State Responsibility and Climate Change Governance: A Light through the Storm

Benoit Mayer*

Abstract

Most excessive greenhouse gas emissions originate from developed states but the adverse impact of climate change is predominantly affecting developing states. This article submits that the law of state responsibility could provide important guidance for the development of the international regime on climate change. The failure of many states, in particular developed ones, to prevent excessive per capita emissions causing harm to global atmospheric commons constitutes arguably a breach of an obligation arising from the no-harm principle. The barriers to the implementation of the law of state responsibility through litigation do not exclude its applicability and the existence of secondary obligations. The obligation to cease a continuing wrongful act suggests a duty of industrial states to commit much more strongly to reducing their emissions. Overall, the obligation to make full reparation requires something essentially different from the current approach of co-operation with regard to adaptation, which, from a state responsibility perspective, seems to involve unjustified interference in the internal affairs of injured states. While certain discrepancies between the climate regime and the law of state responsibility are perhaps inevitable, developed states' outright rejection of responsibility constitutes a major obstacle to achieving a substantial global consensus on responses to climate change.

* PhD candidate, National University of Singapore, Faculty of Law, bnt.mayer@gmail.com . This paper was completed on 19 August 2014 and the websites cited were current as of this date unless otherwise noted. The article benefitted from helpful comments by the anonymous reviewers of the Chinese Journal of International Law, Prof. Antony Anghie and the participants to the NUS Law Doctoral Seminar.

I. Introduction

1. Our climate is changing and compelling scientific evidence attributes this change to human activities, in particular greenhouse gas emissions from fossil fuels combustion.[1] The 196 parties to the 1992 UN Framework Convention on Climate Change (UNFCCC) have recognized "that human activities have been substantially increasing the atmospheric concentrations of greenhouse gases, that these increases enhance the natural greenhouse effect, and that this will result on average in an additional warming of the Earth's surface and atmosphere and may adversely affect natural ecosystems and humankind."[2] Neither the UNFCCC, nor successive efforts, such as the 1998 Kyoto Protocol and its 2012 "Doha" Amendment,[3] have done enough to mitigate climate change (global greenhouse gas emissions continue to increase) or to support the adaptation of human societies to on-going or foreseeable changes. The fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), a synthesis of the best available science, bears witness to the actual and foreseeable consequences of climate change on human lives, health, food production, human settlement, human security, livelihood, and ecosystem services more generally.[4] As its impact starts being felt in many regions of the world, and more particularly in developing countries, climate change is likely to become a defining issue of our time – and a test for international institutions.

2. The "ultimate objective" of the UNFCCC is to "achieve … stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[5] The threshold of "dangerous anthropogenic interference with the climate system" remained (purposefully) vague, but most states recognize that not enough has yet been done. Despite long and intense

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1 For a review of scientific evidence, see generally Intergovernmental Panel on Climate Change (IPCC), Climate Change 2013: The Physical Science Basis, Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (2014).

2 United Nations Framework Convention on Climate Change (UNFCCC), 1771 UNTS 107, second recital.

3 Kyoto Protocol to the United Nations Framework Convention on Climate Change, 2303 UNTS 148; Decision 1/CMP.8 (1st decision of the 8th Conference of the Parties to the Kyoto Protocol), Amendment to the Kyoto Protocol pursuant to its Article 3, paragraph 9 (the Doha Amendment) (2012).

4 See in particular Technical Summary, in: IPCC, Climate Change 2014: Impacts, Adaptation and Vulnerability, Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (2014) (hereinafter "IPCC AR5 WGII").

5 UNFCCC, above n.2, recital 2.

negotiations, international climate co-operation remains plagued by the unwillingness of developed states to commit to costly measures, as reflected by the rejection of the Kyoto Protocol by the United States and the withdrawal of Canada, as well as by the resistance of developing states to concrete commitments.[6] The parties to the UNFCCC have identified an "ambition gap" between their collective commitment to limiting the increase of global average temperature to 1.5 or 2°C and their weak individual commitments to reducing greenhouse gas emissions within their jurisdiction.[7] Developed States have also failed fully to implement the principle, recognized in the UNFCCC, that they should "assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects."[8] By and large, the costs of adaptation are met by the affected states themselves, although developing states have not been significantly contributing to anthropogenic interference with the climate system.

3. The objective of combatting climate change and its impact on societies calls for a large and ambitious agreement. Such an agreement can only be reached if it is based on principles that appear equitable to most states.[9] Yet, ethics is not always able to provide clear, incontestable guidance in the context of climate change. To analyse the ethical disorientation of climate negotiations, Stephen Gardiner introduced the metaphor of a "perfect storm," a reference to Sebastian Junger's account of the shipwreck of the Andrea Gail, which Junger attributed to the rare convergence of several rare weather conditions.[10] In Gardiner's theory,

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6 Despite a steady increase during the last decade, developing states' per capita emissions remain considerably lower than the current or past levels in developed states. See below, para. 6.

7 Decision 1/CP.17 (1st decision of the 17th Conference of the Parties to the UNFCCC), 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. On the 1.5 or 2 °C target, see in particular Decision 1/CP.19, Further Advancing the Durban Platform (2013), 3rd recital; Decision 2/CP.18, Advancing the Durban Platform (2012), 2nd recital; Decision 1/CP.17, Establishment of an Ad Hoc Working Group on the Durban Platform for Enhanced Action (2011), 2nd recital; Decision 1/CP.16, Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Co-operative Action under the Convention (2010), para.4; Decision 1/CP.15, Copenhagen Accord (2009), paras.1-2; and Decision 1/CP.13, Bali Action Plan (2007), 2nd recital before para.4.

8 UNFCCC, above n.2, art. 4.4.

9 This is one of the main conclusions of a workshop convened by the UNFCCC secretariat in 2010. See UNFCCC, Report on the Workshop on Equitable Access to Sustainable Development, FCCC/AWGLCA/2012/INF.3/Rev.1 (2012), para.71.

10 Sebastien Junger, The Perfect Storm (1997).

three "storms" are obstacles to our ability to react ethically to climate change. The "global storm" relates to the global distribution of the causes and effects of climate change. The "inter-generational storm" results from our capacity to affect future generations which cannot defend their interests. Lastly, the "theoretical storm" reflects Gardiner's understanding that "existing theories are extremely underdeveloped in many of the relevant areas, including intergenerational ethics, international justice, scientific uncertainty, and the human relationship to animals and the rest of nature."[11] As a result of the convergence of these three storms in a "perfect storm," ethics is unable to provide a solid guidance to the international governance of responses to climate change, able to oppose strong vested interests, in particular in relation to the respective roles of developed and developing states. Ethicists generally have no doubt that developed states have specific obligations, but the application of different theories suggests different grounds for differentiation and duties of different nature and scope.[12]

4. The intuition of this article is that the principles underpinning international law reflect a shared moral understanding, and that such a shared moral understanding may provide important guidance to climate negotiations, even as proper ethical theories remain underdeveloped. More specifically, this article suggests that the concept of state responsibility could play the role of a prominent and familiar reference that international lawyers could follow, like a lighthouse guiding sailors through a storm, and which may help guide climate governance through and out of the "perfect storm." There is hardly any stronger principle in law than the principle of the remedial responsibility of the wrongdoer. Grotius already noted that from an injury caused "there arises an Obligation by the Law of Nature to make Reparation for the Damage, if any be done,"[13] and the French civil code affirms as a maxim of general application that "[a]ny act whatever of man, which causes damage to another, obliges the one by whose fault it occurred, to make reparation."[14] Responsibility is a central element in any legal system;[15] international law is no exception, where responsibility can be conceived as the necessary corollary of the equality of states.[16] Codifying an abundant case-law, the

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11 Stephen M. Gardiner, A Perfect Moral Storm: The Ethical Tragedy of Climate Change (2011), 7.

12 See in particular the articles gathered in Stephen Gardiner et al. (eds.), Climate ethics: Essential readings (2010).

13 Hugo Grotius, The Rights of War and Peace (Jean Barbeyrac trans. 1738), 370.

14 French Civil Code (official translation), art. 1382.

15 See for instance James Crawford, State Responsibility: The General Part (2013), 3 (noting that "[a]ny system of law must address the responsibility of its subjects for breaches of their obligations").

16 Charles de Visscher, La responsabilité des États, in: *Bibliotheca Visseriana Dissertationvm Ivs Inter-nationale Illvstranitvm* (1924), 90

Articles on State Responsibility adopted by the International Law Commission (ILC) in 2001 affirm that "[e]very internationally wrongful act of a State entails the international responsibility of that State."[17] If excessive greenhouse gas emissions can be considered as an internationally wrongful act of states, state responsibility could provide important guidance to climate governance.[18]

5. This argument is developed through four additional sections. Section II recounts the hard-fought diplomatic battle for the recognition of developed states' responsibility with regard to climate change. Section III assesses the legal grounds for invoking state responsibility, while acknowledging major obstacles to litigation. Section IV compares the climate regime with the obligations that would arise from state responsibility and reveals important discrepancies. Lastly, Section V asserts the political obstacles to the success of arguments on responsibility within the governance of climate change.

6. Two preliminary remarks are necessary. Firstly, by suggesting that state responsibility could provide an *important guidance* to climate governance, this article does not contend that state responsibility should *determine* measures taken in response to climate change.[19] While sailors need more than one landmark to determine their geographical location, state responsibility is not necessarily the only principle that should guide climate governance through and out of the storm. Additional guidance may perhaps be provided by on-going reflections on state liability for injurious consequences of acts not prohibited by international law[20] (possibly in connection with the doctrine of unjust enrichment) and other forms of responsibility (e.g. individual or corporate responsibilities, or responsibilities toward individuals in other countries) or reparations (e.g. post-war reparations). The concept of transitional justice[21] and the

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17 ILC, Draft Articles on Responsibility of States for Internationally Wrongful Acts, art. 1.

18 The concepts of governance and regime extend beyond formal international hard law by putting emphasis on functionality rather than formality. I use "governance" as a dynamic concept relating to the transformation of the climate "regime," which itself refers to the existing normative system applicable to climate change (in particular, but not only, in relation to the UNFCCC).

19 See in particular ILC, Articles on State Responsibility, art. 33(2) (recognizing the possibility of other forms of reparation, in particular to the benefit of individuals) and Commentary, para. 4 under art. 33 (referring in particular to remedies available under human rights treaties and under bilateral or regional investment protection agreements).

20 See generally Alan Boyle, Liability for Injurious Consequences of Acts not Prohibited by International Law, in: James Crawford et al. (eds.), The Law of International Responsibility (2010), 95.

21 See Joy Hyvarinen, Climate Change, Transitional Justice and Loss and Damage (2013). In a sense, transitional justice already includes some of

principles of international solidarity and international co-operation toward the realization of human rights[22] may also provide significant points of reference to conceive co-operative responses to climate change.

7. Thus, like sailors who fear the proximity of land during a storm, states should acknowledge the existence of moral guidance but not necessarily head toward moral "landmarks." In an ideal world, states should respond fairly to climate change – but, in an ideal world, there would be no climate change and perhaps no states. In reality, the obligation to make full reparation would arguably require too great a sacrifice from some states to be acceptable by most. Political realities cannot be ignored, and a certain discrepancies are perhaps necessary, if only as a concession of justice to power. On the other hand, too wide a gap between the climate regime and what is largely perceived as fair may also hinder the objective of universal participation. Currently, even if ethical concepts such as responsibility do not determine the climate regime, they do seem to have an influence, in particular through advocacy and the aspirations of civil society. Assessing the distance between the principle of state responsibility and actual climate governance may contribute to inform the latter, just as much as determining their location may help sailors to decide the course to adopt.

8. Secondly, for the sake of clarity, a distinction will be made between developed states that emit greenhouse gases and developing states that are affected by climate change. In reality, all states emit greenhouse gases and all states are affected by climate change: the difference between developed and developing states is not one of nature but of degree. The existence of polar opposites (heavily industrialized developed states such as the United States and severely affected least-developed states such as Bangladesh) does not preclude the possibility of a continuum. Newly industrialized countries such as China or Brazil account for steadily increasing greenhouse gas emissions, although such emissions remain currently several times inferior to the per capita emissions of the United States, Australia, Canada or the European Union. The gap is wider, even in the case of newly industrialized states, when stocks of historical per capita emissions are considered.[23] Even though it is predictable that emerging economies will account for growing greenhouse gas emissions in the coming decades, they are unlikely ever to reach the emissions intensity that characterize today's industrial states, let alone to acquire similar historical responsibilities. On the other hand, the

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the trade-offs between ethics and politics that I suggest in the following paragraph.

22 See in particular International Covenant on Economic, Social and Cultural Rights, 999 UNTS 171, art 2.1. See also discussions in Humphrey (ed.), Human Rights and Climate Change (2010).

23 Data on greenhouse gas emissions per country can be accessed for instance from the World Resources Institute's Climate Data Explorer, at: http://cait2.wri.org

negative impacts associated with climate change tend to be concentrated on poorer societies, with lesser adaptive capacities and resilience, although such negative impacts are not proper to developing states.

II. A brief history of climate responsibility

9. Since the late 1980s, developing countries have raised political arguments on the responsibility of developed states for interfering with the climate system through excessive greenhouse gas emissions (Section II.A). Some allusions to responsibility were included in the climate regime, in particular the obscure principle of "common but differentiated responsibilities" (Section II.B).

II.A. The "blame game"

10. In 1989, a declaration adopted by the G77 in Caracas defined the common position of developing states with regard to the projected negotiations on climate change in an unequivocal reference to responsibility:

> Since developed countries account for the bulk of the production and consumption of environmentally damaging substances, they should bear the main responsibility in the search for long-term remedies for global environmental protection and should make the major contribution to international efforts to reduce consumption of such substances.[24]

By contrast, the representatives of developed countries excluded causal responsibility and special obligations; what the representatives of developed states claimed to send was rather "a message of *solidarity* showing all nations working together as equal partners."[25] This led to a gap of expectations between the West's self-celebration of its generosity (accordingly evidenced through whatever "voluntary" differentiation and ex gratia assistance) and developing states' demand for the reparation for past and current wrongs.[26] Although the position of individual states has

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[24] G77, Caracas Declaration (1989), paras.II–34.

[25] Helmut Kohl, in: Report of the United Nations Conference on Environment and Development, A/CONF.151/26/Rev.1 (1992), paras.III:28 (my emphasis).

[26] See Karin Mickelson, South, North, International Environmental Law, and International Environmental Lawyers, 11 YB International

evolved, claims of responsibility remain articulated in an inter-hemispheric dispute between developed and developing states as to the basis for negotiating climate governance.[27]

11. In order to guarantee universal participation despite irreconcilable demands, the climate regime was largely built upon vague language, constructive ambiguities and unprincipled arrangements.[28] The UNFCCC recognizes that "the largest share of historical and current emissions of greenhouse gases has originated in developed countries,"[29] and that developed countries must "take the lead in combating climate change and the adverse effects thereof,"[30] but it does not establish whether the special obligations of developed countries stem from their historical responsibility or simply from their greater capacities and their generosity. Likewise, states recognized their "common but differentiated responsibilities"[31] in protecting the climate system, but they defined neither the nature of their responsibility (causal or "moral" responsibility), nor the ground for differentiation ("culpability" or capability): where developing states expected a recognition that the states that were responsible for most greenhouse gas emissions would bear the burden of combating climate change and its adverse consequences, developed states decided to see a recognition of their technological and financial advance.[32] When the 1992 Earth Summit came to an end, several small island developing states made declarations reserving their right to claim the responsibility of industrial states[33] while the United States registered its understanding of the principle of common but differentiated responsibility as "highlight[ing] the special leadership role of the developed countries, based on [their] industrial development, [their] experience with environmental protection policies and actions, and [their] wealth, technical expertise and capabilities."[34]

Environmental Law (2000), 52.

27 See e.g. Hanqin XUE, Trans-boundary Damage in International Law (2002), 224-231; Chandrashekhar Dasgupta, The Climate Change Negotiations, in: Irving Mintzer and Amber Leonard (eds.), Negotiating Climate Change: The Inside Story of the Rio Convention (1994).

28 See e.g. Lavanya Rajamani, Differential Treatment in International Environmental Law (2006), 155.

29 UNFCCC, above n.2, 3rd recital.

30 Ibid., art. 3.1.

31 Ibid., 6th recital, art. 3(1), and art. 4(1); Rio Declaration on Environment and Development, A/CONF.151/26 (vol. I) (1992), principle 7.

32 See Mickelson, above n.26, 70, and Rajamani, above n.28, chapters 5 to 7.

33 See e.g. Declarations of Kiribati, Fiji, Nauru and Tuvalu upon signature of the UNFCCC, 1771 UNTS 317-318.

34 Statement of the United States on Principle 7 of the Rio Declaration on Environment and Development, in: Report of the United Nations Conference on Environment and Development, vol. II: Proceedings of

12. A quarter of century's most intense negotiations have not sufficed to clarify this ambiguity or to bridge the gap between fundamentally divergent conceptions of international co-operation on climate change. Time generally blunted the sharp words uttered at the Earth Summit and the rapid increase of greenhouse gas emissions in some developing countries complicated the distinction between developed states and developing states, but the fundamentals have not changed. No consensus emerged, for instance, when states tried to define the criteria to establish the respective emissions limitation commitments of developed states within what would become the Kyoto Protocol; developing states' proposals to take the respective historical and present emissions into account were ignored by developed states, which preferred to focus on capacity-related criteria.[35] At the final stage of the negotiations of the Kyoto Protocol, US Senator Byrd declared that "the time for pointing fingers is over,"[36] and the US Senate unanimously adopted a resolution indicating that it would not ratify a climate agreement involving unilateral mitigation commitments on the part of developed states.[37] Yet, if Senator Byrd could easily persuade the US Senate, he did not convince the rest of the world. A few years later, as China and the United States consolidated antithetical positions as to their respective duties in a second commitment period, an observer identified "[d]isputes over the scope of CDR [common but differentiated responsibility]" as the primary cause of the "stalemate" of climate negotiations.[38] More recently, the debate on responsibility resurfaced through hard-fought allusions to responsibility, in particular through provisions on adaptation and loss and damage.

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the Conference, A/CONF.151/26/Rev.1 (Vol. II) (1992), 17. A second paragraph adds: "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."

35 See in particular the proposal by Brazil, in: Additional Proposals from the Parties, Implementation of the Berlin Mandate, FCCC/AGBM/1997/Misc.1/Add.3 (1997), 7, suggesting a set of capacity-related criteria on which states were invited to submit data as a basis for negotiations, including the level of present per capita emissions, the emission intensity of gross domestic product, economic and demographic growth, emission intensity of exports, and share of renewable energy in energy supply.

36 Statement of Senator Byrd, Cong. Rec. S8117 (daily ed. 25 July 1997).

37 Senate Resolution 98, 105th Cong., 143 Cong. Rec. S8138-39 (daily ed. July 25, 1997) ("Byrd-Hagel Resolution").

38 Christopher Stone, Common but Differentiated Responsibilities in International Law, 98 American JIL (2004), 276, 280.

II.B. Allusions to responsibility in the climate regime

13. As part of subtle political compromises, developing states have however obtained the adoption of important, carefully-worded allusions to responsibility. Thus, article 4(4) of the UNFCCC, a provision granted to the Alliance of Small Island States (AOSIS) in the closing days of the negotiations,[39] calls for developed states to "assist [developing states] that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those effects,"[40] although it stops short of a formal and unequivocal admission of responsibility.[41] More recently, developed states have made some concessions as part of strenuous efforts to persuade developing states to define concrete emissions limitation commitments. Thus, what appears as the clearest official language on responsibility so far was adopted in a recital of the Cancun Agreements adopted by the 16th Conference of the Parties to the UNFCCC ('COP 16', 2010) stating that, "*owing to [their] historical responsibility*, developed country Parties must take the lead in combating climate change and the adverse effects thereof."[42] Yet, other provisions were also adopted to hinder arguments on responsibility. For instance, the 2007 Bali Action Plan calling for "enhanced action on adaptation," whose substance reflected a growing negotiating power of developing countries, included a preliminary recognition that "economic and social development and poverty eradication are global priorities,"[43] thus suggesting that adaptation is little more than a contextualized aid to development – a form of international solidarity rather than a recognition of responsibility.

14. Beyond such allusions, the debate also impacted the substance of the climate regime. Whereas developed states generally expected the climate regime to focus on climate change mitigation, some of the developing states most vulnerable to climate change – in particular small island developing states and least developed states – or most in need of

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

40 UNFCCC, above n.2, art. 4.4.

41 Philippe Sands and Jacqueline Peel, Principles of International Environmental Law (2012), 734. See also Philippe Sands, The United Nations Framework Convention on Climate Change, 1 Review of European Community & International Environmental Law (1992), 270, 275 (considering this provision as "an implicit acceptance by developed [states] of responsibility for causing climate change"); Bodansky, above n.39, 528 (arguing that this provision does not commit developed states to full compensation as it refers to "costs of adaptation," not to "*the* costs of adaptation," which would imply full compensation).

42 Cancun Agreements, above n.7, 2nd recital before para.36 (emphasis added).

43 Bali Action Plan, above n.7, 2nd recital.

international finance campaigned for the provision of remedies. From the outset, AOSIS called for the inclusion in the UNFCCC of an insurance mechanism financed by industrialized states.[44] The proposal was infructuous, as Bodansky noted, because the states most vulnerable to climate change "had [little] to offer the developed world in exchange for financial transfers."[45] By contrast, from the perspective of developed states, the active participation of new industrialized states (e.g. China, Brazil, ASEAN countries) has been perceived as instrumental to developed states' desire to mitigate climate change, as it already appeared that even a sharp reduction of greenhouse gas emissions in developed countries would be in vain without their co-operation at some point. Consequently, financial transfers related to the climate regime were mostly intended to foster mitigation in newly industrialized countries, rather than to facilitate adaptation in the most vulnerable states.[46]

15. Nevertheless, as a somewhat symbolic concession to developing states in order to ensure participation, the UNFCCC included some provisions encouraging national policies on adaptation by calling for dedicated financial support for the most vulnerable countries and by suggesting technical co-operation in devising national adaptation policies.[47] Further decisions of the Conference of the Parties promoted adaptation, with some emphasis on the development of a financial mechanism to support adaptation in developing countries.[48] Thus, the Marrakesh Accords ('COP 7', 2001) established the Special Climate Change Fund (SCCF), the Least Developed Country Fund (LDCF) and the Adaptation Fund (AF), and COP 16 (Cancun, 2010) created the Green Climate fund, partly dedicated to international action on adaptation.[49] Yet, procedural difficulties, the preference of developed states for international support on mitigation (with global benefits) rather than adaptation activities (with local benefits), and the difficulties for recipient countries to identify the incremental costs attributable to climate

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44 Submission by Vanuatu on behalf of AOSIS, Intergovernmental Negotiating Committee for a Framework Convention on Climate Change, 4th session, Elements Relating to Mechanisms, A/AC.237/WG.II/CRP.8 (1991), 2.

45 Bodansky, above n.39, 528.

46 See generally Barbara Buchner et al., The Landscape of Climate Finance (2011), 46.

47 See e.g. UNFCCC, above n.2, art. 1.b, 4.1.e and 4.4. See also Lisa Schipper, Conceptual History of Adaptation in the UNFCCC Process, 15 Review of European Community & International Environmental Law (2006), 82.

48 See Decision 1/CP.10, Buenos Aires Programme of Work on Adaptation and Response Measures (2004); Bali Action Plan, above n.7, para.1.c; and Cancun Agreements, above n.7.

49 UNFCCC, above n.2, art. 11; Decision 5/CP.7, 7/CP.7 and 10/CP.7 (2001); Cancun Agreements, above n.7, para.102.

change have continuously hindered the implementation of adaptation finance.[50] While international climate finance is estimated to represent USD 97 billion per year, only USD 4.4 billion are directed to adaptation efforts, of which only a tiny fraction is distributed by dedicated multi-lateral funds.[51] The IPCC noted that "[c]omparison of the global cost estimates with the current level of adaptation funding shows the projected global needs to be orders of magnitude greater than current investment levels particularly in developing countries."[52]

16. As the impacts of climate change become more and more apparent, the limited international action on adaptation no longer suffices to satisfy the claims heeded by the states most affected by climate change. Compensation came back to the fore with the adoption of the Bali Action Plan adopted by COP 13 (2007). As part of a program for "enhanced action on adaptation," a section of the Bali Action Plan invited considerations for "means to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change."[53] The concept of loss and damage was not officially defined, but it has been suggested that damage relates to "those impacts that can be reversed," whereas loss refers to "the negative impacts of climate change that are permanent."[54] The Cancun Agreements (COP 16, 2010) associated loss and damage with "the impacts related to extreme weather events and slow onset events,"[55] such as "sea level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification."[56] While COP 19 (2013) established the "Warsaw international mechanism for loss and damage associated with climate change impacts" as a forum in charge of conceiving a financial mechanism to be adopted at COP 22 (2016),[57] the implementation of a genuine and far-reaching compensation mechanism remains unlikely given the firm opposition of developed states.

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50 See e.g. Decision 2/CP.12, Review of the Financial Mechanism (2006), 11th recital.

51 Buchner et al., above n.46, iv.

52 Carolina Dubeux et al., Economics of adaptation, in: AR5 WGII, above n.4, executive summary.

53 Bali Action Plan, above n.7, para.1.c.iii.

54 Saleemul Huq, Erin Roberts and Adrian Fenton, Loss and Damage, 3 Nature: Climate Change (2013), 947, 948.

55 Cancun Agreements, above n.7, para.25.

56 Ibid., note 3.

57 UNFCCC COP19, decision 2/CP18, 'Warsaw international mechanism for loss and damage associated with climate change impacts' (2013).

III. The relevance of state responsibility

17. Beyond purely political claims, responsibility touches on important questions, as climate change involves what is arguably a wrongful act – producing excessive greenhouse gas emissions. This section argues that there is a plausible case for the applicability of the law of state responsibility (Section III.A), despite the existence of serious obstacles to its implementation through litigation (Section III.B).

18. While this article focuses on responsibility between states, it does not necessarily exclude the possibility of other arguments seeking the responsibility of individuals or corporations, or seeking responsibility toward individuals in other countries. However, given the remote causal link and the chronological differences between greenhouse gas emissions and their consequences, state responsibility, a well-established principle reflective of a shared moral understanding of the relevance of states as a structural element of international relations, appears as a far more convenient level of analysis than individual or corporate responsibilities or responsibilities toward individuals. Establishing causal attribution is less problematic when responsibility is approached in relations between states rather than in relations between individuals or companies.

III.A. The applicability of the law of state responsibility

19. The Articles of State Responsibility affirm that "[e]very internationally wrongful act of a State entails the international responsibility of that State."[58] The internationally wrongful act of a state consists in an action or an omission which "(a) [i]s attributable to the state under international law and (b) [c]onstitutes a breach of an international obligation of the state."[59] The injury is not a constitutive element of state responsibility in international law, although it is an important element in establishing secondary obligations.[60] This article does not discuss the distinct concept of state liability for injurious consequences of acts not prohibited by international law, which is not as well established in existing international law as state responsibility for internationally wrongful acts,[61] given that, in the context of climate change, there is a plausible argument for the existence of an internationally wrongful act.

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58 ILC, Articles on State Responsibility, art. 1.

59 Id. art. 2.

60 See e.g. E. Jiménez de Aréchaga, International Law in the Past Third of a Century, Recueil des cours (1978), 1, at 268 -269.

61 See generally Boyle, above n.20.

20. With regard to the applicability of the law of state responsibility to the matters of climate change, one needs to reject a conceivable preliminary objection according to which the existence of specific norms on the responsibility of states in the context of climate change would exclude the application of the general law of state responsibility.[62] This objection should fail because climate law does not display any inconsistency with, or discernable intention of excluding the application of the law of state responsibility.[63] To avoid such objections, several small island developing states took the precaution of declaring formally that the UNFCCC and the Kyoto Protocol

> in no way constitute a renunciation of any rights under international law concerning state responsibility for the adverse effects of climate change, and that no provisions in the Convention [could] be interpreted as derogating from the principles of general international law.[64]

In any case, even if climate law constituted a derogation from the general law of state responsibility, it could be interesting, in a political perspective, to question the causes for such a derogation.

21. The law of state responsibility might be applicable in the context of climate change when a state breaches its treaty obligations, in particular when a state does not comply with its commitment to limit or reduce its greenhouse gas emissions under the UNFCCC, the Kyoto Protocol and (in the future) the Doha Amendment to the Kyoto Protocol.[65] A complementary ground can be found in other treaty obligations such as the obligation to phase out the production and consumption of ozone-depleting substances,[66] to reduce long-range trans-boundary air pollution[67] or to combat pollution of the marine environment.[68]

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62 ILC, Articles on State Responsibility, art. 55 (principle "*lex specialis derogate legi generali*").

63 See ibid., Commentary, para.4 under art. 55; Christina Voigt, State Responsibility for Climate Change Damages, 77 Nordic Journal of International Law (2008), 1, 3-4.

64 Declaration of Kiribati, above n.33.

65 On the obligation of states to mitigate climate change, see: UNFCCC, above n.2, art. 4; Kyoto Protocol, above n.3, art. 3; Decision 1/CMP.8, above n.3.

66 In particular The Montreal Protocol on Substances that Deplete the Ozone Layer, 1522 UNTS 3 (1987).

67 E.g. Convention on Long-Range Trans-boundary Air Pollution, 1302 UNTS 217 (1979, UN Economic Commission for Europe) and its eight protocols; ASEAN Agreement on Trans-boundary Haze Pollution (10 June 2002).

68 See UN Convention on the Law of the Sea, 1833 UNTS 3 (1982), part XII.

22. However, a broader ground for invoking state responsibility stems from the general principle in international environmental law according to which states must prevent activities that cause cross-boundary environmental damage, a principle often called the "no harm principle." The failure to prevent trans-boundary damages may result from an action attributed to the state, but it generally results from the omission of a state to prevent certain activities under its jurisdiction. First expressed in the arbitral award in the *Trail Smelter* case in 1941,[69] the no-harm principle has been confirmed by the 1972 Stockholm Declaration on Human Environment[70] and by the 1992 Rio Declaration on Environment and Development,[71] and it has been recognized as customary international law by the International Court of Justice (ICJ) in its 1996 Advisory Opinion on *The Legality of the Threat or Use of Nuclear Weapons*.[72] One of the leading authorities in the field considers that "the can be no question but that Principle 21 reflects a rule of customary international law, placing international legal constraints on the rights of states in respect of activities carried out within their territory or under their jurisdiction."[73] It is also clearly recognized that states have a duty of due diligence to control activities within its territory that may cause trans-boundary environmental harms.[74]

23. Despite compelling scientific evidence that climate change results in serious harm for human societies,[75] it is generally impossible to consider specific damages suffered by individuals or, to some extent, by states, as the proximate and foreseeable consequence of climate change.[76] On the one hand, the concept of climate is essentially probabilistic rather than determinative: climate change does not "cause" any specific weather event, although it makes some extreme weather events more likely. On the other hand, the damages suffered by human societies as a result of any environmental phenomenon depends of a multitude of political, social and economic proxy factors.[77] Therefore, the no-harm principle is best

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69 United States v. Canada, 3 RIAA 1907 (1941).

70 Declaration of the United Nations Conference on the Human Environment, A/Conf.48/14/Rev. 1, principle 21.

71 Above n.31, principle 2.

72 ICJ Rep. 1996, 226, para.29.

73 Sands and Peel, above n.41, 196.

74 Sands and Peel, above n.41, 200. See also, in particular, case of Pulp Mills on the river Uruguay (Argentina vs. Uruguay), judgment of 20 April 2010, ICJ Reports 2010, p. 14, paras. 101, 197.

75 See IPCC AR5 WGII, above n.4.

76 See e.g. Berhard Graefrath, Responsibility and Damages Caused: Relationship between Responsibility and Damages, 185-II Recueil des Cours (1984), 9, at 94 ("uninterrupted and surveyable causality."

77 See generally Mike Hulme, Attributing weather extremes to "climate change": A Review, Progress in Physical Geography (forthcoming).

invoked, in the context of climate change, as an obligation owed to the international community as a whole.[78] It may thus be argued that a specific application of the no-harm principle gives rise to an obligation owed to the international community as a whole not to damage global environmental commons such as high seas, the atmosphere, or the climate system.[79] This approach permeates the UNFCCC, which recognizes that "change in the Earth's climate and its adverse effects are a common concern of humankind," and whose ultimate objective is to "prevent dangerous anthropogenic interference with the climate system."[80] Conceiving the harm resulting from climate change as harm to global atmospheric commons evades complex issues at the stage of establishing the harm, although new difficulties appear at the stage of conceiving appropriate reparation.

24. Given the vagueness of the no-harm principle as customary law, important questions remain open. In particular, it is difficult to define the geographical and historical scope of the responsibility of states for greenhouse gas emissions. Geographically, the no-harm principle has generally been implemented in cases where environmental harm originated from activities conducted within the territory of the state, but there is no ground to exclude its application to extra-territorial activities under the jurisdiction of a state.[81] In particular, there a plausible argument

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78 ILC, Articles on State Responsibility, arts. 42(b) and 48.1(b). A similar claim was made, although not decided upon, by New Zealand in the first *Nuclear Test* case, where Dr. Finlay argued that "Nuclear testing of the kind carried out by France inevitably produces results in areas beyond the limits of national jurisdiction. In that sense and in a broader sense as well, the common heritage of mankind is affected. If New Zealand is correct in its contention that French actions inevitably conflict with international environmental law—and this is also a matter for the merits phase—then the obligation imposed by that law is, once again, of a universal character, an obligation *erga onmes*." See oral arguments on jurisdiction and admissibility, minutes of the fourth public sitting (10 July 1974), in *Nuclear Tests* (New Zealand v. France), (1978) ICJ Pleadings Vol. II at 264-265. See also Phoebe Okowa, State Responsibility for Trans-boundary Air Pollution in International Law (2000), 214.

79 See e.g. Sands and Peel, above n.41, 12; John Vogler, The Global Gommons: Environmental and Technological Governance (2nd ed, 2000).

80 UNFCCC, above n.2, 1st recital and art. 2.

81 While the *Trail Smelter* arbitration award refers to the "territory" of the state, subsequent references (in particular Principle 21 of the Stockholm Declaration, above n.70; Principle 2 of the Rio Declaration, above n.31; and Advisory Opinion in *Legality of the Threat*, above n.72) consistently referred to "activities within their jurisdiction or control." See by analogy, on the concept of "jurisdiction," Marko Milanovic, Extra-territorial Application of Human Rights Treaties: Law, Principles, and Policy (2011), 2010, who argue that the jurisdictional limitation of

for the no-harm principle to apply not only in relation to greenhouse gas emissions occurring within the territory of a state, but also in relation to overseas emissions caused by national companies or for domestic consumption.[82]

25. On the other hand, the historical scope of responsibility largely depends on the standard of care applicable.[83] If the no-harm principle prevents negligence, states would only be responsible for the consequences of greenhouse gas emitted since sometime between the early 1960s and the early 1990s, when a scientific consensus grew on the occurrence of climate change and on its anthropogenic causes,[84] taking into account, however, the long period of time that would have been necessary to reduce greenhouse gas emissions event through the most drastic policies. Alternatively, a regime of strict liability would possibly take into account all historical emissions, starting with the beginning of the industrial age in the Great Britain of the late 18th Century.

26. If one excludes the possibility that the no-harm principle establishes a regime of absolute liability, the concept of necessity (*état de nécessité*) could constitute an excuse precluding the wrongfulness of omitting to prevent limited amounts of greenhouse gas emissions.[85] A

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human rights obligations implies that states' positive obligations (obligations to do) are limited to situations on which they have effective control, while their negative obligations (obligations not to do) are territorially unbound.

82 See e.g. Dieter Helm, Cameron Hepburn and Giovanni Ruta, Trade, Climate Change, and the Political Game Theory of Border Carbon Adjustments, 28 Oxford Review of Economic Policy (2012), 368; Glen Peters, From Production-Based to Consumption-Based National Emission Inventories, 65 Ecological Economics (2008), 13; Christopher Weber et al., The Contribution of Chinese Exports to Climate Change, 36 Energy Policy (2008), 3572; Glen Peters et al., Growth in Emission Transfers via International Trade from 1990 to 2008, 108 Proceedings of the National Academy of Sciences (2011), 8903.

83 The standard of care has not been conclusively determined in previous cases. See e.g. Sands and Peel, above n.41, 712; Malgosia Fitzmaurice, International Responsibility and Liability, in: Daniel Bodansky and others (eds.), The Oxford Handbook of International Environmental Law (2007) 1014; Xue, above n.27, chapter 5.

84 Charles Keeling detected a rise in the atmospheric concentration of carbon dioxide in 1960, thus confirming the possibility of earlier theories (some from the 19th Century) of an anthropogenic increase of the greenhouse effect that would alter climatic conditions. In 1979 a US National Academy of Sciences report considers anthropogenic climate change as highly credible. See generally Spencer Weart, The Discovery of Global Warming (2nd ed. 2008).

85 See e.g. ILC, Articles on State Responsibility, art. 25; *Gabčíkovo-Nagymaros Project* (Hungary/Slovakia), Judgment, ICJ Reports 1997, 7 paras.51–52;

compelling case for necessity relates to the relatively negligible emissions of greenhouse gases produced through human respiration, but one may further argue that the emissions stemming from a certain level of industrialization are also "necessary," if not to human life, at least to human development. Such arguments could relate to the distinction that Henry Shue suggested between subsistence emissions and luxury emissions.[86] Yet, setting an objective threshold between subsistence and luxury is eminently delicate: rather than an abstract analysis, necessity, in this context, would call for a more sensitive analysis of proportionality, which would compare the benefits of a certain amount of industrialization with the consequences of greenhouse gas emissions:[87] the harm caused by unnecessary or excessive greenhouse gas emissions is significantly greater than the benefits offered by the gas-emitting activities. Although there clearly is no magic formula and a number of inherently political choices are involved, "necessary" emissions should arguably be defined on a per capita basis and there might be a need to take specific national circumstances into account.[88]

III.B. Obstacles to implementation through litigation

27. Although the law of state responsibility is generally relevant in the context of climate change, the conjunction of three obstacles makes any successful international litigation quite unlikely. The first obstacle relates to the consensual nature of international litigation. In the absence of prior agreement or recognition of a compulsory jurisdiction, a dispute before the ICJ or before an arbitration panel requires the agreement of the parties.[89] At best, some UN organs could file a request for an advisory opinion of the ICJ. Disputes could alternatively be based on the provisions on jurisdiction of the UN Convention on the Law of the Sea, by invoking pollution of the marine environment, in particular with regard

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Sarah Heathcote, Circumstances Precluding Wrongfulness in the ILC Articles on State Responsibility: Necessity, in: J. Crawford et al. (eds.), above n.20, 491.

86 Henry Shue, Subsistence Emissions and Luxury Emissions, 15 Law & Policy (1993), 39.

87 Proportionality analysis is commonly practiced in international human rights law and constitutional law, in particular in Europe.

88 For instance, populations living in a cold climate may need more greenhouse gas emissions for heating, and populations living in vast, sparsely populated territories may need more emissions for transportation, in order to achieve the same degree of human development. The availability of renewable energy may also be relevant.

89 See e.g. Statute of the ICJ, art. 36.

to ocean acidification,[90] although this option would only seek redress for a share of the damages caused by excessive greenhouse gas emissions. More fundamentally, no court appears to have sufficient political legitimacy to set a precedent with tremendous conceivable consequences on the world's order – and to persuade states to implement the courts' decisions.[91]

28. A second obstacle results from geopolitical settings whereby the states most affected by climate change are also those with the least diplomatic power, while the greatest diplomatic power is held by states that have emitted the most excessive greenhouse gas emissions. Political pressure has already been applied on developing states against legitimate calls for responsibility. For instance, Palau (a small island developing state with a population of about 20.000), which initiated a campaign for the UN General Assembly to request an advisory opinion from the ICJ, had to back out when the United States threatened to interrupt the provision of development aid.[92] Likewise, Tuvalu, another small island developing state (population 10.000) highly dependent on international aid, has never carried out its threat to seek the responsibility of Australia or the United States before an international jurisdiction.[93] Even if the responsibility of a state were recognized in a particular case, absent diplomatic power or effective counter-measures, compliance would be a function of the sole goodwill of political leaders within the respondent states.

29. A third obstacle to litigation stems from the fragmentation of responsibility: climate change results from the concomitant but independent conduct of many states. Joint and several responsibilities do not normally apply when a damage results from independent state conducts.[94] In the application of the principle of independent

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90 UN Convention on the Law of the Sea, above n.68, arts. 192-237. See Meinhard Doelle, Climate Change and the Use of the Dispute Settlement Regime of the Law of the Sea Convention, 37 Ocean Development & International Law (2006), 319. Ocean acidification results from the introduction of carbon dioxide in the ocean as carbonic acid.

91 See, by analogy, Native Village of Kivalina v. ExxonMobil Corp. et al., 696 F.3d 849 (C.A.9 Cal. 2012, appeals), 858, stating that "the solution to Kivalina's dire circumstance must rest in the hands of the legislative and executive branches of our government, not the federal common law").

92 See e.g. Stuart Beck and Elizabeth Burleson, Inside the System, Outside the Box: Palau's Pursuit of Climate Justice and Security at the United Nations, 3 Transnational Environmental Law (2014), 17, 26.

93 The same relation can be noticed within states, as the populations most vulnerable to climate change is also the populations who have less political powers.

94 See ILC, Articles on State Responsibility, art. 47.1, and Commentary, para.8; and *Corfu Channel* (United Kingdom of Great Britain and Northern Ireland v. Albania), Merits, ICJ Reports 1949, 4, 23. See also Okowa, above n.78, 195-202.

responsibility, the responsibility of a state should therefore be limited to the consequences of its own conduct. This means that responsibility would need to be apportioned between responsible states, which raises thorny issues.[95] One may for instance object that, in contentious proceedings, a decision on apportionment would be precluded by the *Monetary Gold* principle, in application of which the ICJ has refused to determine the responsibility of a state if, in order to do so, "it would have to rule, as a prerequisite, on the lawfulness" of the conduct of a third state[96] – although this principle has sometimes been interpreted in a liberal way.[97] Moreover, it has sometimes been suggested that the no-harm principle only applies when the consequential harm is "serious" or "significant."[98] If this threshold limits litigation, it does not curtail the principle that a state is responsible for preventing activities resulting in trans-boundary environmental damages.[99]

30. By contrast, an analysis of climate change as harmful to global atmospheric commons, rather than to states or individuals, avoids complex issues of attribution at the stage of establishing the breach of the no-harm principle. Article 48 of the ILC's Articles on State Responsibility provides that any state "is entitled to invoke the responsibility of another state … if … the obligation is owed to the international community as a whole," and may thus claim cessation of the internationally wrongful act and "performance of the obligation of reparation … in the interest ... of

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95 Similar issues have been more comprehensively discussed in the context of domestic litigation. See in particular Jacqueline Peel, Issues in Climate Change Litigation, 1 Carbon & Climate LR (2011), 15, 16-18; and generally Richard Lord et al. (eds.), Climate Change Liability: Transnational Law and Practice (2012).

96 *East Timor* (Portugal v. Australia), ICJ Reports 1995, 90, para.35. See also *Monetary Gold Removed from Rome in 1943* (Italy v. France), ICJ Reports 1954, 19, 32.

97 See *Certain Phosphate Lands in Nauru* (Nauru v. Australia), Preliminary Objections, ICJ Reports 1992, 240, 259–260. See generally Alexander Orakhelashvili, Division of Reparation between Responsible Entities, in: J. Crawford et al. (eds.), above n.20, 647, 664 (arguing, in part *contra legem*, that "the doctrine of the absent third party must not be allowed to preclude the judicial enforcement of responsibility for the entire category of actions and wrongful acts, namely the wrongs committed by more than one State, whether through a joint action, joint organs, complicity, or direction or control").

98 See e.g. Sands and Peel, above n.41, 708-711 (and references); Fitzmaurice, above n.83, 1015; Xue, above n.27, at 158-161; Okowa, above n.78, 88-90.

99 Thus, there is no mention of a threshold in the enunciation of the no-harm principle in Principle 21 of the Stockholm Declaration, above n.70, or in Principle 2 of the Rio Declaration, above n.31.

the beneficiaries of the obligations breached."[100] While the ILC's Commentary acknowledges that this provision "involves a measure of progressive development," it insists that this "is justified since it provides a means of protecting the community of collective interests at stake":

> In case of breaches of obligations under article 48, it may well be that there is no State which is individually injured by the breach, yet it is highly desirable that some State or States be in a position to claim reparation, in particular restitution.[101]

Accordingly, any state could in principle initiate a case against another state, seeking reparation for the harm to global atmospheric commons caused by excessive greenhouse gas emissions attributable to that state.[102]

31. It remains however most likely that the fragmentation of responsibility would preclude any meaningful implementation of the responsibility of states for excessive greenhouse gas emissions. Nevertheless, given the declarative nature of the law of state responsibility, practical obstacles precluding its *implementation* through litigation do not affect its *applicability* as a question of principle: responsible states are responsible despite the unlikelihood of being declared so; they hold secondary obligations that arise from their wrongful acts even though it is improbable that any international courts or tribunals could ever have the opportunity to enforce such obligations. In other words, procedural shortcomings should not affect the substance of the law. Other forms of partial or complete implementation can be conceived, including through international negotiations within the climate regime.

IV. Comparing the climate regime and the law of state responsibility

32. Recognizing state responsibility as a relevant guidance for climate governance begs another question: how far is the climate regime from the fulfilment of the obligations that the law of state responsibility entails? This section compares the existing climate regime with the obligations that follow from the application of the law of state responsibility. A state responsible for a continuing breach of an international obligation is mainly under two obligations: one is to cease the wrongful act; the other

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[100] ILC, Articles on State Responsibility, art. 48(1) and (2).

[101] ILC, Articles on State Responsibility, commentary, para.12 under art.48.

[102] Issues regarding the payment of reparation are discussed in next section.

is to make full reparation.[103] Similarly, the climate regime is articulated between two types of actions: actions that aim at mitigating climate change (e.g. limiting or reducing anthropogenic greenhouse gas emissions and enhancing carbon sinks) and actions that aim at adapting to climate change (i.e. adjusting to the impacts of climate change). Cessation can be compared with mitigation (Section IV.A), and reparation with adaptation (Section IV.B), but significant differences appear in terms of scope and nature.

33. Another consequence of responsibility regards the regime of counter-measures. The Draft Articles on State Responsibility did not clearly recognize to states that are not injured a right to take counter-measures, such as in case of a breach of an obligation owed to the international community as a whole.[104] Yet, a more recent study concluded that "present-day international law recognises a right of all States, irrespective of individual injury, to take counter-measures in response to large-scale or systematic breaches of obligations *erga omnes*."[105] In any case the power relations between the states most affected by the adverse impact of climate change and those responsible for the highest emissions levels limit the political affordability of counter-measures for the time being.

IV.A. Obligation to cease an internationally wrongful act and international action on climate change mitigation

34. The Articles on State Responsibility provide that "[t]he State responsible for the internationally wrongful act is under an obligation … to cease that act, if it is continuing."[106] Accordingly, states responsible for having continuously failed to prevent excessive greenhouse gas emissions within their jurisdiction must act without unreasonable delay to reduce these emissions to a level which is excusable because necessary. Given the strong reliance of most industrial states on fossil fuels, immediate cessation might not be possible without catastrophic economic and human consequences. Similar considerations justify for instance that the

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103 ILC, Articles on State Responsibility, arts. 30 and 31.

104 Articles on State Responsibility, art.54, which is without prejudice of the right of any non-injured state, in case of a breach of an obligation owed by the international community as a whole, "to take lawful measures against that State to ensure cessation of the breach and reparation in the interest of the injured State or of the beneficiaries of the obligation breached."

105 Christian Tams, Enforcing Obligations Erga Omnes in International Law (2005), 250.

106 ILC, Articles on State Responsibility, art. 30(a).

Understanding on Rules and Procedures Governing the Settlement of Disputes of the WTO Agreement allows a "reasonable period of time" (normally no more than 15 months) for states to comply with the decision of a WTO adjudicating body "if it is impracticable to comply immediately."[107] Because drastically reducing a state's greenhouse gas emissions is far more challenging than bringing its trade policy into compliance, there is a strong argument for a "reasonable period of time" for compliance to exceed 15 months in the case of states responsible for excessive greenhouse gas emissions.

35. The climate regime has sought the cessation of excessive greenhouse gas emissions from the outset, with an emphasis on concerted action among states. The UNFCCC, which was adopted relatively shortly after the achievement of a scientific consensus on the anthropogenic causes of climate change,[108] requires each developed country Party to "adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs."[109] Furthermore, the Kyoto Protocol attributed individual quantified emissions limitation and reduction commitments to each developed states for a first commitment period from 2008 to 2012.[110] The Doha Amendment to the Kyoto Protocol, adopted by a Conference of the Parties in December 2012 but not yet entered into force, defines a second commitment period from 2013 to 2020.[111] Developing states have also some obligations to "implement … measures to mitigate climate change"[112] under the UNFCCC and the Kyoto Protocol, although these obligations are less demanding given the lesser degree of responsibility of developing states. In addition to trying to solve classical co-operation issues, global efforts on climate change mitigation include forms of co-

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107 1869 UNTS 401, art. 21(3). See also Olivier Corten, The Obligation of Cessation, in: J. Crawford et al. (eds.), above n.20, 545, 548, considering force majeure as a possible excuse to allow a similar grace period in the application of the Articles on State Responsibility.

108 See for instance Weart, above n.84.

109 UNFCCC, above n.2, art. 2(a).

110 Kyoto Protocol, above n.3, art. 3(1).

111 Decision 1/CMP.8, above n.3. According to articles 20.4 and 21.7 of the Kyoto Protocol, the Doha Amendment will enter into force the ninetieth day after the date of receipt of an instrument of acceptance by at least the three fourth of the Parties to the Protocol. As of 19 August 2014, only eleven states have deposited their acceptance of the Amendment, whereas 143 acceptance are required for the amendment to inter into force. Nevertheless, the paragraph 5 of decision 1/CMP.8 encourages the parties to implement the Amendment pending its entry into force.

112 UNFCCC, above n.2, art. 4.1(b) See also Kyoto Protocol, above n.3, art. 10.

operation, for instance through transfer of technologies and dissemination of best practices that facilitate collective compliance.

36. Yet, there are two important differences between climate change mitigation and the requirement of the obligation of cessation. A first difference regards the method of defining states' individual commitments. The distinction between developed and developing states for the purposes of the climate regime was originally based on membership in the Organization for Economic Co-operation and Development (OECD) at the time of the negotiation of the UNFCCC, but the evolution of this membership over the last two decades has not been reflected in the climate regime. It is a somewhat arbitrary distinction, which ignores significant differences in past and current per capita emissions levels within both categories of states.[113] Moreover, the individual emissions limitation and reduction commitments of developed states were not negotiated by reference to historical or present wrongs, but on the sole basis of capacity-related criteria.[114] Lastly, the UNFCCC pays great attention to the "special difficulties" of countries "whose economies are particularly dependent on fossil fuel production, use and exportation, as a consequence of action taken on limiting greenhouse gas emissions,"[115] which is arguably at odds with an approach in terms of responsibility.

37. Even more than such ambivalences, it is the ambit of climate change mitigation that distinguishes it squarely from the requirement of the obligation of cessation. The objective set by the first commitment period of the Kyoto Protocol was to reduce developed states' overall emissions by 5 per cent below 1990 levels between 2008 and 2012.[116] The Doha Amendment considers a further reduction of up to 18 per cent below the 1990 levels for a second commitment period between 2013 and 2020.[117] Some developed states, including the United States (which represent about half of the emissions of developed states), have not participated in these efforts. After more than two decades of concerted actions, per capita emissions in developed states remain at a clearly unsustainable level and several times higher than global average.[118] Strikingly, the emissions of some developed states have continued to increase between 1990 and 2011 (8 per cent in the United States, 3 per

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113 However, specific considerations apply to countries that are undergoing the process of transition to a market economy. See in particular UNFCCC, above n.2, art. 4.6.

114 See above para.12.

115 UNFCCC, 20th recital.

116 Kyoto Protocol, above n.3, art. 3.1.

117 Decision 1/CMP.8, above n.3. (new article 3.1bis).

118 25 metric tonnes per capita and per year in Australia, 21 in the United States and Canada, 9 in the EU, compared with a global average of 6, according to the data (total greenhouse gas emissions excluding land use change and forestry and total populations) made available by World Resources Institute, above n.23, accessed on 24 May 2014.

cent in Australia, and 2 per cent in Canada),[119] although per capita emissions were slowly decreasing. This raises questions as to the length of a "reasonable period of time" that could be permitted for developed states to comply with their obligation. That a quarter of century has passed since the initiation of international negotiations without any impressive progress being made reflects an unreasonable grace period.

38. If a catastrophic climatic change is to be avoided, permitting a longer period of time for developed states to transition toward a cleaner economy increases the pressure on developing states, which have historically contributed far less to greenhouse gas emissions, to take drastic measures to limit their increasing greenhouse gas emissions, often at the expense of their development. While the obligation to cease a continuing internationally wrongful act could justify a reasonable period of time for compliance, the approach of climate change mitigation takes the opposite approach of assuming that emitters can in principle continue polluting while making reasonable efforts. Thus, sadly, rather than substantive measures to bring developed states into compliance, international action on climate change mitigation appears largely as a way for developed states to gain time at the expense of developing countries.

IV.B. Obligation to make full reparation and international action on climate change adaptation

39. The adverse consequences of climate change are both tremendous and complex, affecting human societies in multiple ways.[120] Yet, the causal relation between climate change and its impacts on societies is all but straightforward. On the one hand, the greenhouse gas emissions attributable to a state today will affect the climate system for millennia; and today's climate change is induced by decades of excessive greenhouse gas emissions. On the other hand, climate change does not result in specific weather events (e.g. cyclone, drought, flooding), but rather in changing the probabilities of specific weather events. Even when slow-onset physical impacts appear as a foreseeable consequence of climate change (e.g. sea-level rise, ocean acidification, glacial retreat), how these physical impacts affect individuals, societies and states largely depends on a host of measures, from disaster risk reduction to land planning and from development to food production and health policies.[121] Therefore, as

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119 Ibid.

120 See IPCC AR5 WGII, above n.4.

121 See in particular Chris Field, Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation: A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate

argued above, the consequence of excessive greenhouse gas emissions is best understood as harmful to global atmospheric commons, or as an interference with the climate system, affecting the international community as a whole. This, however, makes it more difficult to conceive reparation.

40. The Articles on State Responsibility provide that "[t]he responsible State is under an obligation to make full reparation for the injury caused by the internationally wrongful act" through restitution, compensation or satisfaction.[122] Restitution (which consist in "re-establish[ing] the situation which existed before the wrongful act was committed"[123]) would demand herculean geo-engineering works such as, perhaps, the undertaking of carbon capture and storage on a massive scale – projects that are not and might never be materially possible.[124] Restitution is excluded when it is materially impossible or involves "a burden out of all proportion to the benefit deriving from restitution instead of compensation."[125]

41. Rather than complete restitution on a global scale, one may object that partial restitution could be made through local micro-restoration projects that responsible states would conduct in injured countries in order to "reverse," as far as possible, the adverse impacts of climate change. Yet, there are many obstacles to considering micro-restoration projects as a form of reparation, in particular with regard to: the difficulty of establishing a direct and proximate causal link between greenhouse gas emissions and particular social impacts; the fragmentation of responsibility among multiple states, and in general the fact that the impact of present greenhouse gas emissions will unfold over centuries whereas reparation aims at "settling a dispute once and for all."[126]

42. These considerations suggest that restitution should generally be excluded and that, in the application of the law of state responsibility, reparation should be made through compensation. Yet, the law of state responsibility provides little firm guidance for the compensation of a breach of an international obligation owed to the international community

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Change (2012), at 9 (noting that, in the context of a developing world with a growing population, "increasing exposure of people and economic assets have been the major cause of long-term increases in economic losses from weather- and climate-related disasters.")

122 Ibid., art. 34.

123 Ibid., art. 34 and 35

124 On the promises and limits of geo-engineering, see e.g. William Burns and Andrew Strauss (eds.), Climate Change Geoengineering: Philosophical Perspectives, Legal Issues, and Governance Frameworks (2013); Ralph Bodle, Climate Law and Geoengineering, in Erkki Hollo, Kati Kulovesi and Michael Mehling, Climate Change and the Law (2013), 447.

125 ILC, Articles on State Responsibility, art. 35.

126 Factory at Chorzów, Jurisdiction, PCIJ, Series A, No. 9, 25.

as a whole. Article 48 of the ILC's Articles on State Responsibility recognizes that, following the breach of an obligation owed to the international community as a whole, any state is entitled to claim "the performance of the obligation of reparation in accordance with the preceding articles, in the interest … of the beneficiaries of the obligation breached."[127] Although the commentary considers "in particular restitution,"[128] it does not exclude the possibility of compensation when restitution is materially impossible. Rather, the interest in the good administration of justice requires that innovative means of distributing compensation to "the international community" be conceived in order to ensure reparation to breaches of an obligation due to the international community as a whole when restitution is not materially possible.

43. Evaluating the amount of compensation due for a harm to global atmospheric commons[129] or conceiving a mechanism for the payment of compensation due to the international community as a whole are questions that go far beyond the scope of this article, although some general principles can be suggested. In particular, there appears to be no reason not to rely on states for receiving compensation. In principle, states are generally considered as the elementary structure in international relations. There may be strong objections to a state-centred approach of international governance,[130] but it would be inconsistent to deny the relevance of (developing) states when distributing reparation while generally recognizing the sovereignty of (developed) states when conceiving international action on mitigation. Moreover, in more practical terms, states are large and perennial structures with the political legitimacy and the administrative structure that allow for the effective use of substantial funds. A rough estimate of the value of the adverse impact that individual states have suffered and will suffer because of climate change, including through the increased probability of specific extreme weather events, is difficult but not absolutely impossible to make.[131] By contrast, attributing adverse effects to individuals is significantly more challenging, and the claim that existing individuals may represent future generations affected is difficult to make. One may conceive mechanisms whereby, for instance, a global arrangement could organize compensation

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127 ILC, Articles on State Responsibility, art. 48(2).

128 ILC, Articles on State Responsibility, commentary, para.12 under art.48.

129 See generally William Nordhaus, The Climate Casino: Risk, Uncertainty, and Economics for a Warming World (2013), for a synthesis of current debates on the valuation of climate change.

130 See for instance Philip Allott, State Responsibility and the Unmaking of International Law, 29:1 Harvard Journal of International Law (1988), 1. See, contra, James Crawford, Chance, Order, Change: General Course on Public International Law, 365 Receil des Cours (2013), 9, at 70, noting that, in the absence of an alternative to state as a structure for global governance, "we are probably stuck with it."

131 See generally IPCC AR5 WGII, above n.4, volume 2 (regional aspects).

through bundle payments to the most affected states, on the basis of probable harm, and compensation could be adjusted by additional payments over the coming decades following progress in climate modelling.

44. Now, there is a sharp contrast between any forms of reparation through restitution or compensation that would follow from the law of state responsibility and the existing action on climate change adaptation carried out through the climate change regime. While restitution is an effort to *re-establish* the situation that existed before a wrongful act, adaptation is an effort to *adjust* to new circumstances.[132] The involvement of a financial transfer from high-emitting developed states to highly-affected developing states is the main similitude between adaptation and compensation, which differ on other fundamental aspects. One such aspect is the order of magnitude: as noted above, the international finance for climate change adaptation represents a tiny share of any possible valuation of the adverse impacts of climate change.[133] Another important aspect is that international action on climate change has rarely taken a restrictive approach of attribution: it has often consisted in programs of "adaptation to climate risk"[134] in general rather than specifically in an adjustment to the consequences of anthropogenic climate change, thus suggesting a utilitarian rationale (maximizing public good by addressing climate risks) rather than a restorative one.

45. But the difference between compensation and adaptation is also a difference in nature, for two complementary reasons. Firstly, compensation is an unconditional financial transfer – an *entitlement* of the injured state[135] and an *obligation* of the responsible state.[136] Following the law of state responsibility, the failure of an injured state to mitigate its damages does not affect its right to compensation (although its contributory negligence may be taken into consideration when assessing the quantum of reparation).[137] Moreover, the injured state is assumed to be "asserting its own rights"[138] even when claiming reparation for

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132 The IPCC defines adaptation as "[t]he process of adjustment to actual or expected climate and its effects." See "Summary for Policymakers", in IPCC AR5 WGII, above n.4, at 5.

133 See above para.15.

134 Mike Hulme, Saffron O'Neill and Suraje Dessai, Is Weather Event Attribution Necessary for Adaptation Funding?, 334:6057 Science (2011), 764, at 765.

135 Gabčíkovo-Nagymaros Project, above n.85, para.152, noting that "an injured State is entitled to obtain compensation from the State which has committed an internationally wrongful act for the damage caused by it."

136 ILC, Articles on State Responsibility, art. 36.1.

137 See Gabčíkovo-Nagymaros Project, above n.85, para.80; ILC, Articles on State Responsibility, Commentary, para.11 under art. 31.

138 Mavrommatis Palestine Concessions (Greece v. United Kingdom), Objection to the Jurisdiction of the Court, PCIJ, Series A, No. 2, 12.

damages suffered by its citizens, and it is under no obligation (despite the existence of a "recommended practice") to transfer any compensation to the injured individuals.[139]

46. By contrast, adaptation finance is attached to a host of conditions, political priorities, orientations, guidance, and international oversight.[140] At the very core of international action on adaptation, the condition that the funds be used for climate change adaptation departs from the law on diplomatic protection or from the general nature of compensation. A developing state with pressing development issues could conceivably prefer to use compensation as an opportunity to pursue other priorities, perhaps at least during a first period before turning to a more specific action on adaptation when the country becomes more severely affected by the impacts of climate change. Even if the government of the injured state were absolutely convinced that climate change adaptation should be its most immediate priority, the need to evidence specific "incremental costs" of adjusting to climate change when applying for adaptation funds creates an onerous burden of proof and likely costs of opportunities, in particular for small or least developed states, making it more difficult to mainstream adaptation in existing policies. Instead of being paid once and for all, adaptation finance comes progressively, in a carefully monitored process, as the country implements adaptation programs under international oversight.[141]

47. Secondly (and largely of the result of the preceding), the law of state responsibility conceives reparation in ways that limit any interference in the domestic affairs of the injured state. Thus, compensation, as a transfer of fungible value, is as neutral as reparation can be (at least as long as one accepts the political legitimacy of states). Restitution supposes some limited degree of political orientation as it consists in re-establishing the prior situation; consequently, it is generally understood that the injured state has a right to elect either restitution or compensation as a form of reparation when both are available.[142] Except for symbolic

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139 ILC, Draft Articles on Diplomatic Protection, art. 19(c), and Commentary, para.5. See also Alain Pellet, The ILC's Articles on State Responsibility for Internationally Wrongful Acts and Related Texts, in: J. Crawford et al. (eds.), above n.20, 75, 89.

140 On the concerns for developing states that arise from these conditions, see e.g. Summary of views expressed during the second session of the Ad Hoc Working Group on Long-term Co-operative Action under the Convention, FCCC/AWGLCA/2008/11 (11 August 2008), para 36.

141 See for instance, Adaptation Fund, Operation Policies and Guidelines for Parties to Access Resources from the Adaptation Fund (as amended in November 2013), para. 56, providing for a transfer of funds "in tranches, based on the disbursement schedule," with the possibility of "progress review" prior to each tranche transfer.

142 See for instance Christine Gray, The Different Forms of Reparation: Restitution, in: J. Crawford et al. (eds.), above n.20, 589, 593.

measures of satisfaction, which must generally be identified by the injured state itself, restitution and compensation are the only forms of reparation that are widely recognized in international relations. Thus, through reparation, the law of state responsibility ensures that the injured state maintains its "sovereign and inalienable right … freely to determine its own political, economic, cultural and social system."[143] In a different context, where states are held responsible to individuals rather than to other states, human rights jurisdictions have sometimes provided for more creative forms of reparation through the rehabilitation of victims.[144] Rehabilitation, which aims essentially "to restore what has been lost"[145] (i.e. the full enjoyment of rights), is only a minor departure from restitution and generally takes place ni a domestic context, but it has sometimes been criticized as being fraught with "the danger of misinformed remedies and paternalism."[146] Rehabilitation certainly cannot be imposed upon an injured state as a form of reparation.

48. Climate change adaptation measures, by contrast, suppose a vision of what a society should become, as there are multiple alternative ways to adapt to climate change. Although the imperative of a "country-driven approach" of adaptation is recognized discursively,[147] the very nature of an international action on adaptation involves a systematic interference by the donor state or international institutions in the domestic affairs of the receiving state. For instance, the project of an international governance of "climate migration" tends to impose, often with a limited understanding of domestic circumstances, a pro-resettlement discourse onto small island developing states[148] and an anti-

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143 Declaration on the Inadmissibility of Intervention and Interference in the Internal Affairs of States, UNGA Resolution 36/103 (1981), para.2(I)(b). See also, e.g., Resolutions 60/1, 2005 World Summit Outcome (24 October 2005), para.5; 3281 (XXIX), Charter of Economic Rights and Duties of States (12 December 1974), art. 1; 2131 (XX), Declaration on the Inadmissibility of Intervention in the Domestic Affairs of States and the Protection of Their Independence and Sovereignty (21 December 1965), para.1.

144 See e.g. Dinah Shelton, Remedies in International Human Rights Law (2005), 275; Jo Pasqualucci, The Practice and Procedure of the Inter-American Court of Human Rights (2013), chapter 6.

145 Dinah Shelton, Remedies in International Human Rights Law (2nd ed. 2005), 275, adding that rehabilitation "can be considered a form of restitution, although it is also crucial to prevent further deterioration."

146 Thomas Antkowiak, Remedial Approaches to Human Rights Violations: The Inter-American Court of Human Rights and Beyond, 46 Columbia JIL (2008), 351, 407.

147 See in particular Cancun Agreements, above n.7, para.12.

148 See Karen McNamara and Chris Gibson, "We do not want to leave our land": Pacific ambassadors at the United Nations resist the category of "climate refugees", 40 Geoforum (2009), 475.

migration agenda in states of international transit.[149] More generally, domestic adaptation policies are guided by a host of international plans of actions and priorities.[150] Even when the limits of topdown governance of adaptation are acknowledged (although on the ground of inefficiency rather than legitimacy),[151] emphasis turns to "community-based adaptation,"[152] further denying the agency of developing states.

49. Interference is evidenced in the structure of international finance on adaptation which, in the context of power asymmetries between "donor" and "recipient" states, is prone to political utilization. As the authors of a thorough review of climate finance note, "[i]t is surprising to see that multi-lateral funds like the Adaptation Fund, which has attracted a great deal of attention, play a relatively insignificant role compared to bilateral adaptation funds."[153] Indeed, this study showed that about a tenth (USD 475 million per annum) of international finance on adaptation (USD 4.4 billion per annum) is channelled through multi-lateral institutions, and less than 2% (USD 65 million per annum) of international finance on adaptation goes through dedicated multi-lateral funds.[154] The choice of bilateral or non-dedicated multi-lateral finance reflects the desire of developed states to exercise a close control over international finance on adaptation, particularly through imposing formal or informal conditions. But even dedicated multi-lateral funds are often managed by the Global Environment Facility of the World Bank, where developed states have a stronger voice. The tight control maintained by developed states on the use of adaptation finance undermines the independence of recipient states as well as the efficiency of international action on adaptation.

50. These observations confirm that "national governments in developed countries are at the centre of the emerging governance of adaptation."[155] Thus, high-emitting developed states appear a bit like an

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149 See Gregory White, Climate Change and Migration: Security and Borders in a Warming World (2011). See generally Mike Hulme, Commentary and Response: Climate Refugees: Cause for a New Agreement?, 50(6) Environment (2008), 50.

150 See in particular Bali Action Plan, above n.7, and Cancun Agreements, above n.7. See also, for instance, decision 1/CMP.4 (12 December 2008), annex IV: Strategic Priorities, Policies and Guidelines of the Adaptation Fund.

151 See e.g. Richard Hil, Climate Change, Population Movements and Governance: Case Studies in Response Mechanisms, in: Timothy Cadman (ed.), Climate Change and Global Policy Regimes: Towards Institutional Legitimacy (2013), 189.

152 See for instance Jessica Ayers (ed.), Community-Based Adaptation to Climate Change: Scaling it up (2014).

153 Buchner et al., above n.46, iv.

154 Ibid.

155 Geoff Cockfield, Governing Adaptation Policies and Programmes, in:

individual who, having destroyed the house of his neighbours, would claim for himself the right to decide where his neighbours should resettle and how they should re-build their house – while only accepting to meet a tiny share of the expenses but celebrating his generosity. International action on adaptation transfers political power from injured states to responsible states, which is at odds with any legal or moral concept of responsibility, suggesting a self-justifying scheme of political subordination disturbingly reminiscent of European colonialism, whereby interference results in costs of opportunities and prevents capacity building, allowing the characterization of developing countries as largely inapt for self-governance and seemingly justifying the pursuance of interference.

51. Instead of reparation, international action on adaptation can at most be considered as concerted efforts to mitigate damages. Consequently, a large part of what state responsibility suggests, the duty to make reparation, seems simply absent from the climate regime, despite repeated requests from number of developing states. In the storm, the climate regime has drifted far from state responsibility. One can discern the contours of efforts to discontinue an internationally wrongful act, although it is not sure whether this is the light of responsibility or that of self-interest. Reparation, an essential feature of responsibility, has almost entirely disappeared from sight.

V. Drifting away from climate responsibility

52. If the principles underpinning international law reflect shared moral understandings, the responsibility of states for excessive greenhouse gas emissions may provide important guidance to conceive responses to climate change. Such guidance should not necessarily consist in directly implementing state responsibility through climate governance; other concepts may provide concurrent guidance (e.g. transitional justice, human rights, international peace and security, complex interdependence), and political trade-offs are necessary. Yet, the differences between the climate regime and the requirements of the law of state responsibility analysed in previous section seem to go beyond what additional moral requirements and inevitable trade-offs between justice and power require. This section highlights some of the political streams that pushed the climate regime so far from the law of state responsibility.

53. One might be tempted to explain the oversight of state responsibility in a realist perspective involving states' interests and power. Accordingly, states use or deny arguments on state responsibility in the

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Timothy Cadman (ed.), Climate Change and Global Policy Regimes: Towards Institutional Legitimacy (2013), 70.

pursuance of their interests. Developing states have an interest in invoking the responsibility of developed states in order to push for differentiated obligations and for financial and technological support. By contrast, developed states are keen to impose mitigation obligations on developing states and to avoid financial and technological support by denying their responsibility. Power asymmetries in favour of developed states may explain the oversight of state responsibility within the climate regime.

54. This analysis is valid but incomplete. For one, saying that states use ethical arguments strategically does not necessarily undermine the value of these arguments. Moreover, analysing the climate regime on the basis of states' interests – which are disputed social constructs, based on political values, rather than constants – is problematic. The political dynamics defining states' interests are particularly important in the context of the climate regime, where scientific uncertainty and complexity allow for very different analyses of economic interests,[156] while the ubiquitous involvement of civil society movements pushes states to adopt at least the façade of a moral conduct. Beyond strategic considerations, it seems that arguments on state responsibility have been given more favourable consideration in developing countries than in developed ones.[157]

55. The brief constructivist analysis that follows suggests four elements of an explanation for the failure of arguments on state responsibility, in the context of climate change, to convince, in particular, Western audiences: (i) the persistence of major barriers to our comprehension of climate change, (ii) the political unacceptability of the "solutions" prescribed, (iii) unfavourable cultural backgrounds, and (iv) the existence of convenient expedients allowing developed states to evade arguments on responsibility.

56. Firstly, persistent major barriers to our comprehension of climate change prevent an effective engagement of states, in particular developed ones, with regard to climate change in general.[158] Societies in liberal democracies, in particular in the United States, have shown a tendency to over-represent sceptical claims over serious scientific arguments, in

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156 See in particular Nordhaus, above n.129.

157 This claim, largely based on the personal experience of the author navigating between Europe and Asia, is difficult to prove beyond anecdotal evidence in the absence of empirical sociological studies to the knowledge of the author. An interesting fact is that, despite important differences in current and historical per capita emissions among EU Member States, none of these states seems to have raised responsibility-based arguments when negotiating individual mitigation commitments for the joint implementation of the Kyoto Protocol. See EU Council, Outcomes of the proceedings of the Environment Council of 16-17 June 1998, 9702/98.

158 See Mike Hulme, Why We Disagree about Climate Change: Understanding Controversy, Inaction and Opportunity (2009).

particular because of the media's frequent "adherence to first-order journalistic norms – personalization, dramatization and novelty,"[159] with the support of industrial lobbies opposed to mitigation measures.[160] Beyond limited instances of outright denial, climate change appears to most as a very abstract concept: as an alteration of the probable weather patterns, climate change is neither instantly perceptible by individuals, nor easily communicable. Public attention to scientific evidence increases following a natural disaster, but decreases during a cold winter; surveyed populations were more sensitive to climate change if the survey was conducted in a warmer room or on a sunny day.[161] Because it "lacks a sense of urgency,"[162] climate change, as "creeping normalcy,"[163] has not triggered wide mobilization in support of immediate action. The immediate and tangible costs of international action on climate change tend to prevail over benefits, "distant in space and time,"[164] especially in liberal democracies that are governed by leaders elected for short terms.

57. Secondly, any substantive "solution" to climate change is simply too demanding to be acceptable. This applies to all approaches of the governance of climate change: as Al-Gore reportedly stated, "[t]he minimum that is scientifically necessary [to combat climate change] far exceeds the maximum that is politically feasible."[165] This also applies more specifically to arguments on responsibility as, even more than cessation

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159 Maxwell Boykoff and Jules Boykoff, Climate Change and Journalistic Norms: A Case-Study of US Mass-Media Coverage, 38 Geoforum (2007), 1190.

160 Maxwell Boykoff and Jules Boykoff, Balance as Bias: Global Warming and the US Prestige Press, 14 Global Environmental Change (2004), 133.

161 See e.g. Patrick Egan and Megan Mullin, Psychology: Local Weather and Climate Concern, 4 Nature: Climate Change (2014), 89; Patrick Egan and Megan Mullin, Turning Personal Experience into Political Attitudes: The Effect of Local Weather on Americans' Perceptions about Global Warming, 74 The Journal of Politics (2012), 796.

162 Anthony Leiserowitz, Climate Change Risk Perception and Policy Preferences: The Role of Affect, Imagery, and Values, 77 Climatic Change (2006), 45, 64. See also Elke Weber, Experience-Based and Description-Based Perceptions of Long-Term Risk: Why Global Warming Does Not Scare Us (Yet), 77 Climatic Change (2006), 103; Harry Collins and Robert Evans, Rethinking Expertise (2007), 2 (identifying "science's … short-term political impotence").

163 Jared Diamond, Collapse: How Societies Choose to Fail or Succeed (2011), 425.

164 Leiserowitz, above n.162, 64. See also Janet Swim et al., Psychology and Global Climate Change: Addressing a Multi-faceted Phenomenon and Set of Challenges (2010), 6-7.

165 Al-Gore (in the 1990s), cited in Bill McKibben, Some Like It Hot, in: The New York Review of Books (5 July 2001).

after a reasonable period of time, reparation is simply not something Western societies are ready to take into consideration. Adding to the anxiety of the declining Western civilization, there is a risk that responsibility arguments may trigger barriers to personal commitment rather than promote action.[166] In international negotiations, responsibility is simply a political non-starter for some developed states.

58. Thirdly, the argument for responsibility builds partly on a cultural background specific to post-colonial Southern societies. Argument studies show that previous ideas frame how new ideas are received.[167] In developing countries, arguments on a right to development and on the responsibility of former colonial powers, as part of broader calls for the construction of an international development law and a new international economic order, provide an ideological framework on which climate change can naturally be perceived as one more matter of Western responsibility. Thus, the transformation of the Cold War's arguments for the protection of "economic refugees" in contemporary arguments for the protection of "environmental refugees" or "climate refugees" reflects a change of context, not a change of ideology.[168] By contrast, the stronger hostility of Western societies generally to the prior arguments on a right to development or the responsibility of former colonial powers prepared these societies to reject new arguments on responsibility in the context of climate change. These respective predispositions add to the fact that, as was already the case of prior arguments on colonial responsibilities, the roles suggested by arguments on responsibility are more readily acceptable by the inhabitants of developed states standing as "victims," than by those of developed states accused of harming the global atmospheric commons. Arguments on state responsibility failed in Western societies: "[t]he words may be heard, but because of their different Weltanshauung, interlocutors find they are incomprehensible to each other."[169]

59. Fourthly, convenient expedients allow Western states to elude arguments on state responsibility while keeping face. As mentioned, developed states tend to interpret the principle of common but differentiated responsibilities as a question of international solidarity and differentiated capabilities rather than as a question of responsibility.[170] In

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166 At a psychological level, see S. Stoll-Kleemann, Tim O'Riordan and Carlo Jaeger, The Psychology of Denial concerning Climate Mitigation Measures: Evidence from Swiss Focus Groups, 11 Global Environmental Change (2001), 107.

167 See Neta Crawford, Homo Politicus and Argument (Nearly) All the Way down: Persuasion in Politics, 7 Perspectives on Politics (2009), 103, 110.

168 See Benoit Mayer, "Environmental Migration" as Advocacy: Is It Going to Work? 29 Refuge: Canada's Journal on Refugees (2014), 27, 30; Jane McAdam, From Economic Refugees to Climate Refugees? 10 Melbourne Journal of International Law (2009), 579.

169 N. Crawford, above n.167, 118.

170 See above para.11.

this alternative moral perspective, pro-South differentiation suggests as ex gratia assistance – "we do well if we give it, but we are not subject to blame or reproach if we do not."[171] Humanitarian reason justifies developed states' self-celebration[172] rather than guilt and, thus, allows the self-portrayal of the Northerner as a good-doer.[173]

60. While the expedient of international solidarity is particularly persuasive in European states, the United States have increasingly used another expedient: pragmatism. Through the Byrd-Hagel resolution, the US Senate unanimously indicated in 1997 that it would not ratify a treaty which "would result in serious harm to the economy of the United States."[174] Making it a principle that states should follow their "interests" (i.e. mostly the immediate economic interests of influential lobbies), thus transforming simplified realist assumptions into normative values, the American pragmatist trend has rejected any normative guidance on climate negotiations as "both vulnerable in principle and dangerous in practice,"[175] positing in particular that "[n]ations should approach the climate problem from a forward-looking, pragmatic perspective."[176] Accordingly, side-payments from the affected states to the polluting ones were suggested as a way of securing a far-reaching, "Pareto-optimal" treaty pursuing each state's individual interest.[177]

61. These two expedients are structurally flawed because they are based on arbitrary omissions: the expedient of international solidarity omits the historical dimension of climate change, while the expedient of pragmatism disregards the whole moral dimension to climate change. Such omissions were only possible in a context of argumentative isolation, because claims for responsibility were not appropriately deployed before Western audiences.[178] Whereas the academia has a role to play, the concentration of research in Western states may have contributed to the

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171 Peter and Renata Singer, The Ethics of Refugee Policy, in: Mark Gibney (ed.), Open Borders? Closed Societies? The Ethical and Political Issues (1988), 116.

172 "We lamented their dead but celebrated our generosity." Didier Fassin, Humanitarian Reason: A Moral History of the Present (2012), ix.

173 See in particular Rajamani, above n.28, 87-88.

174 US Senate Resolution 98/105, above n.37.

175 Eric Posner and David Weisbach, Climate Change Justice (2010), 190.

176 Ibid., 5.

177 Ibid., 7, 84, 179. This argument is based on a misreading of "interests," for, although the social impacts of climate change are greater in developing nations (in particular in loss of lives), their economic value is certain greater in developed nations (in particular through loss of properties). Consequently, developed states may be ready to pay a greater price for mitigation than developing nations.

178 Even more than Southern societies, unborn generations have no argumentation representation.

frequent dismissal of responsibility arguments in some of the literature.[179] In this context where the argumentative battlefield is dominated by responsible states, those calling for reparation can be assailed as ideological or "fanatic."[180]

62. A third expedient allowing developed states to evade the responsibility argument relates to the would-be political sensitivity of the question. Unlike the explicit discourse on international solidarity and pragmatism, political sensitivity is a discrete second-line defence. On the one hand, developed states have rejected any discussion on the principles that should guide climate governance, from the early negotiations of the UNFCCC,[181] to the proposal of India to initiate a dialogue on equity in 2011.[182] On the other hand, the same states have also opposed discussions of climate justice by independent institutions. The opposition of the United States to the campaign of Palau for an advisory opinion of the ICJ was mentioned before.[183]

63. Between 2011 and 2013, developed states representatives at the Sixth Committee of the UN General Assembly opposed the inclusion of a topic on the "protection of the atmosphere" within the long-term work programme of the International Law Commission (ILC).[184] Their opposition was justified by cautioning the ILC against "interfere[ing] with relevant political negotiations"[185] or questioning its ability to deal with "[t]he scientific and technical aspects"[186] of the topic. Despite the general understanding that climate negotiations were stalling, developed states' representatives claimed that existing political negotiation were "relatively effective,"[187] that they had already "provided sufficient general guidance to

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179 See Benoit Mayer, Climate Change and International Law in the Grim Days, 24 European JIL (2013), 947, 952-954.

180 Senator Hagel, in Cong. Rec. S8117 (daily ed. 25 July 1997).

181 See e.g. Bodansky, above n.39, 501.

182 See 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, FCCC/CP/2011/9, paras.13-18.

183 See above para.28.

184 International Law Commission, Report of the Sixty-third session (2011), para.365 and Annex II, Protection of the atmosphere, by Mr. Shinya Murase.

185 Mr. Válek, Czech Republic, in Sixth Committee, 68th session, 18th meeting, A/C.6/68/SR.18, para.102. See also e.g. Mr. Tiriticco, Italy, in A/C.6/68/SR.19, para.10; Mr. Buchwald, United States, in ibid., para.118.

186 Ms. Belliard, France, in Sixth Committee, 67th session, 19th meeting, A/C.6/67/SR.19, para.91. See also Ms. Noland, Netherlands, in A/C.6/66/SR.28, para.64 ("The question of protection of the atmosphere seemed more suited for discussion among specialists").

187 Mr. Simonoff, United States, in 66th session, 20th meeting

States,"[188] and that the topic "was already well-served by established legal arrangements."[189] If the ILC could eventually include the topic in its programme of work in 2013, it was at the cost of a political compromise that excluded virtually any possible substance: it was not only prevented from interfering with negotiations on climate change, but also from dealing with 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."[190] By evading any substantive discussion within the ILC, developed states ensured that climate change governance would follow a political logic where power dominates, rather than the guidance of general principles of law and justice.

VI. Conclusion

64. Responsibility is not a purely rhetorical claim of fund-thirsty developing states: it is an essential principle of justice applicable in relation to "*every* internationally wrongful act of a State,"[191] even in spite of the lack of jurisdictional avenues for litigation. There is at least a plausible argument according to which the failure of a state to prevent excessive per capita greenhouse gas emissions within its jurisdiction constitutes a breach of the obligation of that state not to cause harm to global atmospheric commons, an obligation owed to the international community as a whole. Yet, it appears that not enough is being done, in particular by developed states, to cut greenhouse gas emissions to a necessary hence excusable level within a reasonable period of time, and that international action on climate change adaptation, which involves unjustified interference in the internal affairs of injured states, cannot

A/C.6/66/SR.20, para.15.

188 Mr. Buchwald, United States, in 67th session, 19th meeting, A/C.6/67/SR.19, para.118.

189 Mr. Macleod, United Kingdom, in 68th session, 18th meeting, A/C.6/68/SR.18, para.21.

190 Shinya Murase, First report on the protection of the atmosphere, A/CN.4/667 (14 February 2014), para.5. This compromise also provides that "[t]he outcome of the work on the topic will be draft guidelines that do not seek to impose on current treaty regimes legal rules or legal principles not already contained therein." Mr. Sinhaseni, Thailand, questioned the 6th Committee: "what would be left for the Commission to work on that might be of use to the international community?" in 68th session, 19th meeting, A/C.6/68/SR.19, para.27.

191 ILC, Articles on State Responsibility, art. 1.

generally be considered as a form of reparation. On-going negotiations on loss and damage associated with climate change impacts only offer a slight hope for the creation of a compensation mechanism: developed states remain clearly reluctant to admit, let alone act on their responsibility toward developing states.

65. The then Prime Minister of Malaysia Mahathir Mohamad once denounced the outcome of the Earth Summit in harsh words: "the pittance they offer is much less than the loss of earnings by the poor countries and yet it is made out as a generous concession."[192] Since then, little has been done to ease the exasperation of many in the developing world. The increasing emissions of emerging economies make the construction of a viable climate regime even more pressing, although it does not fundamentally changes the distribution of responsibility between states.[193] Yet, the advancement of the climate regime remains largely impeded by the fundamental disagreements as to the aims and principles of international co-operation and, in particular, by developed states' outright rejection of responsibility. The expedient of pragmatism, for instance, rests on the dubious assumption that all states would readily agree to participate in good faith in a regime whose only aim is to mitigate climate change,[194] but the idea that the states most affected by climate change should pay those responsible for it – essentially a form of extortion – is clearly against any principle of justice. A solid global consensus is only possible if it based on shared moral understandings, including, among others, relating to the responsibility of states for internationally wrongful acts.

66. Climate change not only "poses a critical test for the utility and effectiveness of international environmental regulation,"[195] but also for the relevance of the project of international law in general. It challenges the readiness of states to dialogue, socialize and compromise, guided by something that goes well beyond their immediate interests and sometimes requires substantial immediate sacrifices: justice. It is also a test for humankind in general who, having realized that climate change can harm global atmospheric commons and thus threaten its own existence, now needs to develop self-restrain and responsibility. As developed states call on newly industrialized states to commit to limit their greenhouse gas emissions, political leaders in developed states must have the courage to

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192 Report of the UN Conference on Environment and Development, vol. III: Statements by the Heads of State or Government, A/CONF.151/26/Rev.1 (Vol. III), 233.

193 Developed states maintain per capita emissions level order of magnitude higher than emerging economies. See above para.6. An interesting argument would consider not only past and present emissions, but also predictable future emissions. Even though, the total past and future per capita emissions will certainly remain larger in developed states.

194 See in particular Posner and Weisbach, above n.175*,* 181-183.

195 Sands and Peel, above n.41, 239.

take a responsible stand and to recognize the past harms caused by their own countries as a preliminary step toward international co-operation.