

# The Applicability of the Principle of Prevention to Climate Change: A Response to Zahar

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## Abstract

This is a response to Alexander Zahar's article in the previous issue of *Climate Law*. Zahar argued that 'the principle of prevention is neither applicable nor of relevance to the problem of climate change.'<sup>1</sup> Firstly, I discuss Zahar's scepticism toward state responsibility in the context of climate change. Secondly, I engage critically with Zahar's claim that the preventive principle only applies to the type of environmental damage that occurs in a short timeframe and in a confined space. I show that some sources of international law do recognize the applicability of the preventive principle to damage to the global environment. Lastly, I dissent with Zahar's qualification of the climate regime as a derogation to the principle of prevention. I argue that the principle of prevention is a necessary corollary of the rights of states to territorial integrity, although the modalities of application of the principle need to be refined.

## Keywords

principle of prevention – climate change – International Law Association

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1 Alexander Zahar, 'Mediated versus Cumulative Environmental Damage and the International Law Association's Legal Principles on Climate Change', 4(3-4) *Climate Law* 217 (2014), at 217 (abstract). The author would like to thank anonymous referees for their comments on a earlier version of this article.

## 1 Introduction

First recognized in the famous *Trail Smelter* arbitral award,<sup>2</sup> the principle of prevention was reaffirmed in, among other provisions, Principle 21 of the Stockholm Declaration on the Human Environment,<sup>3</sup> and Principle 2 of the Rio Declaration on Environment and Development,<sup>4</sup> in the following terms:

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental [and developmental] policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.<sup>5</sup>

The principle of prevention was also implemented by, among others, the ICJ in its advisory opinion on *The Legality of the Threat or Use of Nuclear Weapons*<sup>6</sup> and its judgment in the case of the *Pulp Mills on the River Uruguay*;<sup>7</sup> it is also relied on in the award of the arbitral tribunal in the *Iron Rhine* case.<sup>8</sup> However, whether and how the principle of prevention applies to the circumstances of climate change has remained very controversial among state representatives as well as scholars. Some have proposed that the principle of common but differentiated responsibilities should somehow exclude the applicability of the principle of prevention,<sup>9</sup> or that the applicability of this principle to climate

<sup>2</sup> *United States v. Canada*, III UNRIAA 1905 (1941), at 1965.

<sup>3</sup> United Nations Conference on the Human Environment, UN Doc. A/Conf.48/14/Rev.1 (1992), Principle 21.

<sup>4</sup> United Nations Conference on Environment and Development, UN Doc. A/CONF.151/26 (vol. 1) (1992), Principle 2.

<sup>5</sup> The words in square brackets were added by the Rio Declaration.

<sup>6</sup> ICJ Reports 1996, p. 226, at para. 29: ‘The existence of 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.’

<sup>7</sup> *Argentina v. Uruguay*, ICJ Reports 2010, p. 14, at para. 101.

<sup>8</sup> *Belgium v. The Netherlands*, XXVII UNRIAA 35 (24 May 2005), at para. 222.

<sup>9</sup> See, for instance, the statement of the United States on Principle 7 of the Rio Declaration in Report of the United Nations Conference on Environment and Development, vol. 11: Proceedings of the Conference, UN Doc. A/CONF.151/26/Rev.1 (Vol. 11) (1992), at 17–18: ‘The United States understands and accepts that principle 7 highlights the special leadership role of the developed countries, based on our industrial development, our experience with environmental protection policies and actions, and our wealth, technical expertise and capabilities.’

change is precluded by substantial differences between the classical cases of transboundary environmental damage, where this principle was developed, and climate change.<sup>10</sup> Nevertheless, the International Law Association's resolution on the international law principles applicable to climate change, adopted in 2014, takes a clear position in favour of the applicability of the principle of prevention to climate change. This resolution recognized an 'obligation or prevention' according to which 'States have an obligation to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction, including damage through climate change.'<sup>11</sup>

In an article in the previous issue of *Climate Law*,<sup>12</sup> Alexander Zahar engaged critically with this provision and with a commentary on it by Will Frank and Christoph Schwarte (in the same issue).<sup>13</sup> More broadly, Zahar provides a critical and largely sceptical perspective on the applicability of the principle of prevention to climate change and on the role of international law in responses to climate change. Complementing Schwarte and Frank's brief reply to Zahar, the present article aims to discuss some of Zahar's arguments<sup>14</sup> and to defend the applicability of the principle of prevention to climate change.

For the sake of clarity, Zahar's argument can be divided into three assertions. The first one is a certain disbelief in the role of states in addressing climate change. Noting that 'the problem's centre of gravity is at the level of the people, who emit or cause the emission of greenhouse gases by the tonne',<sup>15</sup> Zahar argues that 'the responsibility of states ... to manage climate change is not inherent, but it does make practical sense.'<sup>16</sup> Without disagreeing with the conclusion, I argue

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The United States does not accept any interpretation of principle 7 that would imply a recognition or acceptance by the United States of any international obligations or liabilities, or any diminution in the responsibilities of developing countries.'

10 This appears to be suggested, for instance, by Christian Tomuschat, in Summary Record of the 2224th Meeting of the International Law Commission, UN Doc. A/CN.4/SR.2224, para. 35.

11 ILA Resolution, 'Declaration of Legal Principles Relating to Climate Change' (April 2014), art. 7A(1).

12 Zahar, *supra* note 1.

13 Christoph Schwarte and Will Frank, 'The International Law Association's Legal Principles on Climate Change and Climate Liability under Public International Law', 4(3-4) *Climate Law* 201 (2014).

14 I do not engage with Zahar's argument on adaptation (section 4) and only indirectly with his argument on the role of the ILA (section 2).

15 Zahar, *supra* note 1, at 218.

16 *Ibid.*

in section 2 that this remark needs to be put in the context of a broader legal fiction, namely the state. In fact, a state never ‘does’ anything wrongful, or anything rightful for that matter. The state is only a legal fiction invented, for reasons of convenience, as a way to manage relations between nations. Yet, given the existence of the state as a (widely accepted) legal fiction, it appears to me quite natural and even inevitable that international law approaches climate change in terms of states, rather than through individual responsibility.

Zahar’s second assertion is that the principle of prevention does not apply to climate change. This is based on an interesting distinction between ‘mediated’ environmental damage, whereby activities in one state typically affect populations in neighbouring state(s), and ‘cumulative’ environmental damage such as climate change, which ‘exists everywhere.’<sup>17</sup> Showing that the principle of prevention arose from cases of mediated environmental damage, Zahar argues that this principle does not extend beyond such cases, and, in particular, does not apply to cases of cumulative damage.<sup>18</sup> In section 3, I expose the grounds that lead me to disagree with this assertion. While acknowledging the authority of precedent and the limitations of the analogy, I point to certain indications of a recognition of the no-harm principle in cases involving cumulative environmental damage (or of an indifference of courts to the mediated/cumulative distinction). Overall, I argue that the principle of prevention is a necessary corollary of the right of states to territorial integrity. In a technologically advanced era of equal and sovereign states, an individual state cannot be allowed to cause significant damage to the global environment.

Zahar’s third assertion is that treaties on climate change mitigation ‘function ... as a kind of *lex specialis* that displaces the ILA’s alleged general duty’<sup>19</sup> of states under the principle of prevention. In section 4, I argue that this argument should fail as a matter of positive law. The *lex specialis* objection only applies in cases where specific rules are inconsistent with, or clearly intend to exclude the application of general rules; such is clearly not the case of the climate regime with regard to the principle of prevention. As a necessary corollary of the sovereignty of states, the principle of prevention would arguably exist without the consent of states and even despite their objection. But in fact, even if such a *lex specialis* could exist, this should not prevent legal scholars from questioning what the law ought to be. Although its chances of jurisdictional implementation are limited, to say the least, the main function of the principle of prevention

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17 Ibid., at 225.

18 Similar reasoning was once suggested by Christian Tomuschat, in a statement during the 2224th meeting of the ILC (13 June 1991). See UN Doc. A/CN.4/SR.2224, para. 35.

19 Ibid., at 230.

is to guide international negotiations by providing a sense of fairness based on well-accepted principles rather than (only on) relations of power.

## 2 States' or Individuals' Responsibility?

Zahar's first assertion is that individuals, rather than states, should in principle be held responsible for climate change. As he notes:

Given that responsibility for [damage that happened through climate change] rests with people, where does the legal responsibility of states to address the causes and impacts of climate change come into the picture? I would say that it does not, at least not automatically. Some states have taken upon themselves some of the responsibility that naturally rests with individual greenhouse gas polluters—all people.<sup>20</sup>

This position is part of a larger trend toward denying the relevance of collective responsibility with regard to climate change.<sup>21</sup> States, after all, never *do* wrongs—in fact they are not capable of doing anything on their own, without individuals acting on their behalf. Strikingly, this trend of scepticism toward the relevance of states and collective responsibility questions some of the fundamentals of law as a discipline. As lawyers, we are trained for years to believe in legal fictions. One of these fictions is that states are 'legal persons' capable of holding rights and bearing obligations which entail responsibilities in cases of wrongdoing. In international law, states' rights and obligations do not replace individuals', but they offer an alternative, more convenient way to manage relations between nations. Absent a utopian global government, it is difficult to conceive of an international legal order without the recognition of states as legal persons capable of bearing obligations,<sup>22</sup> or without responsibilities for breaches of such obligations.<sup>23</sup>

<sup>20</sup> Ibid., at 218.

<sup>21</sup> Eric A. Posner and David A. Weisbach, *Climate Change Justice* (Princeton, NJ: Princeton University Press, 2010), at 99–118.

<sup>22</sup> James Crawford, 'Chance, Order, Change: General Course on Public International Law', 365 *Collected Courses of The Hague Academy of International Law* 1 (2013), at 85, concluding that, despite numerous issues with the legal personality of the state, 'we are probably stuck with it.'

<sup>23</sup> The existence of secondary obligations following the breach of an obligation is a necessary condition of a legal norm. Thus, Crawford posited that 'any system of law must address the responsibility of its subjects for breaches of their obligations.' James Crawford, *State*

In the existing international legal order, it is well recognized that states have obligations that may not apply directly to specific individuals. Likewise, it is widely recognized that a state is responsible for a breach of ‘its own’ obligations,<sup>24</sup> even though it would often be difficult to disentangle individual responsibility from that of the state, in particular when the breach of an international obligation of the state results from the concurrent conduct of a multitude of individuals over a long period of time.<sup>25</sup> In an ethical sense, it is true that state responsibility may be a form of ‘rough justice’<sup>26</sup> sanctioning all individuals within a state, even though it is often the case that some individuals did their utmost to prevent the collective wrongdoing. State responsibility, in this sense, is a trade-off between moral principles and practical constraints. While general criticisms can validly be developed against this trade-off in general,<sup>27</sup> it would be arbitrary to exclude state responsibility only with regard to climate change.

Nevertheless, Zahar is clearly sensible to the convenience of collective responsibility with regard to climate change—as he notes, states responsibility simply ‘makes practical sense.’<sup>28</sup> In fact, it is difficult to consider any situation where state responsibility would make more practical sense than with regard to climate change, as it would be impossible to attribute responsibilities to individuals in any fairer way. Each individual’s emissions are largely path-dependent, being a function, for instance, of public investment in public-transportation infrastructure. Individuals benefit from the greenhouse gas emissions caused by the actions of other individuals, directly through trade (e.g. buying industrial commodities),<sup>29</sup> but also more diffusedly through

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*Responsibility: The General Part* (Cambridge, UK: Cambridge University Press, 2013), at 3. See also Hugo Grotius, *The Rights of War and Peace* (translated by Jean Barbeyrac, 1738), at 370, arguing that from a wrongful act ‘there arises an obligation by the law of nature to make reparation for the damage, if any be done.’

24 Responsibility of States for Internationally Wrongful Acts; articles adopted by the ILC, UNGA Res. 56/8, 12 December 2001 (hereinafter *Articles on State Responsibility*), art. 1.

25 Nothing in the assertion of the responsibility of states precludes the possibility of individual responsibility, either of a civil or a criminal nature. See, e.g., *ibid.*, art. 58; and Institut de Droit International, ‘Responsibility and Liability under International Law for Environmental Damage’ (Strasbourg, Resolution 1997/3), art. 1.

26 Posner and Weisbach, *supra* note 21, at 116.

27 See, for instance, Philip Allott, ‘State Responsibility and the Unmaking of International Law’, 29 *Harvard International Law Journal* 1 (1988).

28 Zahar, *supra* note 1, at 218.

29 Trade raises issues in asserting the responsibility of states with regard to commodities produced abroad by domestic companies or for the domestic market. However, because most trade occurs within states, these issues become more important and controversial in relation to individual responsibility.

development (e.g. by living in a rich economy built through decades or centuries of unsustainable development). State responsibility is certainly difficult to assert, but significantly less so than individual responsibility.

### 3 Mediated versus Cumulative Environmental Damage

A state is responsible when its conduct breaches an international obligation.<sup>30</sup> The most relevant ground for state responsibility for climate change appears to be the breach of the principle of prevention.<sup>31</sup> Zahar, however, argues that the principle of prevention does not apply in circumstances such as climate change. The following recounts and assesses Zahar's argument (3.1) before highlighting the reason why the principle of prevention *must* be applicable to circumstances such as climate change (3.2).

#### 3.1 *The Scope of the Principle of Prevention*

Zahar distinguishes two categories of environmental damage, which he refers to as 'mediated' and 'cumulative.' Mediated damage is conveyed by a physical 'agent' (such as air or water) from the territory of one state to that of one or more states, usually neighbouring ones. Mediated damage tends to occur relatively quickly following the activity, and it is confined to a particular geographical area. By contrast, the impact of cumulative damage such as climate change 'exists everywhere.'<sup>32</sup> Instead of being conceived in concrete terms as having localized impacts, cumulative damage is conceived as a transformation of the global environment.

Zahar argues that 'the prevention principle arose out of damage cases of the strictly mediated type'<sup>33</sup> and that it does not extend to cases of cumulative damage such as climate change. In support to his argument, Zahar reviews the

<sup>30</sup> *Articles on State Responsibility*, *supra* note 24, arts. 1 and 2.

<sup>31</sup> State responsibility could also be sought when a state breaches its mitigation commitment under the Kyoto Protocol or its amendment, its broader mitigation obligations under the UNFCCC, or its obligations to phase out the production and consumption of ozone-depleting substances (e.g. Montreal Protocol on Substances that Deplete the Ozone Layer, 1522 UNTS 3 (1987)), to reduce long-range trans-boundary air pollution (e.g. Convention on Long-Range Trans-boundary Air Pollution, 1302 UNTS 217 (1979) and its eight protocols; and ASEAN Agreement on Trans-boundary Haze Pollution (2002)), and not to cause marine pollution (UN Convention on the Law of the Sea, 1833 UNTS 3 (1982)), among others.

<sup>32</sup> Zahar, *supra* note 1, at 225.

<sup>33</sup> *Ibid.*, at 228.

most important cases where international jurisdictions applied the principle of prevention. *Trail Smelter*,<sup>34</sup> *Pulp Mills*,<sup>35</sup> *Gabčíkovo-Nagymaros*,<sup>36</sup> and *Iron Rhine*<sup>37</sup> are all cases of mediated damage, either strictly confined to the territory of another state or affecting that state in an immediate and specific way.<sup>38</sup> For instance, the *Trail Smelter* case concerned a factory situated in Canada, whose pollution was affecting some populations across the border with the United States. These judicial decisions—to which Zahar, influenced by the common law tradition, pays the utmost attention—might seem to justify a limitation of the principle of prevention to analogous cases of mediated damage.

Yet, Zahar's interpretation of the advisory opinion of the ICJ on the *Legality of the Threat or Use of Nuclear Weapons* is less convincing. This proceeding did not only discuss the intended damage caused to the territory where a nuclear bomb would be detonated and the possible fallout in neighbouring states (mediated damage), but also diffuse harms to the global environment, such as the possibility of a 'nuclear winter' with the potential to destroy humankind or consequences on the Earth's electromagnetic field (cumulative damage).<sup>39</sup> The ICJ explicitly recognized that 'the destructive power of nuclear weapons cannot be contained in either space or time' and that it has 'the potential to destroy all civilization and the entire ecosystem of the planet.'<sup>40</sup> It made no distinction between types of environmental damage when recognizing that 'The existence of 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.'<sup>41</sup>

As Zahar justly notes, the ICJ admitted that the principle of prevention could be restricted in certain circumstances.<sup>42</sup> However, the Court's caution in

34 See *supra* note 2.

35 See *supra* note 7.

36 *Gabčíkovo-Nagymaros Project* (Hungary v. Slovakia), Judgment, ICJ Reports 1997, p. 7.

37 See *supra* note 8.

38 Zahar, *supra* note 1, at 226.

39 See, e.g., Written Statement by the Government of Mexico (1995), para. 65; Written Statement of the Government of Egypt (transmitted on 20 June 1995), para. 32; Letter dated 20 June 1995 from the General Director for Multilateral Organizations at the Ministry of Foreign Affairs of Ecuador, para. D; and Dissenting Opinion of Judge Weeramantry, ICJ Reports 1996, pp. 456–458, 242–245, and 245–246.

40 *Legality of the Threat or Use of Nuclear Weapons*, *supra* note 6, at para. 35.

41 *Ibid.*, at para. 29.

42 Zahar, *supra* note 1, at 227, citing *Legality of the Threat or Use of Nuclear Weapons*, *supra* note 6, at para. 30: 'States must take environmental considerations into account when

this case was related to a balancing between states' obligations under the principle of prevention and their right of self-defence; the Court referred, in particular, to the international humanitarian law principles of necessity and proportionality.<sup>43</sup> Accordingly, the Court concluded that international law precluded the use of nuclear weapons, except, perhaps, as an exercise of the right to self-defence.<sup>44</sup> On the other hand, there is nothing in the Court's reservations to suggest that the principle of prevention should only apply to mediated damage, or, indeed, to suggest any distinction between mediated and cumulative damage. To the contrary, the Court apparently took all crossboundary environmental damage into consideration, whether mediated or cumulative. Some dissenting opinions suggest that the particular nature of the harms that nuclear weapons would cause to the global environment should be taken into account, but only for the purpose of making the obligations under the principle of prevention more stringent and in order to exclude the right of self-defence from being used as a balancing factor.<sup>45</sup>

In any case, judicial decisions are only a subsidiary source of international law.<sup>46</sup> The scope of the principle of prevention needs to be assessed, as far as possible, on the basis of the main sources of international law: treaty provisions, international custom (evidenced by state practice accepted as law), and general legal principles.<sup>47</sup> Customary international law, in particular, reflects a clear recognition of the applicability of the principle of prevention to areas beyond the limits of national jurisdiction. While the survey of all relevant state practice goes beyond the scope of this article, suffice it to note the evidence of the recognition of this practice as law (*opinio juris*) by (among many other provisions) Principle 21 of the Stockholm Declaration on the Human

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assessing what is necessary and proportionate in the pursuit of legitimate military objectives.' Zahar also cites the Court's general statement according to which 'The existence of 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.' *Legality of the Threat or Use of Nuclear Weapons*, *supra* note 6, at para. 29.

43 Thus, the Court also notes that it 'does not consider that the treaties in question could have intended to deprive a State from the exercise of its right of self-defence under international law because of its obligations to protect the environment'; *ibid.*, para. 30.

44 *Ibid.*, para. 105(E).

45 See Dissenting Opinion of Judge Koroma in *Legality of the Threat or Use of Nuclear Weapons*, ICJ Reports 1996, p. 580; and Dissenting Opinion of Judge Weeramantry, *supra* note 39.

46 ICJ Statute, art. 38(1)(d).

47 *Ibid.*, art. 38(1)(a), (b), and (c).

Environment and Principle 2 of the Rio Declaration on Environment and Development, and the identification of the preventive principle as applicable to 'areas beyond national control' by the ICJ.<sup>48</sup> Treaty provisions that protect global commons such as the high seas<sup>49</sup> or the Antarctic<sup>50</sup> are not only justified with reference to the intrinsic value of the global commons, but arguably also by their instrumental value for humankind: accordingly, it is because harm to the global commons would be likely to have indirect adverse impacts on many states (i.e. cumulative damage) that such damage was prohibited.

Overall, states have recognized the relevance of the principle of prevention in relation to cumulative damage affecting the atmosphere, notably through the protection of the ozone layer, as well as the climate system. The first recital in the 1985 Vienna Convention for the Protection of the Ozone Layer, ratified by 197 parties, reflects the parties' awareness of 'the potentially harmful impact on human health and the environment through modification of the ozone layer.'<sup>51</sup> The second recital recalls 'the *pertinent* provisions of the Declaration of the United Nations Conference on the Human Environment, and in particular principle 21.'<sup>52</sup> Such preambular statements of principle have a clear legal value as treaty provisions and, beyond that, they 'may reflect independent rules of customary international law.'<sup>53</sup> The main 'general obligation' defined by the same Convention is a particular application of the principle of prevention: the obligation to 'take appropriate measures ... to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer.'<sup>54</sup> This general obligation is arguably the cornerstone of the regime for the protection of the ozone layer.<sup>55</sup>

48 See *Legality of the Threat or Use of Nuclear Weapons*, *supra* note 6, at para. 29, cited with approval in *Gabčíkovo-Nagymaros Project*, *supra* note 36, at para. 53; *Iron Rhine*, *supra* note 8, at para. 222; and *Pulp Mills on the River Uruguay*, *supra* note 7, at para. 193. As suggested before, the phrase 'areas beyond national control' was a ratio decidendi in the judgment of the ICJ in *Legality of the Threat or Use of Nuclear Weapons*.

49 See, in particular, United Nations Convention on the Law of the Sea, part XII.

50 For an account of the multiple instruments protecting the environment of the Antarctic, see Philippe Sands and Jacqueline Peel, *Principles of International Environmental Law* (Cambridge, UK: Cambridge University Press, 2012), at 579–591.

51 Vienna Convention for the Protection of the Ozone Layer, first recital.

52 *Ibid.*, second recital (emphasis added).

53 Mark Eugen Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties* (Leiden: Martinus Nijhoff, 2009), at 43.

54 Vienna Convention for the Protection of the Ozone Layer, *supra* note 51, art. 2(1).

55 See, in particular, Montreal Protocol on Substances that Deplete the Ozone Layer, second recital.

Likewise, the climate regime is built on an explicit recognition of the principle of prevention. The preamble to the UNFCCC, just like that of the Vienna Convention, recalls the '*pertinent* provisions' of the Stockholm Declaration and, in particular, it reaffirms the principle of prevention.<sup>56</sup> This seems to imply, on the part of the 196 parties to the UNFCCC, a recognition that the principle of prevention does indeed apply in relation to climate change.<sup>57</sup> Here again, the 'ultimate objective' of achieving 'stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'<sup>58</sup> can be read as defining specific modalities for international cooperation in the implementation of the principle of prevention. This objective is also recalled in the Kyoto Protocol.<sup>59</sup>

In conclusion, there is no legal basis in existing law for the distinction that Zahar suggests between mediated and cumulative damage. Although the few cases that have been adjudicated concern what Zahar qualifies as 'mediated' damage,<sup>60</sup> states appear to have recognized a broad principle that also applies to cumulative environmental damage, such as the depletion of the ozone layer and climate change. Furthermore, the following subsection argues that the application of the principle of prevention to cumulative as well as mediated damage is not only a choice of states: it is a necessary corollary of general principles of law, in particular the equal sovereignty of states.

### 3.2 *The Indispensable Application of the Principle of Prevention to Cumulative Damage*

If we were to follow Zahar's assertion, according to which the applicability of the principle of prevention to cumulative damage is not supported by existing

<sup>56</sup> See UNFCCC, seventh and eighth recitals (emphasis added).

<sup>57</sup> See however, Zahar, *supra* note 1, at 227, n. 27, stating that 'not too much should be read into this [recital], because the preamble in this case sketches the legal backdrop to the treaty without implying that it is fully applicable to the problem which the treaty sets out to address, namely climate change.' It is not clear what Zahar means by implying that the principle could be 'partly' relevant—or why the preamble of a treaty would recall a principle (and qualify it as 'pertinent') when the drafters do not consider it to be applicable. The preamble of a treaty is usually the place where the object and purpose of the treaty are revealed; it is not clear why the case of the UNFCCC would be different.

<sup>58</sup> UNFCCC, art. 2.

<sup>59</sup> See second paragraph of the Protocol's preamble.

<sup>60</sup> However, New Zealand invoked damage to the global environment in its application in the *Nuclear Test* case. See Memorial on Jurisdiction and Admissibility submitted by the Government of New Zealand (29 October 1973), paras. 190 (a) and (b) and 191. The ICJ did not have the occasion to decide these arguments because of France's commitment to discontinue the nuclear tests that were at issue.

international law, there are two possible ways to justify the application of the principle of prevention to cumulative environmental damage such as climate change: by analogy or by deduction from general legal principles. Zahar considers whether the principle of prevention, which in his perspective has been recognized only in cases of mediated environmental damage, could be extended by analogy to cumulative damage. He rejects this possibility on the ground that ‘a rule of law may not be extended by analogy into a conceptually incompatible legal sphere.’<sup>61</sup> Zahar does not consider alternative justifications based on general legal principles.

Arguments by analogy are ‘useful heuristic devices for deepening and sharpening reflection,’<sup>62</sup> but they are not determinative arguments. In particular, the conclusion of an argument by analogy depends on the selection of an analogue, clearly a subjective step. Thus, in the textbook case of *Adams v. New Jersey Steamboat Company*, a court had a choice of two analogies to define the framework of responsibility applicable to a steamboat company for a robbery that occurred during an overnight cruise: either a strict liability regime that applied to innkeepers, or a limited liability regime that applied to railroad sleeping-car companies. The court said that the boat was ‘for all practical purposes, a floating inn’<sup>63</sup> (rather than a floating train)—an arbitrary decision, which no doubt justified what the judges had already identified as the desirable outcome.

Zahar does not justify his assertion that cumulative environmental damage should be regarded as a legal sphere ‘conceptually *incompatible*’<sup>64</sup> with the principle of prevention. Instead, he shows some ‘conceptual *problems*,’<sup>65</sup> firstly in identifying ‘significant emissions ... in a global, as opposed to transboundary, context,’<sup>66</sup> and secondly in taking cumulative damage into consideration through environmental impact assessment.<sup>67</sup> It is noteworthy that these difficulties

61 Zahar, *supra* note 1, at 226.

62 Grant Lamond, ‘Precedent and Analogy in Legal Reasoning’, in *Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta (Stanford: Stanford University Press, 2014).

63 151 N.Y. 163, 167 (1896). The Court’s addition that ‘Sleeping-car companies are neither innkeepers nor carriers’ and that ‘A berth in a sleeping car is a convenience of modern origin’ (168) did little to justify this choice for the analogy to the exclusion of the other. See also Frederick F. Schauer, *Thinking Like a Lawyer: A New Introduction to Legal Reasoning* (Cambridge, MA: Harvard University Press, 2009), at 99; and Edward H. Levi, *An Introduction to Legal Reasoning* (Chicago: University of Chicago Press, 1948), at 1–2.

64 Zahar, *supra* note 1, at 226 (emphasis added).

65 *Ibid.*, at 230 (emphasis added).

66 *Ibid.*, at 229.

67 *Ibid.*, at 230.

are not specific, by their nature, to cumulative damage: for instance, defining a threshold of 'significant' damage (a *de minimis* threshold for the principle of prevention) is no easy task even in the most straightforward cases of mediated damage.<sup>68</sup> Nor are these difficulties impossible to overcome; in fact, the EU environmental impact assessment law has progressively included mandatory considerations for climate change impacts.<sup>69</sup> Although cases of cumulative damage generally raise more difficulties than cases of mediated damage, it is not clear why this should justify the exclusion of the analogy between the two types of damage with regard to the application of the principle of prevention. Difficulties in implementing the principle of prevention with regard to cumulative damage are not a sufficient reason to reject the application of this principle, although they may require particular modalities of application.

Beyond the argument by analogy between mediated and cumulative environmental damage, the necessary applicability of the principle of prevention to all crossboundary environmental damage can be more readily justified by reflecting on the nature of this general legal principle as a corollary of the principle of state sovereignty and, more specifically, of the right of states to territorial integrity. In this perspective, the principle of prevention is not a choice of states: it is a necessary corollary of the features of today's international governance. The principle of prevention in international environmental law is only one aspect of a broader obligation of states to respect each other's territorial integrity and sovereignty more generally,<sup>70</sup> a sort of categorical imperative applying to states,<sup>71</sup> whose respect for each other is instrumental in preventing

68 See, for instance, the discussion in Hanqin Xue, *Transboundary Damage in International Law* (New York: Cambridge University Press, 2002), at 131–161.

69 See EU Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, OJ L 335, 17.12.2011, art. 3(1); EU Directive 2014/52/EU of 16 April 2014, amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, OJ L 124, 25.4.2014, seventh and thirteenth recitals and Annex IV paras. 4 and 5(f).

70 See, in particular, *Island of Palmas*, II UNRIAA 829 (1928), at 839, affirming an obligation of all states 'to protect within the territory the rights of other states, in particular their right to integrity and inviolability in peace and war'; and *Corfu Channel* (UK v. Albania), ICJ Reports 1949, at p. 22. See also the Draft Declaration on the Rights and Duties of States, in Report of the first session of the International Law Commission, UN Doc. A/925 (1949), at 7, article 7: 'Every State has the duty to ensure that conditions prevailing in its territory do not menace international peace and order.'

71 Immanuel Kant, *Grounding for the Metaphysics of Morals* (translated by James W. Ellington, 1993), at 30: 'Act only according to that maxim whereby you can, at the same time, will that it should become a universal law.'

tensions between nations and maintaining international peace.<sup>72</sup> The wording of Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration clearly correlates the principle of prevention with states' sovereign right to exploit their natural resources, as well as (in the Rio Declaration) to develop. Restriction of cross-boundary environmental damage is particularly necessary in a world where technological progress has opened numerous channels through which a state's intended conduct, or mere negligence, can significantly affect the rights of others.<sup>73</sup>

In this perspective, the rationale for the principle of prevention provides no room for a distinction between mediated and cumulative damage. To the contrary: the prohibition of mediated environmental damage, whose consequences are generally relatively mild (at least because of their geographical confinement) would not make sense if cumulative damage with more severe, and possibly existential consequences were not similarly prohibited. As Judge Weeramantry wrote in his dissenting opinion in *The Legality of the Threat or Use of Nuclear Weapons*, 'it would be a paradox if international law, a system intended to promote world peace and order, should have a place within it for an entity that can cause total destruction of the world system, the millennia of civilization which have produced it, and humanity itself.'<sup>74</sup> The principle of prevention is law by necessity, not by choice;<sup>75</sup> and the necessity of preventing

72 See UN Charter, first recital; and Steven R. Ratner, *The Thin Justice of International Law: A Moral Reckoning of the Law of Nations* (Oxford: Oxford University Press, 2015).

73 See for instance Alan Boyle, 'Globalising Environmental Liability: The Interplay of National and International Law', 17 *Journal of Environmental Law* 3 (2005), at 7; and, more generally, Eyal Benvenisti, 'Sovereigns as Trustees of Humanity: On the Accountability of States to Foreign Stakeholders', 107 *American Journal of International Law* 295 (2013). By contrast, a different rule was possible in a world that was barely industrialized, and perhaps necessary when states generally assumed less control over their citizens. Before the *Trail Smelter* case, the Harmon doctrine contended that, due to its absolute territorial sovereignty, any state could engage in or permit whatever activities it wished regardless of its consequences for the environment of other states. Even then, however, state practice in the early twentieth century was inconsistent with the Harmon doctrine. See the discussion in Stephen C. McCaffrey, 'The Harmon Doctrine One Hundred Years Later: Buried, Not Praised', 36 *Natural Resources Journal* 549 (1996).

74 *Supra* note 39, at 451.

75 See Declaration of Judge Ferrari Bravo (official translation) in *Legality of the Threat or Use of Nuclear Weapons*, ICJ Reports 1996, p. 282, at 285: 'at every period in its development, since the beginning of the modern era, international law which is essentially a customary law—and hence has come into being spontaneously—has encountered situations in which the force of certain rules prevented contrary rules from being established or maintained.'

serious environmental damage applies to cumulative as much as to mediated environmental damage.

#### 4 The Climate Regime and the Principle of Prevention: Clarification, Addition, or Derogation?

If the principle of prevention applies to cumulative environmental damage, as I hope to have convinced the reader in the course of the previous section, questions remain regarding the function of the climate regime in relation to the principle of prevention. Clearly, the climate regime extends beyond a mere restatement of the principle of prevention. In principle, this regime could be considered as composed of clarifications, and additions to, and perhaps derogations from, the principle of prevention. Although a comprehensive review of the climate regime from the perspective of the principle of prevention is beyond the scope of this article,<sup>76</sup> some general considerations follow, first regarding Zahar's assertion that the climate regime constitutes a general derogation to the principle of prevention (4.1), and then in defence of an alternative, principled vision of the climate regime as an attempt to implement the principle of prevention (4.2).

##### 4.1 *Rebutting the Lex Specialis Objection*

One of Zahar's main concerns with the ILA's resolution on the international law principles applicable to climate change seems to be its lack of consideration of the existence of specific norms adopted by states in response to climate change. Why would the principle of prevention remain relevant when clear and specific objectives and methods have been defined within the climate regime, in particular the pledges of the parties to the UNFCCC to avoid dangerous anthropogenic interference with the climate system?<sup>77</sup> Against the ILA's resolution, Zahar contends that specific agreements relating to climate change 'function ... as a kind of *lex specialis* that displaces the ILA's alleged general duty'<sup>78</sup> of states under the principle of prevention. I argue first that the climate regime does not fulfil the conditions of a *lex specialis*. In addition, I suggest that, in any case, the nature of the principle of prevention would preclude its general rejection by states.

76 See, however, Benoit Mayer, 'State Responsibility and Climate Change Governance: A Light through the Storm', 13(3) *Chinese Journal of International Law* 539 (2014), paras. 31–51.

77 Zahar, *supra* note 1, at 224.

78 *Ibid.*, at 230.

As stated by the International Law Commission, for the *lex specialis* doctrine to apply, 'it is not enough that the same subject matter is dealt with by two provisions; there must be some actual inconsistency between them, or else a discernible intention that one provision is to exclude the other.'<sup>79</sup> Yet, there appears to be no general inconsistency between the principle of prevention and the climate regime, which aims to 'achieve ... stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.'<sup>80</sup> Nor does the climate regime involve a discernible intention to exclude the application of the principle of prevention to climate change. On the contrary: as mentioned before, the UNFCCC reaffirms 'the pertinent provisions' of the Stockholm Declaration as well as the content of Principle 21 relating to the principle of prevention.<sup>81</sup> Moreover, as Schwarte and Frank justly pointed out in their reply to Zahar,<sup>82</sup> small-island developing states have made a series of statements upon their ratification of the UNFCCC to establish that 'no provisions in the Convention can be interpreted as derogating from the principles of general international law.'<sup>83</sup>

Going further, one could even argue that the nature of the principle of prevention precludes its general rejection as a principle (without, however, excluding any need to refine its modalities). Legal scholars have long recognized the existence of peremptory norms of international law that 'override the treaty-making will of states as well as persistent objections.'<sup>84</sup> Consistently with this, the Vienna Convention on the Law of Treaties has recognized the existence of peremptory norms of general international law, or 'jus cogens' norms, as prevailing over treaty norms.<sup>85</sup> Peremptory norms are norms which 'must be found necessary to international life and deeply rooted in the international conscience.'<sup>86</sup> The principle of prevention fulfils the former condition of

79 See *Articles on State Responsibility*, *supra* note 24, commentary under art. 55, para. 4. See also *Mavrommatis Palestine Concessions*, 1924, PCIJ, Series A, No. 2, at p. 31.

80 UNFCCC, art. 2.

81 *Ibid.*, seventh and eighth recitals.

82 Schwarte and Frank, 'Reply to Zahar', *supra* note 13, at 236.

83 Declarations of Kiribati, Fiji, and Nauru upon signature of the UNFCCC, 1771 UNTS 317-318 (1992).

84 Dinah Shelton, 'Normative Hierarchy in International Law', 100(2) *American Journal of International Law* 291 (2006), at 323. See also Vattel, *The Law of Nations* (1758), book II, ch. 12, para. 161.

85 Vienna Convention on the Law of Treaties, art. 53.

86 Mustafa Kamil Yasseen, in Summary Record of the 683rd Meeting, UN Doc. A/CN.4/156, at para. 39.

necessity, although not evidently the latter. A cognate, and more directly applicable doctrinal theory is that of a 'jus necessarium' (prevailing over the 'jus voluntarium'), composed of rules that are 'either the logical precondition for the existence of any legal system, such as rules of interpretation and rules providing sanctions, or ... the logical precondition for the existence of a multiple state system, such as the rules delimiting the jurisdiction of individual states.'<sup>87</sup> As Morgenthau noted, the binding force of these rules

does not affect the sovereignty of the individual nations, but makes sovereignty as a legal concept possible in the first instance; for without mutual respect for the territorial jurisdiction of the individual state and without legal enforcement of that respect, international law and a state system based on it obviously could not exist.<sup>88</sup>

Such necessary norms, established without the express consent of states and even against their objection, are relevant to the assessment of the obligation of states in relation to global concerns such as climate change.<sup>89</sup> A strong case could be made that there exists, by necessity, a peremptory norm of international law according to which states must ensure that no activity within their territory results in serious harm to the global environment, at least when such harm may represent an existential threat to civilization or to the conditions of existence of future generations.<sup>90</sup> Accordingly, even if—as Zahar seems to suggest—the UNFCCC and the Kyoto Protocol intended to exclude the applicability of the principle of prevention to climate change, they would be unable to do so because of the peremptory nature of the principle of prevention.

<sup>87</sup> Hans J. Morgenthau, 'The Problem of Sovereignty Reconsidered', 48(3) *Columbia Law Review* 341 (1948), at 343. See also Alexander Orakhelashvili, *Peremptory Norms in International Law* (Oxford: Oxford University Press, 2006), at 38; Antônio Augusto Cançado Trindade, *International Law for Humankind: Towards a New Jus Gentium* (2nd ed., Leiden: Martinus Nijhoff Publishers, 2013), at 61; Christian Wolff, *The Law of Nations Treated According to a Scientific Method* (Oxford, Oxford University Press: 1934), at 10; and Vattel, *supra* note 84, preliminaries, paras. 7–9 (on the 'necessary law of nations').

<sup>88</sup> Morgenthau, *supra* note 87, at 344.

<sup>89</sup> Jonathan I. Charney, 'Universal International Law', 87(4) *American Journal of International Law* 529 (1993), at 529. See also *ibid.*, at 530: 'Today, the enormous destructive potential of some activities and the precarious condition of some objects of international concern make full autonomy undesirable, if not potentially catastrophic.'

<sup>90</sup> See the separate opinion of Judge Cançado Trindade in *Pulp Mills on the River Uruguay*, ICJ Reports 2010, p. 134, at para. 113, according to which the principle of prevention is part of the *jus necessarium*.

Zahar is certainly right, however, to suggest that implementing the principle of prevention to cumulative environmental damage such as climate change raises serious difficulties. As he convincingly shows, international courts have generally dealt with mediated rather than cumulative damage. A clear distinction must however be made between the principle and its modalities. The principle of prevention, according to which states have the obligation 'to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction',<sup>91</sup> is a corollary of states' territorial integrity. Renouncing this principle, in a world where destructive technologies have become commonplace, would create a serious flaw which would significantly weaken the international legal order. At this level of generality, no distinction is justified between types of damage. As Schwarte and Frank note in their reply to Zahar, there would be clear opposition to a state causing cumulative environmental damage affecting other states.<sup>92</sup>

Although the relevance of the principle of prevention to climate change seems (to me) clearly established in existing international law, its implementation allows a certain flexibility.<sup>93</sup> The distinction between mediated and cumulative environmental damage suggests important differences in the modalities of implementation of the principle of prevention. Let us consider two examples: the acceptable amount of harm under the preventive principle, and the remedial obligations following a breach of this principle. It is difficult to directly answer Zahar's question about what "significant emissions" mean in a global ... context.<sup>94</sup> But the same thorny question occurs, in fact, in more classical cases of mediated damage. It seems that the level of tolerable environmental harm is never defined in absolute terms, but through a balancing of interests that aims to determine an acceptable level of unavoidable interference.<sup>95</sup> Such a balancing of interests is not an exact science but

91 See *supra* note 5.

92 Schwarte and Frank, *supra* note 13, at 235.

93 See ILA, Legal Principles relating to Climate Change (Sofia Conference Report, 2012), at 25; and Farhana Yamin and Joanna Depledge, *The International Climate Change Regime: A Guide to Rules, Institutions and Procedures* (Cambridge: Cambridge University Press, 2004), at 69.

94 Zahar, *supra* note 1, at 229.

95 See, in particular, *Trail Smelter*, *supra* note 2, at 1939: 'It would not be to the advantage of the two countries concerned that industrial effort should be prevented by exaggerating the interests of the agricultural community. Equally, it would not be to the advantage of the two countries that the agricultural community should be oppressed to advance the interest of industry.'

(as often in law) a subjective approximation guided by considerations of equity. In the context of climate change, certain greenhouse gas emissions are arguably necessary, in particular in order to achieve a certain level of human development, while others are obviously excessive, causing harm to present and future generations out of all proportion to their benefits. The distinction between necessary and excessive greenhouse gas emissions parallels the moral distinction suggested by Henry Shue between subsistence emissions and luxury emissions.<sup>96</sup> Admittedly, the no-harm principle alone does not suffice to define the concrete modalities of such a thorny distinction. It does, however, provide a conceptual framework that facilitates discussions about what would realize this distinction.

The question of the remedial obligations following from a breach of the preventive principle is another source of difficulty (and, more so, of political reluctance).<sup>97</sup> Asserting that the principle of prevention is applicable to climate change does not necessarily suggest an obligation of greenhouse gas emitters to make full reparation (even for emissions beyond the necessary).<sup>98</sup> Here, I believe that one ought to consider whether state responsibility for breach of the principle of prevention entails an obligation to make full reparation, in circumstances where culpable negligence causes widespread environmental damage. The obligation of a responsible state 'to make full reparation for the injury caused by the internationally wrongful act'<sup>99</sup> is not as firmly established in international law as article 31 of the ILC's Articles on the Responsibility of States for internationally wrongful acts suggests. The draft articles adopted in the first reading<sup>100</sup> and the discussions held in this regard within the ILC as well as among state representatives<sup>101</sup> reflect no consensus as to the general

96 Henry Shue, 'Subsistence Emissions and Luxury Emissions', 15 *Law and Policy* 39 (1993), at 39.

97 The ILA put the issue of responsibility aside because of persistent disagreements among its members. See Jacqueline Peel's statement in the report on the 2014 working session of the ILA Committee on the Legal Principles Relating to Climate Change, available at <[www.ila-hq.org/en/committees/index.cfm/cid/1029](http://www.ila-hq.org/en/committees/index.cfm/cid/1029)>.

98 See Sands and Peel, *supra* note 50, at 196; and Yamin and Depledge, *supra* note 93, at 69.

99 *Articles on State Responsibility*, *supra* note 24, art. 31.

100 See Draft Articles on the Responsibility of States for Internationally Wrongful Acts adopted by the International Law Commission in first reading, UN Doc. A/CN.4/L.528/Add.2 (1996), art. 42(3), excluding measures of reparation that would 'result in depriving the population of a State of its own means of subsistence.'

101 See, e.g., F. V. Garcia-Amador, Fourth Report on State Responsibility, UN Doc. A/CN.4/119 (1959), para. 89 ('there may be cases and situations in which compensation which does not cover the full value of the expropriated property must be regarded as valid and effective');

application of the obligation to make full reparation. The practice of war reparations (including the controversial UN Compensation Commission),<sup>102</sup> of transitional justice,<sup>103</sup> and of settling investment disputes through lump-sum agreements,<sup>104</sup> for instance, are not consistent with a general obligation to make full reparation. Here again, therefore, existing law is not fully determinative of the content of the obligations of states that have breached the principle of prevention through excessive greenhouse gas emissions.

Thus, the modalities of the principle of prevention are generally more complex with regard to cumulative environmental damage, and they raise important yet unexplored legal issues. This, however, does not justify the outright rejection of the principle of prevention. Rather, it calls for the international negotiations on climate change to be guided by the preventive principle and to define, often *praeter legem*, the specific modalities necessary for its implementation.

#### 4.2 *Implementing the Principle of Prevention*

Since the principle of prevention is applicable to climate change, it is arguably the role of the climate regime to implement it. As noted before, the UNFCCC's

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Summary Record of the 2392th Meeting of the International Law Commission, UN Doc. A/CN.4/SR.2392 (1995), para. 31 ('experience had shown that [full restitution] was often impossible and even undesirable'); United Kingdom, in Comments and observations received by Governments, UN Doc. A/CN.4/488 and Add. 1–3, at 145–146 (1998); and Raul Goco, in Summary record of the 2615th meeting of the International Law Commission, UN Doc. A/CN.4/SR.2615 (2000), para. 55.

102 See UNSC Resolution 705 (1991), para. 2, and Note of the Secretary-General pursuant to paragraph 13 of his report of 2 May 1991, UN Doc. S/22559 (1991), para. 7, limiting the obligation of Iraq to 30 per cent of the annual value of the exports of petroleum and petroleum products from Iraq on the basis of its payment capability and of the needs of the Iraqi economy. See also *Treaty of Peace with Japan*, 136 UNTS 45 (1951), art. 14(1); *Potsdam Agreement* (1945), section IV; and Eritrea-Ethiopia Claims Commission, Final Award, XXVI RIAA 631 (17 August 2009), para. 22.

103 See, e.g., Guidance note of the Secretary-General: United Nations Approach to Transitional Justice (March 2010), at 8; and Christian Tomuschat, 'International Law: Ensuring the Survival of Mankind on the Eve of a New Century', 281 *Collected Courses of The Hague Academy of International Law* 9 (1999), at 293.

104 M. Sornarajah, *The International Law on Foreign Investment* (Cambridge, UK: Cambridge University Press, 2010), at 417; Richard B. Lillich and Burns H. Weston, *International Claims: Their Settlement by Lump Sum Agreements* (Charlottesville: University Press of Virginia, 1975); Burns H. Weston, David J. Bederman and Richard B. Lillich, *International Claims: Their Settlement by Lump Sum Agreements, 1975–1995* (Ardsley, NY: Martinus Nijhoff, 1999); and American Law Institute, *Second Restatement: The Foreign Relations Law of the United States*, para. 188(2).

ultimate objective of achieving ‘stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system’<sup>105</sup> can certainly be read as a collective effort toward compliance with the principle of prevention. Likewise, the determination of individual mitigation commitments and of a global objective of limiting global warming to 2°C by the end of the twenty-first century may appear to be an attempt at a collective regime through which states would comply with their obligations. Yet, one cannot ignore the difficulties that the climate regime has been facing for more than two decades. States themselves have recognized the existence of an ‘ambition gap’ between global objectives and individual commitments,<sup>106</sup> and their failure to adopt effective measures makes compliance with the 2°C limit on global warming by the end of the twenty-first century seem increasingly unlikely.

Here, certainly, lies the core of the dispute. State representatives and others have repeatedly opposed any discussion of the general legal principles applicable to climate change, arguing that such discussion would hinder international negotiations.<sup>107</sup> The International Law Commission’s work programme on ‘the protection of the atmosphere’ could be initiated only in 2014, at the cost of a political compromise that excluded virtually all important issues from the scope of the topic.<sup>108</sup> In 2011, India’s proposal for a dialogue on equity

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<sup>105</sup> UNFCCC, art. 2.

<sup>106</sup> See, e.g., Decision 1/CP.17, Establishment of an Ad Hoc Working Group on the Durban Platform for Enhanced Action (2011), para. 7; and Decision 1/CP.19, Further Advancing the Durban Platform (2013), para. 1.

<sup>107</sup> See, for instance, Petr Válek (Czech Republic), in the summary record of the 18th meeting of the Sixth Committee of the UN General Assembly’s 68th session, UN Doc. A/C.6/68/SR.18 (2013), para. 102; and Andrea Tiriticco (Italy), and Todd Buchwald (United States), in the summary record of the 19th meeting of the Sixth Committee of the UN General Assembly’s 68th session, UN Doc. A/C.6/68/SR.19 (2013), paras. 10 and 118.

<sup>108</sup> See Shinya Murase, First Report on the Protection of the Atmosphere, UN Doc. A/CN.4/667 (2014), para. 5, including the following condition (among others): ‘Work on this topic will proceed in a manner so as not to interfere with relevant political negotiations, including those on climate change, ozone depletion, and long-range transboundary air pollution. The topic will not deal with, but is also without prejudice to, questions such as the liability of States and their nationals, the polluter-pays-principle, the precautionary principle, common but differentiated responsibilities, and the transfer of funds and technology to developing countries, including intellectual property rights.’ As a delegate of Thailand justly asked, ‘what would be left for the Commission to work on that might be of use to the international community?’ See Norachit Sinhaseni, in Summary Record of the 19th meeting of the Sixth Committee of the UN General Assembly’s 68th session, UN Doc. A/C.6/68/SR.19 (2013), para. 27.

within the UNFCCC was blocked by industrialized states.<sup>109</sup> The same states also opposed any clear definition of the principles guiding international responses to climate change during the negotiations toward the adoption of the Framework Convention.<sup>110</sup> The so-called ‘principle of common but differentiated responsibilities’ stands for an ambiguity which was hoped to be constructive, as no agreement was reached to define what ought to be common and differentiated, the grounds of differentiation, or even the nature of the responsibility (either the causal responsibility that arises from a breach of an obligation, or the more flexible ‘moral’ responsibility that stems from one’s capability to help).<sup>111</sup> Because of lack of agreement on the principles guiding the climate change negotiations, unrealistic expectations soared within different states, hindering international negotiations and precluding an ambitious climate deal.<sup>112</sup>

The ILA’s project discussed by Zahar aims at clarifying the legal principles applicable to climate change. It is motivated by the understanding that the climate regime is ‘widely regarded as inadequate and inadequately implemented,’ and it is ‘intended to inform’<sup>113</sup> on-going negotiations. Thus, it supports states’ commitment toward ‘the widest possible cooperation by all countries and their participation in an effective and appropriate international response, with a view to accelerating the reduction of global greenhouse gas emissions.’<sup>114</sup> It is difficult and perhaps impossible to conceive of meaningful international cooperation, despite significant differences between the aspirations of different states, without some widely accepted moral ground. The most obvious reason why the principle of prevention remains relevant despite the development of a climate regime is that states are far from reaching a consensus on their individual responsibility, and that some of them have been refusing any sensible commitment. It is likely that anchoring the

109 UNFCCC, Report of the Conference of the Parties on its Seventeenth Session, held in Durban from 28 November to 11 December 2011, Part One: Proceedings, UN Doc. FCCC/CP/2011/9 (2011), paras. 13–18.

110 See, e.g., Daniel Bodansky, ‘The United Nations Framework Convention on Climate Change: A Commentary’, 18 *Yale Journal of International Law* 451 (1993), at 501.

111 See, for instance, the statement of the United States on Principle 7 of the Rio Declaration, in Report of the United Nations Conference on Environment and Development, vol. II: Proceedings of the Conference, UN Doc. A/CONF.151/26/Rev.1 (Vol. II), at 17–18 (1992).

112 See, in particular, *Byrd-Hagel Resolution*, 143 Cong. Rec. S8138 (25 July 1997), at 8117.

113 ILA, Report of the Washington Conference (2014), Legal Principles Relating to Climate Change, at 1.

114 UNGA Res. 66/288, *The Future We Want* (2012), para. 191. The climate regime has not yet managed to reduce greenhouse gas emissions but only to slow their rate of growth.

climate regime in a more solid principled discourse would facilitate a convergence of expectations among nations, as an essential condition for fruitful negotiation between states and for an effective implementation of any resulting agreement.<sup>115</sup> In this context, the principle of prevention is not only applicable, but also particularly relevant as a guide to on-going international negotiations.

## 5 Conclusion

My main source of dissension with Zahar's argument is perhaps my perception of the principle of prevention being not merely a positive norm, but a necessary principle of international law. There is little doubt, in my perspective, that the principle of prevention pre-existed the *Trail Smelter* case,<sup>116</sup> or that it would exist today even without the consent of states, simply out of necessity. The right of states to territorial integrity would be nullified if a state could lawfully inflict severe damage upon the territory of another. That such damage is not caused directly but through a modification of the climate system should be either irrelevant (as long as the territorial integrity of some states is affected), or more probably considered to be an aggravating factor (affecting not 'just' one state, but many and possibly all of them, and even mankind in general). In no case should the complexity of cumulate environmental damage justify the outright rejection of the principle of prevention: instead, solutions need to be found, if necessary through a measure of creative thinking, in order to define appropriate modalities for the implementation of the principle of prevention to climate change.

The authority of the law always stems, at its most fundamental level, from a subjective belief, namely, our faith that law is an instrument of justice,<sup>117</sup> not (just) an expression of power but also a bulwark against power. Its legitimacy stems from its compliance with widely shared values and from its internal consistency. Climate change, however, poses a critical test for the effectiveness of

115 Benoit Mayer, 'Conceiving the Rationale for International Climate Law', *Climatic Change* (forthcoming).

116 The principle was already identified as existing law (*lex lata*) well before the *Trail Smelter* case, for instance in Clyde Eagleton, *The Responsibility of States in International Law* (1928), at 80, stating in no ambiguous terms that 'A State owes at all times a duty to protect other States against injurious acts by individuals from within its jurisdiction.'

117 Martti Koskenniemi, 'What Is International Law For?' in *International Law*, edited by Malcolm D. Evans (3rd ed., Oxford: Oxford University Press, 2010), at 32.

international environmental law, in particular,<sup>118</sup> and international law, in general. On the one hand, our moral compass is affected by new issues: as Stephen Gardiner showed, ‘existing theories are extremely underdeveloped in many of the relevant areas [of climate change], including intergenerational ethics, international justice, scientific uncertainty, and the human relationship to animals and the rest of nature.’<sup>119</sup> On the other hand, climate change is the result of a wrong of the powerful affecting the powerless: the greatest share of greenhouse gas emissions occurs within the jurisdiction of the most powerful states, whereas the gravest impacts affect those populations benefitting the least from industrialization and development. In this context, it is hardly surprising that scholars and state representatives have rejected any discussion of the general legal principles applicable to climate change; but this is also particularly worrisome. States interests alone cannot spur effective responses to climate change: in the absence of sufficient enforcement mechanisms, a state’s immediate interest will always be to free-ride on the efforts of other states.<sup>120</sup> To *convince* states and their populations to really engage in costly mitigation efforts, an effective climate regime needs to be grounded in principles that are largely regarded as fair—the first of which is the principle of prevention.

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118 Sands and Peel, *supra* note 50, at 239.

119 Stephen M. Gardiner, *A Perfect Moral Storm: The Ethical Tragedy of Climate Change* (Oxford: Oxford University Press, 2011), at 7.

120 Posner and Weisbach, *supra* note 21, at 181.