC WORLD

Professor Brown Weiss’ account of the kaleidoscopic world complements and advances the complexity thinking that has become increasingly influential in the social sciences.¹⁸ A variety of disciplines have explored the traits that render complex problems resistant to resolution: multiple variables of a problem situation, interconnectedness of the variables, dynamism of the problem situation and

13. ENGAGING COUNTRIES: STRENGTHENING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL ACCORDS 17–18 (Edith Brown Weiss & Harold K. Jacobson eds., 1998) [hereinafter ENGAGING COUNTRIES]; Edith Brown Weiss, *Strengthening Compliance with Climate Change Commitments*, in 1 COEXISTENCE, COOPERATION AND SOLIDARITY: LIBER AMICORUM RÜDIGER WOLFRUM 693, 694 (Holger Hestermeyer et al. eds., 2012) [hereinafter *Strengthening Compliance*]; Edith Brown Weiss, *Rethinking Compliance with International Law*, in THE IMPACT OF INTERNATIONAL LAW ON INTERNATIONAL COOPERATION 134, 134–36 (Eyal Benvenisti & Moshe Hirsch eds., 2004) [hereinafter *Rethinking Compliance*].

14. Paris Agreement Under the United Nations Framework Convention on Climate Change, U.N. Doc. FCCC/CP/2015/L.9/Rev.1 [hereinafter Paris Agreement].

15. Brown Weiss, *supra* note 1, at 52.

16. *Id.* at 52.

17. See generally Joost Pauwelyn, Ramses A. Wessel & Jan Wouters, *When Structures Become Shackles: Stagnation and Dynamics in International Lawmaking*, 25 EUR. J. INT’L L. 733, 733–34 (2014).

18. Complexity theory has its origins in the natural sciences. See, e.g., Warren Weaver, *Science and Complexity*, 36 AM. SCIENTIST 536, 537 (1948).

variables, incomplete knowledge or understanding of the problem situation, and polycentric nature of the situation.¹⁹ Complexity thinking has also gained currency in International Relations scholarship,²⁰ as well as in the global environmental governance literature.²¹ Indeed, climate change has been labeled a “super-wicked” problem due to additional features that make it especially difficult to tackle: time to act is running out, those seeking to solve the problem are also causing it, an absence of central authority, and today’s policies irrationally discount the future.²²

These observations resonate with Professor Brown Weiss’ identification of a fundamental tension that heightens the challenges of the kaleidoscopic world. Given the rapid, multifaceted changes that characterize the kaleidoscopic world, she observes, governance and law necessarily must respond in the short-term. At the same time, the *Anthropocene*—the current geologic period, in which human activity profoundly shapes climate and environment—demands that our laws and policies be alert to the long-term (and hence inter-generational) impacts of current human activities.²³ This tension is borne out in the climate context, and has vexed national and international efforts to develop climate law and policy.

Legal scholarship has been considerably slower to engage with the implications of complexity;²⁴ the application of complexity theory to international law has remained sporadic.²⁵ It is in this context that Professor Brown Weiss’ work on the role of international law in the kaleidoscopic world makes such an important contribution. Complexity theory instructs that policymakers ought to adopt process-focused approaches that privilege “dynamic flux over stable essences.”²⁶ International environmental law scholarship has only begun to build on these

19. See, e.g., Joachim Funke, *Complex Problem Solving*, in 38 ENCYCLOPEDIA OF THE SCIENCES OF LEARNING 682, 683 (Norbert M. Seel ed., 2012).

20. Antoine Bousquet & Simon Curtis, *Beyond Models and Metaphors: Complexity Theory, Systems Thinking and International Relations*, 24 CAMBRIDGE REV. INT’L AFFS. 43, 44 (2011).

21. See Kelly Levin, Benjamin Cashore, Steven Bernstein & Graeme Auld, *Overcoming the Tragedy of Super Wicked Problems: Constraining Our Future Selves to Ameliorate Global Climate Change*, 45 POL’Y SCI. 123, 124 (2012).

22. *Id.* at 126–29.

23. Brown Weiss, *supra* note 1, at 54. On the concept of the Anthropocene, see Paul J. Crutzen & Eugene F. Stoermer, *The “Anthropocene”*, GLOB. CHANGE NEWSL., May 2000, at 17, 17–18.

24. See, e.g., J.B. Ruhl, *Thinking of Environmental Law as a Complex Adaptive System: How to Clean Up the Environment by Making a Mess of Environmental Law*, 34 HOUST. L. REV. 933, 940–41 (1997); Julian Webb, *Law, Ethics, and Complexity: Complexity Theory & the Normative Reconstruction of Law*, 52 CLEV. ST. L. REV. 227, 229 (2005).

25. See, e.g., Mark Chinen, *Complexity Theory and the Horizontal and Vertical Dimensions of State Responsibility*, 25 EUR. J. INT’L L. 703, 703–05 (2014); Joost Pauwelyn, *At the Edge of Chaos? Foreign Investment Law as a Complex Adaptive System, How It Emerged and How It Can Be Reformed*, 29 ICSID REV. – FOR. INV. L. J. 372, 373–75 (2014); Steven Wheatley, *The Emergence of New States in International Law: The Insights from Complexity Theory*, 15 CHINESE J. INT’L L. 579, 580–81 (2016); Jutta Brunnée, *The Rule of International (Environmental) Law and Complex Problems*, in THE INTERNATIONAL RULE OF LAW: RISE OR DECLINE? 211, 212–13 (Heike Krieger, Georg Nolte & Andreas Zimmermann eds., 2019).

26. Bousquet & Curtis, *supra* note 20, at 49.

insights. In one recent article, for example, the field as a whole was described as a complex system composed of a decentralized network of interacting norms, treaties, and institutions that continuously adapt to external change.²⁷ Professor Brown Weiss, in her *Hague Lectures*,²⁸ significantly advances this debate. She concretely maps out the limitations of the current international legal system as well as the approaches available to adapt international law to the demands of the kaleidoscopic world. In the next Part, I explore the limitations that flow from traditional international law's sovereignty-based structure,²⁹ as illustrated by the harm prevention rule in international environmental law. I then turn to the transition to a "more complex, globalized legal system,"³⁰ as reflected in the Paris Agreement on climate change.

II. GENERAL INTERNATIONAL LAW AND CLIMATE CHANGE: THE LIMITS OF SOVEREIGNTY

The kaleidoscopic world and the complexity of the climate crisis, as we have seen, challenge international law to manage the tension between short-term imperatives and long-term effects. Meeting this challenge requires adaptable, dynamic approaches capable of engaging diverse actors. Yet actors also need a stock of shared norms to promote and guide cooperation among them. These norms, explains Professor Brown Weiss, must reflect not just the values "of a handful or even a few dozen countries, but rather [must] be embedded in the multiple cultures and civilizations around the globe."³¹ She identifies harm avoidance as one such fundamental norm for the kaleidoscopic world.³² The goal of harm avoidance animates the wide array of MEAs in operation today, including the climate agreements to which I turn in the next Part of this Article.³³ In this Part, I take a closer look at the conceptual foundations of harm avoidance in international environmental law. The harm prevention rule, a rule of customary international law and, as Professor Brown Weiss rightly notes, a "core norm" for the "kaleidoscopic Anthropocene,"³⁴ lends itself to this exploration.

27. Rakhyun E. Kim & Brendan Mackey, *International Environmental Law as a Complex Adaptive System*, 14 INT'L ENV'T AGREEMENTS 5, 5–24 (2014).

28. Brown Weiss, *supra* note 1, at 51.

29. *Id.* at 52.

30. *Id.*

31. *Id.* at 65.

32. *Id.* at 154. See generally JELENA BÄUMLER, DAS SCHÄDIGUNGSVERBOT IM VÖLKERRECHT (Springer 2017) (tracing the role of harm avoidance across different areas of international law).

33. See Brunnée, *supra* note 10, at 136–37 (discussing the role of MEAs in "complex harm prevention"); see also DANIEL BODANSKY, JUTTA BRUNNÉE & LAVANYA RAJAMANI, INTERNATIONAL CLIMATE CHANGE LAW 55–56 (2017).

34. Brown Weiss, *supra* note 1, at 183.

The harm prevention rule’s existence in general international law is universally accepted³⁵ and has been confirmed by the International Court of Justice (“ICJ”) on several occasions.³⁶ And yet, many questions about the rule’s scope and thrust remain unanswered.³⁷ As a result, it is worth exploring, first, the extent to which the harm prevention rule can help address the short-term and long-term dimensions of the kaleidoscopic world in the context of climate change, and, second, the extent to which it is constrained in doing so effectively, notably by its sovereignty focus.

The harm prevention rule finds its origins in the principles concerning state sovereignty over territory and, specifically, in the principles that govern the mutual limitation of neighboring states’ respective rights to territorial sovereignty (the freedom to use territory at will) and territorial integrity (the right to be free from interference by other states).³⁸ According to the ICJ,

[t]he principle of prevention, as a customary rule, has its origins in the due diligence required of a State in its territory. It is ‘every State’s obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States’ . . . A State is thus obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State.³⁹

The harm prevention rule, then, appears to revolve around precisely the kinds of sovereignty-focused rights and obligations that Professor Brown Weiss noted are insufficient to address the challenges of the kaleidoscopic world. As I am about to show, the rule’s sovereignty focus does entail significant constraints. But it nonetheless holds some promise as a core norm for the balancing of short-term and long-term considerations. It stands to reason that the harm prevention rule is a universally shared inter-state norm precisely because it aligns with bedrock principles of international law concerning sovereignty. In that sense, therefore, its sovereignty focus is actually a strength. Furthermore, although the rule’s normative thrust is to balance potentially competing sovereign rights, today it limits

35. *Id.* at 184. See U.N. Secretary-General, *Gaps in International Environmental Law and Environment-Related Instruments: Towards a Global Pact for the Environment*, ¶ 11, U.N. Doc. A/73/419 (Nov. 30, 2018) (observing that the rule “is intrinsic to a core preference in international law for preventing environmental harm rather than compensating for harm that has already occurred. The prevention principle is well established as a rule of customary international law. . .”).

36. See *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, 1996 I.C.J. 226, ¶ 78 (July 8); *Pulp Mills on the River Uruguay (Arg. v. Uru.)*, Judgment, 2010 I.C.J. 14, ¶ 139 (Apr. 20); *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicar.)* and *Construction of a Road in Costa Rica Along the San Juan River (Nicar. v. Costa Rica)*, Judgment, 2015 I.C.J. 665, ¶¶ 100–105 (Dec. 16).

37. Brown Weiss, *supra* note 1, at 184; Brunnée, *supra* note 10, at 115–62.

38. See *Island of Palmas Case (Neth. v. U.S.)*, 2 R.I.A.A. 831, 839 (Perm. Ct. Arb. 1928); *Trial Smelter (U.S. v. Can.)*, 3 R.I.A.A. 1905, 1965 (1941); *Corfu Channel (U.K. v. Alb.)*, Judgment, 1949 I.C.J. 4, 36 (Apr. 9); see also Brunnée, *supra* note 10, at 121.

39. *Arg. v. Uru.*, 2010 I.C.J. ¶ 101 (quoting *U.K. v. Alb.*, Judgment, 1949 I.C.J. 4, at 22 (Apr. 9)).

these rights in order to prevent harm not just to states, but to the environment.⁴⁰ Hence, even in the narrowest, inter-state conception of the rule, *it is not exclusively focused on sovereignty*. Similarly, by curbing potentially harmful activities, the harm prevention rule also affords protection against future harm. That is the very point of harm prevention, of course. But the degree to which the rule can serve its preventive purpose depends in part on how it is understood.

It is important to note that early practice involving the harm prevention rule, and a good deal of the scholarly engagement with it, revolved around questions of state responsibility for harm that had already occurred.⁴¹ The Trail Smelter case, concerned with whether Canada owed the United States compensation for injury caused by transboundary air pollution emanating from the smelter, is illustrative of this focus.⁴² In this compensatory context, the operation of the harm prevention rule is subject to a number of inherent constraints. First, from the standpoint of harm avoidance, a compensatory approach is inferior, or even wholly inadequate. Often, environmental harm cannot be undone or “compensated.”⁴³ Second, when the harm prevention rule is invoked with a view to compensation, proof of transboundary harm and of a causal link between that harm and another state’s conduct will be required.⁴⁴ Although such proof may be relatively easy to provide in a transboundary setting like the one that gave rise to the Trail Smelter case (the smelter was the only major source of air pollution in the area), most contemporary environmental issues are far more complex. In the context of climate change, for example, it will be challenging to prove that a particular harm suffered by one state (for example, the destruction of coastal areas due to sea level rise) is attributable to another state’s failure to exercise due diligence (for example, in emission reduction efforts).⁴⁵

However, perhaps counter-intuitively, the harm prevention rule is not in fact contingent upon the causation of transboundary harm. More specifically, though proof of harm causation is necessary when compensation is being sought, harm is not actually an element of the primary rule.⁴⁶ An at times underappreciated feature of the harm prevention duty is that it is triggered not by harm, but by the risk of causing transboundary harm.⁴⁷ It is this risk that gives rise to states’ obligation to exercise due diligence with a view to minimizing the risk and, ideally, avoiding

40. Compare, e.g., the older award in Trail Smelter, 3 R.I.A.A. at 1974 (focusing on injury “in or to the territory” of another state) with the more recent decisions in Pulp Mills, Costa Rica v. Nicar. and Nicar. v. Costa Rica, 2015 I.C.J. ¶ 104.

41. See Brunnée, *supra* note 10, at 146; see also LESLIE-ANNE DUVIC-PAOLI, *THE PREVENTION PRINCIPLE IN ENVIRONMENTAL LAW* 20–21 (Cambridge Univ. Press 2018).

42. Trail Smelter, 3 R.I.A.A. at 1917–18.

43. See Brunnée, *supra* note 10, at 158.

44. See Kerry Anne Brent, *The Certain Activities Case: What Implications for the No-Harm Rule?*, 20 ASIA PAC. J. ENV’T L. 28, 55–56 (2017).

45. See BODANSKY, BRUNNÉE & RAJAMANI, *supra* note 33, at 45.

46. See Brunnée, *supra* note 10, at 157, 162.

47. *Id.* at 151.

harm. The International Law Commission’s (“ILC”) 2001 Draft Articles on Prevention of Transboundary Harm from Hazardous Activities reflect this feature of the harm prevention rule.⁴⁸ As the ILC puts it, prevention is focused on “activities not prohibited by international law which involve a risk of causing significant transboundary harm.”⁴⁹ In turn, “risk of causing significant transboundary harm” denotes a spectrum of scenarios ranging from “a high probability of causing significant transboundary harm” to “a low probability of disastrous harm.”⁵⁰

Returning to the climate change example, given the—by now, incontrovertible—scientific evidence of the climate change risks engendered by greenhouse gas emissions, including sea level rise,⁵¹ this risk threshold is clearly crossed, certainly in the case of small island nations. Indeed, today these states—and arguably the entire world—are facing a high probability, if not certainty, of disastrous harm.⁵² Under the harm prevention rule, therefore, states are obligated to take “all appropriate measures to prevent significant transboundary harm.”⁵³ Because the concept of transboundary harm includes impacts in the territory of another state “whether or not the States concerned share a common border,”⁵⁴ small island nations should be able to invoke the harm prevention rule and demand that emitting states meet their due diligence obligations.

Due diligence, in turn, is a contextual standard that can evolve over time.⁵⁵ It can be more or less demanding depending on the situation at hand, the circumstances of the obligated state, the relevant scientific or technological knowledge, the severity of the risk, and the seriousness of the potential harm.⁵⁶ Generally speaking, the higher the risk, and the more serious the potential damage, the more stringent the requirements of due diligence.⁵⁷ According to the ILC, this could entail “taking such measures as are appropriate by way of abundant caution, even if full scientific certainty does not exist, to avoid or prevent serious or irreversible damage.”⁵⁸ Given the risks now so clearly associated with greenhouse gas

48. See Int’l Law Comm’n, Rep. on the Work of Its Fifty-Third Session, U.N. Doc. A/CN.4/SER.A/2001/Add.1 (Part 2), at 151–54 (2001) [hereinafter *Harm Prevention Articles*].

49. *Id.* art. 1, at 149.

50. *Id.* art. 2(a), at 151–52.

51. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE [IPCC], SPECIAL REPORT ON GLOBAL WARMING OF 1.5°C – SUMMARY FOR POLICYMAKERS 7, ¶ B2 (2018).

52. *Id. passim*. See also *New Climate Predictions Assess Global Temperatures in the Coming Five Years*, WORLD METEOROLOGICAL ORG. (July 8, 2020), <https://perma.cc/3AH4-X679> (predicting that there is, “in each of the coming five years (2020-2024) . . . a 20% chance that [the global mean temperature] will exceed 1.5°C in at least one year.”).

53. *Harm Prevention Articles*, *supra* note 48, art. 3, at 153.

54. *Id.* art. 2(c), at 152.

55. See Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, Case No. 17, Advisory Opinion of Feb. 1, 2011, 2011 ITLOS Rep. 10, 43, ¶ 117 [hereinafter *Responsibilities in the Area*].

56. See Brunnée, *supra* note 10, at 159–60.

57. See *Harm Prevention Articles*, *supra* note 48, cmts. 10–18, at 154–55.

58. *Id.* cmt. 14, at 155. See also *Responsibilities in the Area*, *supra* note 55, ¶ 131, at 46 (noting that “the precautionary approach is . . . an integral part of the general obligation of due diligence”).

emissions and climate change, the harm prevention rule's protective capacity is potentially strong, enabling states to demand that other states "adopt, implement, supervise, and enforce policies and measures . . . that prevent, limit, or reduce the emission of greenhouse gases."⁵⁹ In principle, then, the contextual nature of the due diligence standard should enable the harm prevention rule to strike a balance between short-term imperatives and long-term considerations, including those stemming from a risk of potentially catastrophic and irreversible future harm.

This all said, the very due diligence features that give the harm prevention rule potential "bite" may also undercut its usefulness in the context of complex challenges like climate change. For example, because due diligence is a malleable, relatively general standard, it may be difficult to show that a given state has failed to meet the standard, notably in the climate context. After all, most states today are taking some emission reduction measures, even as virtually all of these states' actions appear to fall short of what would be required to keep greenhouse gas concentrations in the atmosphere within a safe range.⁶⁰ Ironically, because the Paris Agreement accommodates a wide range of national approaches,⁶¹ its parties may have an even stronger argument that they are exercising due diligence.⁶² Invoking a due diligence failure may be relatively easier vis-à-vis certain states, such as an industrialized, high-emitting country that is taking no emission reduction measures or is rolling back rather than ramping up climate policies.⁶³

Another catch is inherent in the structure of the harm prevention rule: given that its standard of conduct is due diligence, the rule does not actually prohibit the causation of transboundary harm. So long as a state can show that it is taking appropriate measures to prevent harm, it can not be held responsible even if harm did occur.⁶⁴ As a result, although small island states might have a case against states that are doing nothing to combat climate change, they likely would not succeed against states that are taking reasonable steps but nonetheless fail to avert climate harm. The result is somewhat paradoxical: on the one hand, the harm prevention rule might be violated even when no harm is caused (because a state failed to meet the due diligence standard); on the other hand, it might not be violated even when significant harm is caused (because a state acted diligently in seeking to prevent the harm).

59. See René Lefeber, *Climate Change and State Responsibility*, in INTERNATIONAL LAW IN THE ERA OF CLIMATE CHANGE 321, 334 (Rosemary Rayfuse & Shirley Scott eds., 2012).

60. See generally, e.g., United Nations Env't Programme, *The Emissions Gap Report 2018* (Nov. 27, 2018).

61. See *infra* notes 115–18, 135–36, and accompanying text.

62. See Brunnée, *supra* note 10, at 168.

63. See DUNCAN FRENCH & TIM STEPHENS, INT'L LAW ASS'N STUDY GRP. ON DUE DILIGENCE IN INT'L LAW, SECOND REPORT 13 (2016) (noting that a state "cannot be considered to have acted diligently when the State has acted in bad faith or has knowingly refused to take any measures whatsoever").

64. See Brunnée, *supra* note 10, at 162.

So far, I have considered the extent to which the harm prevention rule, when applied in a context of potential inter-state impacts, could nonetheless contribute to environmental harm avoidance and address short-term as well as longer-term environmental concerns. In international practice, this inter-state aspect of the harm prevention rule has been its predominant feature. However, though the rule was originally limited to territorial impacts, it evolved over time to also apply to the prevention of environmental harm in areas beyond the jurisdiction of states. States affirmed what one might call the “commons branch” of the harm prevention rule in two U.N. conference declarations, the 1972 Stockholm Declaration on the Human Environment⁶⁵ and the 1992 Rio Declaration on Environment and Development.⁶⁶ Both documents declared that states have “the responsibility to ensure that activities within their jurisdiction and control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.”⁶⁷ The same wording has been reiterated in the preambles of numerous MEAs, including the 1992 U.N. Framework Convention on Climate Change (“UNFCCC”),⁶⁸ which is the umbrella agreement for both the 1997 Kyoto Protocol⁶⁹ and the 2015 Paris Agreement.⁷⁰ The ICJ confirmed the existence of the expanded harm prevention rule in its 1996 Advisory Opinion on Nuclear Weapons. It held that “the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment.”⁷¹

Many questions remain unanswered about the commons aspect of the harm prevention rule. In fact, the only thing certain is that states’ harm prevention obligation extends to the environment beyond state territory or control.⁷² It is not clear, however, whether this obligation applies only to harm caused to “areas” in the literal sense, such as the high seas, or also to ecological systems, like the global climate system. Even less clear is to whom an obligation to protect the environment of the commons is owed. The most plausible conceptualization of the relevant obligation would be that it is owed *erga omnes*—to all states. Alas,

65. U.N. Conference on the Human Environment, *Stockholm Declaration on the Human Environment*, U.N. Doc. A/CONF.48/14/Rev.1 (June 16, 1972) [hereinafter *Stockholm Declaration*].

66. U.N. Conference on Environment and Development, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26/Rev.1 (Vol. I), annex I (June 14, 1992) [hereinafter *Rio Declaration*].

67. *Stockholm Declaration*, *supra* note 65, Principle 21; *Rio Declaration*, *supra* note 66, Principle 2.

68. United Nations Framework Convention on Climate Change *pmbl.*, May 9, 1992, 1771 U.N.T.S. 107 [hereinafter UNFCCC].

69. Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, 2303 U.N.T.S. 162 [hereinafter *Kyoto Protocol*].

70. Paris Agreement, *supra* note 14, *pmbl.*

71. Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, ¶ 29 (July 8).

72. But note that the ILC’s Harm Prevention Articles apply only to “harm caused in the territory of or in other places under the jurisdiction or control of a State other than the State of origin.” See *Harm Prevention Articles*, *supra* note 48, art. 2(c), at 152.

although the ICJ has opined that there exist certain “obligations of a State towards the international community as a whole,” which “by their very nature are the concern of all States,”⁷³ it has never confirmed that the harm prevention rule is one of these obligations.⁷⁴

To be sure, there is some support for the proposition that the commons aspect of the harm prevention obligation is owed *erga omnes*. Although there is little direct state practice that would confirm the *erga omnes* nature of the obligation to protect the environment of areas beyond national jurisdiction or control, the proposition does find support in the advisory opinion of the International Tribunal for the Law of the Sea’s Seabed Chamber on Responsibilities in the Area.⁷⁵ According to the Law of the Sea Convention, the “Area [the deep seabed] and its resources are the common heritage of mankind.”⁷⁶ The Seabed Chamber, noting that the International Seabed Authority was tasked with acting on behalf of “mankind as a whole,” observed that each “State Party may also be entitled to claim compensation [for harm to the Area] in light of the *erga omnes* character of the obligations relating to preservation of the environment of the high seas and the Area.”⁷⁷ It supported this observation by referring to Article 48 of the ILC’s Draft Articles on State Responsibility, which envisages circumstances in which states other than those directly injured could invoke another state’s responsibility for breaches of obligations owed *erga omnes*, “to the international community as a whole.”⁷⁸ Article 48 suggests that all states have standing to hold violators of obligations owed *erga omnes* accountable. Again, however, the lack of international practice, including in relation to the commons branch of the harm prevention rule, underscores the uncertainty of the legal situation.⁷⁹

In sum, although the harm prevention rule could play an important role in addressing both short-term and longer-term concerns, its potential in this respect is limited by its strong sovereignty focus. The commons branch of the rule remains especially underdeveloped. Moreover, the harm prevention rule not only

73. *Barcelona Traction, Light and Power Company, Limited (Belg. v. Spain)*, Judgment, 1970 I.C.J. 3, ¶ 33 (Feb. 5).

74. See Brunnée, *supra* note 10, at 175; Sean Murphy (Member), Int’l Law Comm’n, 67th Sess., 3246th mtg. at 5–6, U.N. Doc. A/CN.4/SR.3246 (May 6, 2015) (provisional) (*inter alia* pointing out that environmental norms were not among the examples provided by the ICJ in the *Barcelona Traction* case, or other cases that touched upon obligations *erga omnes*).

75. *Responsibilities in the Area*, *supra* note 55, ¶ 180, at 59.

76. United Nations Convention on the Law of the Sea art. 136, Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter LOSC].

77. *Responsibilities in the Area*, *supra* note 55, ¶ 180, at 59 (referring to LOSC art. 137(2)).

78. See Draft Articles for Responsibility of States for Internationally Wrongful Acts, Article 48, in *Report of the International Law Commission to the General Assembly*, 56 U.N. GAOR Supp. No. 10, at 1, U.N. Doc. A/56/10 (2001), reprinted in [2001] 2 Y.B. Int’l L. Comm’n 126, U.N. Doc. A/CN.4/SER. A/2001/Add.1 (Part 2). On the Draft Articles, see Jutta Brunnée, *International Legal Accountability Through the Lens of the Law of State Responsibility*, 26 NETH. YB. INT’L L. 21, at 33–35 (2005).

79. See BODANSKY, BRUNNÉE & RAJAMANI, *supra* note 33, at 49–50; Brunnée, *supra* note 10, at 175–77.

emerged from an inter-state framework, it remains focused on the rights and obligations of states. In this framework, the interests of human beings are subsumed under the interests of the states in which they reside.⁸⁰ People affected by trans-boundary environmental harm, let alone harm to the environmental commons, are not entitled under the harm prevention rule. A recent advisory opinion of the Inter-American Court of Human Rights broke new ground by highlighting potential linkages between human rights violations and the harm prevention rule.⁸¹ It is too soon to know, however, whether this opinion might point to the emergence of the harm prevention rule as a core norm not only for states, but also for other actors in the kaleidoscopic world.

III. THE PARIS AGREEMENT: TOWARDS A “MORE COMPLEX, GLOBALIZED LEGAL SYSTEM”?

In the kaleidoscopic world, shaped by state and non-state actors and driven by the rapid emergence and changing of issues, interests, and constituencies, problem-solving on the basis of binding international agreements is increasingly difficult.⁸² Due to the requirements of state-consent and entry-into-force, binding treaty commitments may be slow to arrive at and slow to change. Furthermore, unlike general international law, treaty-based commitments apply only to those states that choose to bind themselves. Treaty law, too, then, is sovereignty-focused and its opt-in approach to obligations poses significant challenges to the development of ambitious and widely applicable commitment regimes.

Notwithstanding these difficulties, the bulk of international environmental law-making occurs under the auspices of treaties. After all, most international environmental problems are not amenable to resolution on the basis of typically broad-meshed customary norms like the harm prevention rule or through judicial settlement.⁸³ In response to the challenges of treaty-making, the framework-protocol model emerged in the 1980s as the field’s most common approach to multilateral treaty design.⁸⁴ The approach was meant to accommodate the

80. *See, e.g.*, Trail Smelter, 3 R.I.A.A. at 1965 (referring to injury “in and to the territory of another [State] or the properties or persons therein”).

81. *See* The Environment and Human Rights (State Obligations in Relation to the Environment in the Context of the Protection and Guarantee of the Rights to Life and to Personal Integrity – Interpretation and Scope of Articles 4(1) and 5(1) of the American Convention on Human Rights), Advisory Opinion OC-23/17, Inter-Am. Ct. H.R. (ser. A) No. 23, ¶¶ 180, 238–40 (Nov. 15, 2017). For a discussion, *see* Christopher Campbell-Durufflé & Sumudu Anopama Atapattu, *The Inter-American Court’s Environment and Human Rights Advisory Opinion*, 8 CLIMATE L. 321 (2018).

82. Brown Weiss, *supra* note 7, at 4.

83. Not surprisingly, the ICJ’s major decisions on the harm prevention rule involve disputes between neighbouring states. *See, e.g.*, Pulp Mills on the River Uruguay (Arg. v. Uru.), Judgment, 2010 I.C.J. 14 (Apr. 20); Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicar.) and Construction of a Road in Costa Rica Along the San Juan River (Nicar. v. Costa Rica), Judgment, 2015 I.C.J. 665, ¶¶ 100–105 (Dec. 16).

84. *See* BODANSKY, BRUNNÉE & RAJAMANI, *supra* note 33, at 57.

complexity of international environmental issues, as well as account for the need to build consensus among participants with often widely diverging priorities. To these ends, the initial framework treaty is limited to enshrining the regime's objective, guiding principles, and procedural obligations, and establishing treaty bodies and decisionmaking rules. Typically, concrete substantive obligations are inserted into the regime only at a later stage, through supplementary treaties, usually referred to as "protocols." Although they are separate treaties, protocols are legally connected to the framework, sharing its objectives, principles, and decisionmaking rules.⁸⁵ In the climate regime, the UNFCCC and its Kyoto Protocol map onto these features of the framework-protocol model.

The Kyoto Protocol epitomized a centralized model of environmental treaty design, also described as "top-down."⁸⁶ It contained negotiated, legally binding emission reduction targets, as well as detailed procedural obligations to ensure the transparency of performance and allow for compliance assessment. The declared goals of the protocol's non-compliance procedure ("NCP") were to "facilitate, promote and enforce compliance" with its provisions.⁸⁷ In relation to non-compliance with the parties' binding emissions targets, the NCP set out fixed "consequences to non-compliance," to be applied by the compliance committee upon a finding of non-compliance.⁸⁸

Alas, it proved impossible to turn the Kyoto Protocol into a comprehensive, long-term emissions regime. Building on the UNFCCC's core principles of common but differentiated responsibilities and respective capabilities ("CBDRRC") and developed country leadership,⁸⁹ the protocol did not include emission reduction commitments for developing countries, a feature that later became a major point of contention among parties.⁹⁰ Legally, amendments were required both to extend the protocol's original five-year commitment period and to expand the range of parties with emission reduction commitments to include developing countries. An amendment establishing a second commitment period for the existing group of developed countries was adopted.⁹¹ However, developing countries maintained that it was incompatible with the principle of CBDRRC for them to have binding emission reduction commitments under the Kyoto Protocol.⁹² In short, they argued for bright-line differentiation between South and North, with only the latter being subject to binding emission reduction requirements. In turn, developed countries refused to take on long-term emissions commitments unless

85. *Id.* at 85–94.

86. *Id.* at 23, 163.

87. See Procedures and Mechanisms Relating to Compliance under the Kyoto Protocol, Dec. 27/CMP.1, U.N. Doc. FCCC/KP/CMP/2005/8/Add.3, at 93.

88. *Id.* § XV.5, at 102.

89. See UNFCCC, *supra* note 68, pmbi., art. 3.1.

90. BODANSKY, BRUNNÉE & RAJAMANI, *supra* note 33, at 105–08, 165–66.

91. *Id.* at 202–06 (on the fate of the Kyoto Protocol, including the commitment period amendment).

92. See JUTTA BRUNNÉE & STEPHEN J. TOOPE, LEGITIMACY AND LEGALITY IN INTERNATIONAL LAW: AN INTERACTIONAL ACCOUNT 155–58, 206 (Cambridge Univ. Press 2010).

all major emitters were required to undertake climate action in the post-Kyoto phase of the climate regime. They argued that differentiation was appropriate amongst developing countries too, such that large developing countries with major emissions ought to take on reduction commitments.⁹³

This rift stalled the evolution of the climate regime for many years, with the aforementioned opt-in requirements of treaty-law complicating the development of a binding, long-term regime. These difficulties were exacerbated by a procedural quirk of the climate regime. When the rules of procedure governing its plenary bodies were adopted, the parties were unable to agree on whether and under what conditions decision making by majority vote should be possible.⁹⁴ As a result, the regime’s plenary bodies defaulted to the U.N. practice of decision making by consensus.⁹⁵ This consensus practice has enabled parties to stall or derail the adoption of decisions supported by the majority of parties.

The 2009 Copenhagen meeting of the parties offers a vivid example. The meeting was originally meant to result in the adoption of a formal agreement on post-Kyoto climate action, but the many disagreements among parties could not be bridged in time.⁹⁶ Indeed, parties favoring a long-term agreement covering both developed and developing countries were concerned that the consensus practice would make it impossible to adopt any instrument that even gestured in this direction. In the final hours of the meeting, U.S. President Obama brokered a deal among the leaders of twenty-eight states, including all the major economies and emitters. This political agreement, dubbed the “Copenhagen Accord,” roughed out the contours of a global commitments regime.⁹⁷ The hope had been that a plenary decision could then bring this blueprint under the umbrella of the UNFCCC. But a handful of developing countries objected that the accord had been negotiated outside of the normal process.⁹⁸ Given the refusal of these states to support the adoption of the accord through a decision, the plenary merely took note of it.⁹⁹

Some observers at the time feared that the Copenhagen meetings might spell the demise of the climate regime.¹⁰⁰ But the approach mapped out in the Copenhagen Accord was subsequently embraced by the parties and today is reflected in the Paris Agreement.¹⁰¹ In hindsight, then, far from destroying the

93. *Id.* at 156–57 (citing statements by Australia, France, and the EU).

94. See U.N. Framework Convention on Climate Change, *Draft Rules of Procedure of the Conference of the Parties and its Subsidiary Bodies*, at 12, U.N. Doc. FCCC/CP/1996/2 (May 22, 1996). Draft rule 42 on voting remains in square brackets, signifying the lack of agreement.

95. See BODANSKY, BRUNNÉE & RAJAMANI, *supra* note 33, at 75.

96. See BRUNNÉE & TOOPE, *supra* note 92, at 204–05.

97. See BODANSKY, BRUNNÉE & RAJAMANI, *supra* note 33, at 76, 110–11.

98. See *id.* at 111–12.

99. *Id.*

100. For a discussion, see generally Meinhard Doelle, *The Legacy of the Climate Talks in Copenhagen: Hopenhagen or Brokenhagen?*, 4 CARBON & CLIMATE L. REV. 86 (2010).

101. See BODANSKY, BRUNNÉE & RAJAMANI, *supra* note 33, at 112, 214–15.

climate regime, the Copenhagen meetings marked the beginnings of a major shift towards precisely the kind of international law highlighted by Professor Brown Weiss as indispensable in the kaleidoscopic world.

To be sure, the framework-protocol approach already reflected some of the features of kaleidoscopic lawmaking. First, the regime-building process began with parties working towards shared principles and shared understandings of the problem to be addressed—a foundation identified by Professor Brown Weiss as crucial to promoting cooperation in a context of complexity.¹⁰² Second, in addition to the formal treaty terms, the climate regime, like other MEAs, has long placed extensive reliance on regime development through non-binding decisions of the plenary bodies.¹⁰³ Under the Kyoto Protocol, for example, standards adopted by means of plenary body decisions complemented the inventory or reporting obligations in the treaty and provided specific parameters for compliance assessment.¹⁰⁴ Recourse to non-binding instruments can facilitate regime development,¹⁰⁵ in part because decisions become effective immediately, without the need for formal consent to bind individual parties. However, though more easily negotiated and changed than formal terms, plenary body decisions are still negotiated and subject to the vagaries of the consensus practice.

Furthermore, as Professor Brown Weiss rightly stressed, to adapt to the kaleidoscopic world, international law must be responsive to its “individualized and, at the same time, globalized” nature.¹⁰⁶ Thus, although top-down action through formal institutions and international agreements remains relevant, international law must account for the growth in bottom-up initiatives and engage actors other than states.¹⁰⁷ In the climate context, international law must foster cooperation in both the public and private sectors through international, national, and local measures, as well as individual commitments.¹⁰⁸ In order to accomplish this task, argued Professor Brown Weiss, international law may have to shift emphasis from negotiated and consensus-based commitments towards an increased reliance on voluntary commitments.¹⁰⁹ Voluntary commitments, she explained, “could have an important role in bottom-up empowerment,” as they produce buy-in by those who make them, can be initiated quickly, and can be adapted to local practices and culture.¹¹⁰ At the same time, such commitments may need to be

102. Brown Weiss, *supra* note 4, at 31.

103. See Jutta Brunnée, *COPing with Consent: Lawmaking Under Multilateral Environmental Agreements*, 15 LEIDEN J. INT'L L. 1, 21–31 (2002) (explaining that, unless the relevant treaty stipulated otherwise, plenary body decisions are non-binding).

104. See Kyoto Protocol, *supra* note 69, arts. 5.1, 7.1, and 7.4.

105. Brown Weiss, *supra* note 11, at 84–85.

106. Brown Weiss, *supra* note 7, at 4.

107. *Id.*

108. *Id.* at 9.

109. Brown Weiss, *supra* note 11, at 86.

110. *Id.* at 88–89.

anchored in a formal instrument, enshrining common values and procedures, including accountability.¹¹¹

And so, writing in 2014, against the backdrop of the Copenhagen Accord, Professor Brown Weiss anticipated the structure and approach of the Paris Agreement. Indeed, her recommendations for moving towards a more complex, globalized legal system match up with the key shifts in the climate regime’s approach brought about by the Paris Agreement. The Paris Agreement entails, first, a move to a more decentralized model in which the treaty helps “orchestrate” a range of state and non-state practices;¹¹² second, a turn towards non-binding substantive terms, supported by binding procedural obligations¹¹³; and third, a shift away from a Kyoto-style NCP to transparency-based accountability.¹¹⁴

Like the Kyoto Protocol, the Paris Agreement is a treaty in its own right,¹¹⁵ operating under the auspices of the UNFCCC, pursuing its objective, and relying upon its principles and decisionmaking procedures.¹¹⁶ In terms of substantive commitments, however, it represents a significant departure from the Kyoto Protocol’s top-down approach. There are no legally binding and centrally reviewed emission reduction commitments in the Paris Agreement. Instead, it relies on a “bottom-up” approach to emissions mitigation, with individual countries making “nationally determined contributions” (“NDCs”),¹¹⁷ aimed at achieving the agreement’s goal of keeping temperature increases beyond pre-industrial levels at “well below 2° C” and, ideally, below 1.5° C.¹¹⁸ The only substantive obligation the agreement imposes on states is a broadly-framed obligation to “pursue domestic mitigation measures, with the aim of achieving the objectives” of their NDCs.¹¹⁹ The NDCs themselves are not binding under international law. Parties merely commit themselves to preparing, communicating, and maintaining successive NDCs, guided by the non-legally binding normative expectations that a party’s NDCs reflect its “highest possible ambition” and CBDRRRC, and that successive NDCs represent a “progression” over time.¹²⁰

Aside from the obligation to pursue domestic mitigation measures, parties’ obligations under the Paris Agreement are procedural. Notably, in communicating their

111. *Id.* at 89.

112. See Kenneth Abbott, *Strengthening the Transnational Regime Complex for Climate Change*, 3 *TRANSNAT’L ENV’T L.* 57, 83 (2013); Thomas Hale, “All Hands on Deck”: *The Paris Agreement and Nonstate Climate Action*, 16 *GLOB. ENV’T POL.* 12, 12–13 (2016).

113. See, e.g., Christopher Campbell-Durufflé, *Accountability or Accounting? Elaboration of the Paris Agreement’s Implementation and Compliance Committee at COP 23*, 8 *CLIMATE L.* 1, 19, 27 (2018).

114. *Id.* at 26.

115. See, e.g., Daniel Bodansky, *The Legal Character of the Paris Agreement*, 25 *REV. OF EUR., COMPAR., & INT’L ENV’T. L.* 142, 143 (2016).

116. For an overview, see Brunnée, *supra* note 10, at 197–202.

117. See BODANSKY, BRUNNÉE & RAJAMANI, *supra* note 33, at 23, 214–15.

118. Paris Agreement, *supra* note 14, art. 2.1(a).

119. *Id.* art. 4.2.

120. *Id.* arts. 3, 4.3.

NDCs, parties are required to “provide the information necessary for clarity, transparency and understanding” in accordance with decisions adopted by the agreement’s plenary body.¹²¹ Parties must also “account for” their NDCs and, in doing so, must “promote environmental integrity, transparency, accuracy, completeness, comparability, and consistency, and ensure the avoidance of double-counting,” again in accordance with guidance adopted by plenary decision.¹²²

The changed structure of the Paris Agreement’s commitment regime is reflected in its three-pronged approach to accountability.¹²³ First, the Agreement provides for a relatively robust transparency mechanism.¹²⁴ Pursuant to the abovementioned procedural obligations, each party must provide emission inventories and reports on progress towards and implementation of its NDC. All inventories and reports then undergo expert review.¹²⁵ Second, this transparency mechanism is complemented by a “global stocktake,” focused on parties’ collective performance towards the treaty objective and temperature goals.¹²⁶ The process is explicitly not focused on individual performance, but is meant only to offer “non-policy prescriptive consideration of collective progress.”¹²⁷

The third component of the Paris Agreement’s performance assessment approach is a “mechanism to facilitate implementation and promote compliance,” with a compliance committee that is to be “expert-based and facilitative in nature and function in a manner that is transparent, non-adversarial and non-punitive.”¹²⁸ Thus, whereas the Kyoto Protocol had experimented with an enforcement-oriented approach, the Paris Agreement’s compliance mechanism returns to a managerial approach.¹²⁹ The mechanism is focused almost exclusively on parties’ compliance with their procedural obligations. It can be triggered by a party “with respect to its own implementation of and/or compliance with any provision of the Paris Agreement.”¹³⁰ The compliance committee itself

121. *Id.* art. 4.8.

122. *Id.* art. 4.13.

123. See generally Lavanya Rajamani & Daniel Bodansky, *The Paris Rulebook: Balancing International Prescriptiveness with National Discretion*, 68 INT’L & COMPAR. L. Q. 1023, 1025–27 (2019).

124. See Paris Agreement, *supra* note 14, art. 13; see also Katowice Climate Change Conference, *Modalities, Procedures and Guidelines for the Transparency Framework for Action and Support Referred to in Article 13 of the Paris Agreement*, ¶ 1, U.N. Doc. FCCC/CP/2018/L.23 (Dec. 14, 2018).

125. See Paris Agreement, *supra* note 14, arts. 14.11, 14.12.

126. See *id.* art. 14; see also Katowice Climate Change Conference, *Matters Relating to Article 14 of the Paris Agreement and Paragraphs 99-101 of Decision 1/CP.21*, ¶¶ 10, 36, U.N. Doc. FCCC/CP/2018/L.16 (Dec. 14, 2018) [hereinafter *Matters Relating to Article 14*].

127. See *Matters Relating to Article 14*, *supra* note 126, ¶ 14.

128. See Paris Agreement, *supra* note 14, arts. 15.1, 15.2.

129. See ABRAM CHAYES & ANTONIA HANDLER CHAYES, *THE NEW SOVEREIGNTY: COMPLIANCE WITH INTERNATIONAL REGULATORY AGREEMENTS* 18 (1996).

130. See U.N. Framework Convention on Climate Change, *Modalities and procedures for the effective operation of the committee to facilitate implementation and promote compliance referred to in Article 15, paragraph 2 of the Paris Agreement*, Dec. 20/CMA.1, ¶ 20, U.N. Doc. FCCC/PA/CMA/2018/3/Add.2 (Mar. 19, 2019).

can initiate the process only to determine whether a party has communicated or submitted a required NDC, report, or information at all.¹³¹ The committee may not assess whether parties are complying with the requirements concerning the content or form of submissions. Furthermore, the committee may not determine non-compliance by individual parties, but may issue only “findings of fact.”¹³²

Finally, the Paris Agreement’s emphasis on bottom-up action is not only reflected in the inter-state commitment regime; the Agreement also focuses on the orchestration of multi-level climate action¹³³ by engaging sub-state and non-state actors in a more expansive fashion than did the Kyoto Protocol. To be sure, non-state actors were always highly visible in the climate regime.¹³⁴ Expert networks and nongovernmental organizations have long provided input and feedback for negotiations and states’ emissions performance. The Paris Agreement, however, specifically acknowledges the role of a much wider range of “non-Party stakeholders” in the bottom-up action required to address climate change.¹³⁵ It taps into a series of existing initiatives under the banner of a Global Climate Action Agenda, encompassing voluntary initiatives by sub-state governmental actors like cities and regions, business actors, and civil society actors.¹³⁶

In summary, the Paris Agreement is an attempt to blend the traditional instrument of international environmental lawmaking—the MEA—with a range of approaches intended to defuse the constraints that flow from the sovereignty focus of treaty law. The agreement aligns with Professor Brown Weiss’ recommendations for a more globalized, kaleidoscopic international law to a remarkable degree.

First, the Paris Agreement adopts a bottom-up approach to substantive commitments. In other words, parties’ emissions-related commitments are not only non-binding, but also voluntary. As Professor Brown Weiss has explained, the crucial difference is that voluntary commitments are not negotiated but nationally determined and “independent of the commitments of other parties,” even if they “may be in part conditioned upon similar actions by others.”¹³⁷ The bottom-up approach to emissions mitigation allowed the Paris Agreement to side-step the sovereignty trap that previously stalled progress in the regime. Similarly, nationally determined climate actions can be adjusted quickly and without protracted

131. *Id.* ¶ 22(a).

132. *Id.* ¶ 30(e).

133. Abbott, *supra* note 112, at 83.

134. *See, e.g.*, Sarah Mason-Case, *On Being Companions and Strangers: Lawyers and the Production of International Climate Law*, 32 LEIDEN J. INT’L L. 625, 628, 630, 632, 636, 639 (2019).

135. *See* U.N. Framework Convention on Climate Change, *Adoption of the Paris Agreement*, Dec. 1/CP.21, ¶¶ 118–122, 133–136, U.N. Doc. FCCC/CP/2015/10/Add. 1, 2 (Jan. 29, 2016); Hale, *supra* note 110, at 14.

136. *See* Hale, *supra* note 112, at 13–14; Harro van Asselt, *The Role of Non-State Actors in Reviewing Ambition, Implementation, and Compliance Under the Paris Agreement*, 6 CLIMATE L. 91, 98–99 (2016).

137. *See* Brown Weiss, *supra* note 11, at 86.

negotiations or drawn-out entry-into-force periods. Furthermore, the NDC feature of its commitment regime has enabled the Paris Agreement to go some way towards defusing the vexed debates around differentiation. Effectively, as far as emission mitigation is concerned, the parties self-differentiate.¹³⁸

Second, although parties' emissions mitigation actions are nationally determined, the Paris Agreement does provide some parameters to guide, or even pull, parties in the desired direction. Much as Professor Brown Weiss has recommended, the Paris Agreement enshrines common values and goals in the shape of the agreement's temperature goal and the normative expectations that parties' NDCs reflect their highest possible ambition, and that subsequent NDCs represent a progression over time.¹³⁹ Although these propositions are also among the non-binding terms of the Paris Agreement, they do play an interpretative role and seem to be taken seriously by parties so far.¹⁴⁰

Third, given the Paris Agreement's turn to voluntary emissions commitments, an enforcement-oriented approach to compliance like the one employed under the Kyoto Protocol was no longer appropriate or feasible. But, as Professor Brown Weiss has documented extensively, accountability and pressure towards compliance can also be generated through what she has called "sunshine methods"—transparency.¹⁴¹ The Paris Agreement's accountability mechanisms are based exactly on these methods. Binding procedural obligations coupled with detailed methodological guidance create the foundation for the Agreement's three-pronged, transparency-based accountability system.¹⁴²

Fourth, although states remain central in the Paris Agreement, the Agreement seeks to engage sub-state and non-state actors in a concerted fashion. Non-state actors have established themselves as key participants in the accountability landscape. Indeed, a variety of organizations have contributed significantly to mitigating one of the challenges Professor Brown Weiss flagged in relation to accountability for voluntary commitments: comparability of the great variety of national actions.¹⁴³ For example, the influential *Climate Action Tracker* "quantifies and evaluates" all national mitigation commitments and measures them against the goals of the Paris Agreement.¹⁴⁴

One more point is worth highlighting. Even as the Paris Agreement embodies Professor Brown Weiss' vision of a globalized, kaleidoscopic international law, it also gives pride of place to the enduring role of state sovereignty. It is fair to say that the agreement manages to side-step the sovereignty-driven constraints of

138. See BODANSKY, BRUNNÉE & RAJAMANI, *supra* note 33, at 29–30.

139. See Paris Agreement, *supra* note 14, art. 3.

140. See Lavanya Rajamani & Jutta Brunnée, *The Legality of Downgrading Nationally Determined Contributions Under the Paris Agreement*, 29 J. ENV'T. L. 537, 539 (2017).

141. *Rethinking Compliance*, *supra* note 13, at 146; ENGAGING COUNTRIES, *supra* note 13, at 543.

142. See Rajamani & Bodansky, *supra* note 123, at 1024–25.

143. See Brown Weiss, *supra* note 11, at 89.

144. See THE CLIMATE ACTION TRACKER, <https://perma.cc/J874-2HEM> (accessed Sept. 30, 2020).

treaty law precisely because it does not impose substantive obligations upon states, but rather leaves them free to make their own climate action choices. This freedom is not unfettered, of course. It is tempered by the non-legally binding parameters for climate action enshrined in the Agreement and disciplined by procedural obligations and transparency regarding party performance. Still, the Paris Agreement ultimately amounts to an effort to square the international legal circle: it seeks to overcome sovereignty-based impediments to treaty development by affirming—and harnessing—states’ sovereign freedom to determine their own national climate policy.

CONCLUSION

Over the last decade or so, Professor Brown Weiss has drawn our attention to the implications of what she calls the “kaleidoscopic world” for the international order. International law, she argues, must transition from its origins as an exclusively sovereignty-based system to a more globalized legal system that engages state and non-state actors alike. In this ever-changing context, it must provide both dynamic, adaptable approaches to lawmaking and universally accepted norms that can promote, guide, and stabilize cooperation. She identified harm avoidance as one such fundamental norm for international law in the kaleidoscopic world, and climate change as emblematic of the complex problems it must confront.

In this short Article, I built on these strands of Professor Brown Weiss’ work to explore international law’s role in combating climate change. I have shown that the norm of harm avoidance is both firmly engrained in international law and subject to a range of limitations that constrain its capacity to ensure climate action. These limitations are all related to the sovereignty moorings of international law. In the context of general international law, the attendant constraints are enshrined in the central harm prevention rule itself. The evolution of the rule beyond the sovereignty paradigm has been only tentative, extending its reach to environmental harm in other states and, much more weakly, to environmental harm in areas beyond state jurisdiction. In the context of MEAs, sovereignty-related constraints flow from the rules that govern treaty making and treaty development. As the experience in the climate regime illustrates, these constraints have hampered the emergence of a long-term commitment regime applicable to all states. The Paris Agreement seeks to defuse these constraints by embracing states’ sovereignty over their climate policy. It represents a response to the complexities of lawmaking in the kaleidoscopic era, providing for shared normative expectations to guide nationally determined and non-state climate action.

It is too soon to know whether the Paris Agreement’s move to a more complex, globalized approach will fare better in dealing with “the most all-encompassing and complex problem that countries have ever addressed.”¹⁴⁵ But whether the

145. *Strengthening Compliance*, *supra* note 13, at 701.

Paris Agreement succeeds is likely to depend in large part on factors well beyond its four corners. Since the adoption of the Paris Agreement, the world has been buffeted by a greater array of pressures and crises than at any point since World War II, further underscoring the prescience of Professor Brown Weiss' focus on a world that is subject to "rapid and unforeseen changes with widespread effects."¹⁴⁶ Furthermore, the decision of the Trump Administration to withdraw from the Paris Agreement represented a direct challenge to its hard-won normative consensus and threatened to precipitate the unraveling of the Agreement.¹⁴⁷ This risk appears to have been averted by the expressed intention of the incoming Biden Administration to rejoin the Paris Agreement.¹⁴⁸ But the potentially most troubling insight into the role that law can play in tackling climate change emerges from another crisis that has rapidly gripped our globalized world: Covid-19. The global response to the pandemic illustrates that governments are able to quickly mobilize vast resources and mandate significant behavioral change to deal with an immediate threat. The contrast to the handling of the climate crisis is striking, underscoring Professor Brown Weiss' observation that the kaleidoscopic world holds particular challenges when short-term action is needed to address long-term problems. It remains to be seen whether the Covid-19 crisis will serve to reveal the lack of political commitment to serious climate action, undercut the climate agenda, or help galvanize climate action and boost the Paris Agreement by showing us what can, in fact, be done, and what dire consequences follow if decisive action is not taken.

146. Brown Weiss, *supra* note 4, at 21.

147. See generally, e.g., Noah M. Sachs, *The Paris Agreement in the 2020s: Breakdown or Breakup?* 46 *ECOLOGY L. Q.* 865 (2019).

148. See Christian Downie, *Biden Says the US Will Rejoin the Paris Climate Agreement in 77 Days. Then Australia Will Really Feel the Heat*, *THE CONVERSATION* (Nov. 5, 2020), <https://perma.cc/UL6U-SFEC>.